caaaggegeg gtteatgegg etgtggaagt teeeggattt ggagatggge gteeagattg 960 ccgcgcctct ggagtgaaac ggaactgaga cgtcggacac tgtcgccccg agctcggtga 1020 aaagegagat ggettttgag acegttttgt geaegegegg gtetatgeea ggeatgttea 1080 teeettetga gataaegeeg attttgaege eggagaggaa tttggggttg gggagggagg 1140 ttagaatget gtagtaetea ggaatttggg acggcagagg cgccgcgaag gaccggtcgt 1200 cgatattgtc gttgccggct gttgcttgga ggagcagcgc attatcgagg agggtgcgcg 1260 teatggggee cagatggteg ttegetgtat cacacaatat ceegteagta aageetegtg 1320 ctgcaattgc tccagagcca ggtgtaggac atactcggct cattcgatcc acatccggta 1380 tacggcatca gtccaaatgt aggctttagc ccgtatagac cgcaccatcc agctggctac 1440 aaactcatta gtcccatcct catggaatca gcccctcatg cagttccgat tcccagcatt 1500 gcgcaagacg gtaagacata cgacccggac actgccccct tgatcggccc caatcgccaa 1560 atecacatet ceattegeaa egagggagee acacecaete gageteecae egetgetata 1620 cccqcqcqca aatqqqttat qcaccqaccc cqtqqcaqca gaactacttg tcqccgaatg 1680 gcacaggttc tcgcagactg ctttgccctt gaccactgcg caagctacca agacgcgcgt 1740 cacgactgtc gcgtcagtat cctagccggt aattgccatc aacttgtctg ccagtatatc 1800 agactegaag gtagaegtae gggtatatat cegetaacea tateggttee catgageatt 1860 ggcactccct tgaccgcgat attgtccttc aggacgattg tcctgccagc gagtagaccc 1920 gaggttgcgg aacgggtctg gtcttggatc tcacatctcc acgcccatgc gtttagtggg 1980 ttttcctccg atgttgggaa gtggatgtta tgtcggggga agcgttcctc atccaccata 2040 gggacatagt cttctcgcag acattagctt ggtgcaaaca accccgtcaa cgggagatac 2100 ggtggcgtga cagaccaggg agacccatca acgcctcagc actctcatga tacaccgcaa 2160 gcaqqcqaaq qtaqtcttcc ttctcqtqct ctqcaactqt gatacccaqa ctatccqcqa 2220 cgcgatccag cgtctctaat gtgaccgggt tggaagagtt gatgttcagg gagaagacgg 2280 acategegge gacactacta caggiaacte caggiteggi aactettatt teeteteeat 2340 caagttcacg agagccgttg ggccgagttg ggaaaatggg ctttttaacg attccgtacc 2400tgagacgtta tcaatagagt caagegggga acggaactcc gacggacctc ctatcttgct 2460 ccgacgcatt ggtggccgtt ggagatggta agagatatga taaggaagtg tgatatgccg 2520

ataggtgttg gagacggttg aggtaggata taagccaacc tttccttggt gtttttcgc 2580

aatttgcttc tcgttgctct tgagctctac ctatccggtg cggaggacgt cctagcacag 2640

gcccaatgcc ggttctcaga aatggcccgg gcaagacggt tctcctccgc gcagacatgg 2700

acgcccttcc cgtcaaggag gagacgggtc tcccctactc cagcaccgcg acagcgaccg 2760

atcctgacgg ggtctcaagg ccgtcatgca cgcttgggac acgatatgca 2810

<210> 1758 <211> 3227 <212> DNA

<213> Aspergillus nidulans

<400> 1758

atggacccat catccagaaa ttgttcatgt acttagactc cttacgtatg cacagggtgg 60 gctttaaacg caatgtgcgg cgccacatgc cgaacttctt actttccatg tcttcttcac 120 acgtgacgct gggtcgcacg acgtaagccg tgttcggtac tacggacatt ggttatcact 180 240 gccctagcgc atactccaaa cacaggtata tctctgccgc aagttgtaag tcaatcccaa 300 atctctgatg tattattccc ttagtggggc accaatagcc gctagcagta tctacctcca cgtagaactt cttcgccagt aatggtacta gtagtaagta gtaataacag cagcaataca 360 ggtttatgtt agtactatca ttagggatat actatgatta gaatattatt ttccagcact 420 gcatcagatt agaagctact ttaaattttc cgacagtgcg gttcgtcaac atccggctcc 480 atatgcgata tttggatctt tactttacta ggtacttcga tagcactgtt tgaggattcg 540 cgttgagacc gggacgcccg ggaggaatta tgagtatggg tagagagtgg tagtaatcat 600 660 tctgttagca tgcttattac gtacaggcag gtcatggaaa gcgccaatgg caatcatgat tccatatcct aaaagagtcc ggttaactca gttgggatga ctcgatacct acgttctagt 720 tttcgcgaag agataccccg tatcatgtgc attatttcga aattcgatag aggtaaaggc 780 attgcttgaa ggggagtcta tggtacaata gtatgaggag cctagatgaa cagcattccg 840 gctcatacgg tgacagtgac ggtggacggt tcacttggcc gtattctcca ccgtatgtga 900 gctttccaac caagtcccaa attcatcgag acgctgattc tcatcgtcat cttctgcgtc gagaccette teagcaagat ettecagtge agegegette teattegact tgeggaaceg 1020 ctcgcttcca tctgagatgt atgcttcgac tgctgtgccg ccgaagaagc ggccgttcat 1080 gagctggcga tgtcagcaca cttattcaga cttccgacgg ctacagaggg gttcacgtgg 1140 gttatgtatg taccttgacg caagctctcg cggactctgg attcgagaac cggacgctga 1200 cgacgcccgc ttcttccttg tcataaagga cgacatttgt gacctctccg agttttgagc 1260 attcttcacg gatatcttcc ttgatgtcaa ggatagetgc egggteetee tgtgtattgt 1320 caqctcaqaq caatgggggt agcagccaga gaccagtgcc ggtgcagaga tgtacctcca 1380 attettgaag egtgaacata tgetteaata ttaegatttt eteaaacttg gaattegtat 1440 ccaccagtge agegggetea tegteateee aatetgegag titigetaege ateegtgtgt 1500 tagtatetgt tetteaceta aaacagetga gecataetta tteagtttet gegttetett 1560 aatgattttt ttcttatccc gcatgctcgt cttcgtcggc gcctcttgct ggcttttgaa 1620 agagaaatct gcaggctgca cgcgcatggg cccctgcggc ccaggcacgc ccagtctaaa 1680 gtctgaatca tccagcatct gaatcgcgag attcaccgac tcgggtcgga aatagacgac 1740 tagagettee eeettgaatt tteeetegte ateegtgtae attttgatee ggggeeggee 1800 gctgtcaatc tcctcggcga tgacgccgca cctcgaaaag atgtctcgta tttcgtcgaa 1860 ctctgcgtcg agggggatag atgtaacgaa cacagcggtg ttgacccgtt gcttctttgg 1920 tttttgageg tegeeetgee catgaacgaa egateagega tgeataeaeg gegataggae 1980 aaagtagttt ggcgatgtgt gcaactgacc tecteaetge eetgtttgeg etttttettg 2040 agectetgtg etecageetg etegtettea tetacteett caactttata ggettettgt 2100 tgttgccgca gcaagtcatc gtcaatctgg aggacaccca caggcgcaaa agaggcgcca 2160 accagcaatc agtttcacga accacccaaa tccagcagac ttagcggatc atgcagattc 2220 tgttcaagag gaaaagccaa gcgcgcacac accgtcggaa tccaccgctt caagatcgta 2280 tegtagetat attectgeee ategtetgtt tetaaqatqa atttgttgtc gagettggag 2340 aaggagacte gegggteget gteaaagteg gatgggtett gegggaagtt getgattgea 2400 ggcggggaac ctgtcgccgt tgggtcgtgt ttggggtctt ggagcgccat tataggatca 2460 aactaggtgc taaaacgcag gttgaatgaa gaggttgtat gagtttaaag tccaagcctt 2520 tggcttgcgg ggagcgttga tgacacagtt acgtaagcaa cgggaagctt ccagccttta 2580 aacteggtac taataataga gattetettg aacageetaa taattattat cagagttaca 2640 tagacaatta tacaaagaac atcagttatc ttgctatcgt atacactaat aaatcgagaa 2700 cattatatat gcaaatcctg ggtatataga agatgggaac cactccacta atgaaatggg 2760 cacttgccag ttcgcgagac tttcaagcct ttcatgccct cctgctgctg ctttctaccc 2820 tttgcttgaa gtatctgggc ccgacatcag gaatgtaaat ccgttcggac agtacttgtc 2880 accttcaatc cccgaagagg gcggccagtg ccccttgacc aaagcatcgg acccaacgat 2940 tcagacggcg ggttacgtat aaggtcgcca tccatgagga gaaatacttc gctaagattg 3000 tctcaggaag gttcatgcca taatgagccc gtatcaagta ccaaacaaag gcccccacag 3060 gaataaaatt tcttttccg ggggttaatt aatatagtgg aaattatcta acccatttt 3120 aaacaatta acacttattc cctattctt tcttcttatt atcctactca ctcatttatc 3180 ttaatctctt taattttatt ctatccttt tctttatcaa tttactt

<210> 1759 <211> 3839 <212> DNA

<213> Aspergillus nidulans

<400> 1759

ccgactgggc cgacgacgaa gagttcgacg acccctctgc cctcccccc caacaaatca 60 caaccaacaa agacggcacc aagaccgtag tttcataccg cttcaatgac gaaggcaaga 120 180 aagtaaaagt cacccgccgc atcaaaacaa ccgtcgtccg cgaacacgtc aatccgcaag tcgcggagcg cagaacatgg gccaagttcg gcttggaaaa aggtcacgct gctggtccct 240 300 cgtttgacac tacctccgtc ggtgaaaaca ttgtcttccg cccgtctgtc aactggaagg cgcaagctgc ggaggcggag aagaacggcg gcgagaaagg aagcatcaag gaccagctga 360 aggataagaa ggtcaagtgc cggatttgtt caggcgagca ctttaccgcg cgctgtccat 420 480 tcaaggatac catggcgccc gtggatgaac ccggtgctgg tggtgctgaa ggtggtgctg cggctggcga ggatgcggct ggaggtctgg gtgctggcgg tggtagttat gtgccgcctc 540 atctacggaa gggcgctgca ggtggtggcg aacggatggc cgggaagtat gagaaggatg 600 atttggcgac tctcagagtt acaaacgtat gtctcgtcgt tttcagtgcc tcgtttgtgg 660 ttttttgcat cggggattcc ttcttggtcc tgatggctaa tggtgaacgc ctaggtttcc 720 gaacttgcgg aggaacaaga actcagggat ctattcgagc ggttcggtcg tgttaccaga 780 gttttcttgg ccagggacag agaaacccag agagccaagg gctttgcctt catcagcttt 840 gcggaccgga gcgacgccgc acgtgcctgc gacaagatgg atggatgtac gtttctttcc 900 ctcaccctat atctcccttc ttactcgcaa atcccttatc atccttatca caataagctc 960 eqatgetgac ttetecetge tgeagteggt tacegeeace teattetteg egtegaatte 1020 qcaaaqaqqq ccacttaqat tttttctcca ttttcttcqt cqtatcatat catattatct 1080 ttggggatta tttctgcttc gatcggtatt tacgacgctg ttctgcaggt ctacactggc 1140 ctgtttaggc agattggatg actccataca tactcttgcc tcacgagttc ctttttctca 1200 ataaaagtgt catgatccgt gaataacgaa gtaataagat gaagacttta tttttaatgc 1260 tctatggcga caaataagaa attgcagagg ttatagagac acaacatcta ccttgttgaa 1320 agcacatage tecetggtaa egtteggtag teggeaceag etttageaca ttgteteeca 1380 ggtttcattc aaggctatcc cgtgtctccc tgtgtcttag ccgttgaaag ggagaacggc 1440 cgtactggat gtttcaggac gcagtctctt ggtgacactc gtgagatctc ccgtacaact 1500 cacctgtaat cagcctgctg tagtctgcgg gaaagccgtg gaagagagtc aggaaccaag 1560 agtcagaagg gtgagtgact tttgcttgct tcaagatagc caaacggata gcgcagtgac 1620 tggggcagag tggtcatctg catgcatcgg catctagcaa gttagggcca agtgaaagtc 1680 atacctagtg ccgaatgaat agtatccggt tctcagtatc tttgcaaact aggaagataa 1740 gtatagetee cageatatga gacatgtget agteetgatg caaattacte geagatgeat 1800 atgtacaatg gccacctgag cagcggatac tcgggacttg gaagagcatt tctgtaggca 1860 gacagaagta agcctaccgg tatttttggt cttctcaaca gccagtctag ctctctccgt 1920 ttacatacca cetteaggae teaaaaatag teegataage geeceacec aettaeteat 1980 ttcctccagg actggcaact cggctgtcca gacgatatgc aagtcttgat ctccggctag 2040 gctcgacctc aaaacggtcc tgtcaactga caagcgaagt agagtctgat ccatgtagca 2100 ttgatgtttt gtgattgact gtaacacgaa agcagtcgtc ctcgccgtaa atgggcatca 2160 cattggcccc cggagctttg ccttcctatt ccccgagctt ctgacaagtg gacgaccagt 2220 aaagagaate aactgeeggt gaaggggeet eggggegetg teggeageta gaageteegg 2280 ttacattgca tagaatccac agtcagtctc tggacaacaa ctggcgaaga tgaggatctg 2340 agaagcgcca ttatgtcatg gaggacaatt atcttcgtct ggaatctgaa acgggaagga 2400 ggaaaggcgg cattttcgca ggtggcgggt tgactcgccg tgtttctgtt ctgtgtgact 2460

tcacctaact cccaactggc gaggtctggt aaaacaaagt ttgacttctc ttgacaagcc 2520 aaagegtega eegaggeaga ttaceggtgt eetgtagetg tgeteagtgg agaaatagte 2580 aacggtagtc ggcggtgcgc atcgtggatt tgtgacagta gagttggggg cctgtctacc 2640 cttcatttct qaqaataaac ccaaqqacct tgtgccaatg aattgattat cgagcttctg 2700 cettetatgg caccaegteg atcagtetee egeagtatee agatgeatge caccatteee 2760 ttgaagcaag gtgtcgactt gcattcgggg cccatgatat tagtccactt gctcgaaatc 2820 gatttcattg acgtggtcgg cagttaggac ttcctgccca ctcaagggat atcttggtct 2880 qtacqqaatt gatqqcactt qqtcatcqqc cqqccctcqq cttattqatc taqcaqaqaq 2940 gccagagcga ttaccagcag taattggccg cagctgaagt agtacagcta acttgaacag 3000 qqaqtaaaat cqtqqtqqqc qtcaqgcata gccacaagaa attgcagaat cctggccgct 3060 catgeggege ccaaggtaat tgegeagaac aactgetgeg cacatggace gattatgege 3120 ctaagctagg acgcgacgca gacagtttgg aatacggaag aggcttgggg gtgaatgtca 3180 qccatqqctq attattctcq taccatqact ctqaqataca tcctqattaa tctccqaqtt 3240 taacttgatg tagagteggg tgtaceagat eeactgeeta ggeagaeeeg tttgeaegtt 3300 agcatatggc atgtaacgat ccaaacctgg ggtctccacc aagtatgttt gtgttctggt 3360 cggcgtgaac gttcctagga atatcgcaag tccaatcact caagcgctct gtcttgggcg 3420 cttcagtagc cataagtgaa agtggcggta aatctgtcta gagtctatgt ttctgtgacg 3480 gataattcgc agtagacctc agtctgaact atacggacca agattcgagg gccgcaatcc 3540 gcaactgggt agccgggtcc cagagttgga acctttccag aagatcgaaa cgcgtggaga 3600 tcaagggatc ctggaaccaa cggccgaatg ttctggacac aaagagcacg agctcactga 3660 ccaacgtcga tccgaaaaaa gccatctgac atacaccttg gtgtttcaga cgatcataac 3720 ggegagetge ateteggtat getategace tteaatgttt tgeategtge caacacataa 3780 cgatcgtgct atacagcgga gaggatcggg aagcgcacta gaagtatgag ctcagattg 3839

<210> 1760 <211> 3904

010 5313

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 1760

60 atgccggatg tgtcgtcgcc atgatcgcca aagatggggt aatcaggaag acgaggtgga 120 aacttagtcg atggaggcag gcgctgcaga cgtgaggtta tgactggaat agatgaacaa 180 ttgaggctac tccaaaatat tctgtatttg gttggaaggt gagttactac agctgcggca gtttggagtg acagagaccg agcggcggct cctgttggtc gtttgtccct cggctcggcc 240 300 tegagagtea ceteactetg gggttggetg gaegtagete gteaegggat tetecagatt 360 tegtgettgg cgtcaaacaa acaaccaaca caettcatca aacatetcag teaaaggage 420 accetettt ctaatgagga cgacagettg ggttcggcca gcaaagcage tgattcctga 480 aattgcaata tagcagcaat aatcactaat caatcatcgt ccggaagcga aacatattct 540 atgacgcact cttttcattc catactagat ccttctaata tactattcca atattcttct 600 atteaaatte tttttacetg gggtataett getgataeca ttateecaet aatetttegg actagcacca ggaataaaga aaagagagag agagagagag atggcaagag aactattaaa 660 aacaaatgga catggacgtc aatgcgccag acattcccat tccacctagc acggatgtta 720 780 gaaaatctcg catctctgct tttgtcgcta tcgatttcga gttctccggc attgcattag ctgcacacgg aacaactgga gctgggccac cacatagctt gcagcagaga taccaggaat 840 900 tgaaggaatt tgctgactag taccaaatac tccaagtcgg cttaaccttt tgtcaggagg atgttgaggc aggtcagatt atctgcattc tttttgagct ctccgaaata tgtgatattg actgtctgta gggaagtata ctttgaaacc atataacctc tacctcagtg caatcattga 1020 tegtaggetg taegeegaga gaaattgttt atteeagage ageggtatgt aegeteageg 1080 ttattttcgc aggactgagt cttccatgca gcggtcgagt tcctcctgga gcacaaattt 1140 gatatgggcg ctttgtacag aacgggcgtg acgtacgtat cgagagaaga ggaagcacgg 1200 gctatctcaa aggcccaaga aagatgtata atggcaccgg tgctgacttc aatcaatgga 1260 cgttgacgag accgactacg aatctctagc acttttgaaa ttcgtccgga agctcataga 1320 cgaatggatc gcgctcggtg atataaaggt tcaattttga ttgctgtcct acctaatcaa 1380 ttatagaagc gcgataaata cctcaaaatc ccgccacctt ctcgccaaaa ggaaacccag 1440 acactegaca gegtgeette gatattaaac aggtteeaaa agagaetggt ceaceaagtt 1500 gtcgaagtag agtatccaga ctttgtcacc atcggacggc ctggattcgt acagattatt 1560 gactatgacg agaaacgcga agttgctgtc cgggacaaaa gggtccagtg gtgtcaaaaa 1620 cgagttcgga agcagacggg tttcagatgg atcgccgaag ccctggcttg gggtgatctt 1680 acgcatetea geaceaatta etteeetgge gteagaggea acaetgeate aacggageag 1740 ggcaaatcac tccaggaatt tgttgagaac ttcaaggcac gcctcaaagc tcatcgacct 1800 attettgttg gteacaacet etteacegat etggtttaet titteegetg ettitttigg 1860 aaccctaccg aaccatgtag aggactttca gtccatggtg cacaagcatt ttcctattgc 1920 catcgataca aagtaccttg ctacacatga atgcgggtcc accaatccca tatcttcttt 1980 tacaggaaat caataacagt ctgctgggaa tatctaaacc aatgagtgga tgacgcaata 2040 tataactggc gacagacaga cetetttagg catacateet catttegeca ggtaegaaat 2100 agagaaaatc gatcatgaag caggatacga cagtctactc actgcgcaga tattcgtcaa 2160 acteteagee cagettggga geggaagtea aattaggeee geaggateae eeteaaatae 2220 atctttgacg gcggcacacg gcctcaacaa ccgattttcc catttgcacg ttgaagagac 2280 gagcaacgga ctggccagcc cgctcgtggt tgctgaaagc gaaaggagcg atggggtctt 2340 gggccagcaa agccatgcag aggagatacg actggctgag aaaggacttt tgatctccag 2400 accgaatttt cagttctgga gagtgtatgg caacaattta cgcaactttg gaaccaaaga 2460 gaaggtttgc cgtgtaaaga acgctgcata gcccttaaat aatgcactac ttggactcaa 2520 tctcaaacca tctacaataa cccttagtag aatctccaaa atatgaagcg agcaattggg 2580 atgtgcgcag catctatcta acagtacacc ttggattcaa gaaggtaccg ctagcgaaat 2640 cagctgcaag cactctctct gagcaccgca atgaatgatc gactggttgt agaagaaact 2700 gaacgcagtg acgataagga tggtgctgtg ataaagaaga aagagaaaat tgagtgcagc 2760 gggaaaattg ggtagaagta ggctgaagtg gtcacgtggg tacctagctg tttttgggct 2820 agccaggccc gacggggacg ggaaaacagt gaccgacgac ttttctcgag acttgctgaa 2880 gggaccgtag gagcctgtta cgaccacact aacagccact tggagatgtc ttcaggatcc 2940 aatggtgcca ggcgcatagc ctcaatactg cgtaagtaac attaggcttt attcccattg 3000 agtetettet gatgtegagt tgeagggeet tegattgeeg aacagegagt gtgeageage 3060 tgtcaagaga cacttgtccg ccgcaactat gcctccgcgg ctacacccat ttcccctaaa 3120 ccctcttcgt cgacctcatc tacgtttcct gttgtgagcc cgacttatac tatcaatgct 3180 ggcgtgctcc tgtcccgtcc gccccaaatc acacgcgacc tcaccgattt tgagaaagcg 3240

tactacttet accagaageg tetgaacgag egaetggege teccatteae gaaatactte 3300 tactttaage geggaacgee cettgaegag gattggaage gtaaggteeg agagegeeag 3360 accgetgege gegatattgg caagtacaat gegtaeggta aagaggegtg gaacgatgaa 3420 etgettetgg gegecaagga gteggaaceg gagcatattg ttgaggegtt gattteggat 3480 geeggaggea etgecaacaa caegteteaa gatacaagea agcaagagea aateccaagg 3540 eegeateece gggtaacgga ggeggataag aagggtgaea eeaagagtet ggattegget 3600 etteagagga eeetgtaett gettgtteaa caeanggaag gatactggaa getteetage 3660 teteetgteg ettetggta aaceettega teggtatget gtgtaeceea ettgetgtt 3720 egggegettg etaatattgt tttgatagge egetgaacgt gtgtaeceea ettgetgtg 3780 tgaacatgae acctttatgt egateceaee tgegggeate gtgtaecaett egaaaceeag 3840 atgacagaea eegegeeace tagegggaga geatettatg aagaceatat geeggeageg 3900 actt

<210> 1761 <211> 3356 <212> DNA

<213> Aspergillus nidulans

<400> 1761

gaaaactcca taagattcgt gctggcgaac tgaacaatga gagcccagaa taaattttaa 60 atacgattcc agcctgatat tgaataactg aactttgtac gctacccacg ggggtgggag 120 cactgtaata gactgagaat tagacaaggt tcttaagtaa agcaggaagc tacggcgatt 180 tactagactg agatcaaatt tttgttagtt ttgtcaagct gtggaaatac tttgcagagg 240 atatgcctta agttttgtat ttgtgctgat gaggaataat acagccaatt catgggcaat 300 360 atgatgacgc tcttagcaag cgtcgaatgg ccctgcgaga agtaggcaag aataatctta ttetttetea etgattttea tetttttega gteeceette tttetteggt tteateeatt 420 cattttagac ggcatgagct gttctatctt gcccctctat gctacgccag ctgaatcgtc 480 ccaacagcac aatgaagggt ttcaggctcg acaatggggg ctcgaccatg ggcaggccgg 540 gtagaacagc accattgcca gagcagttat tccgagtttg aagaatggta accgacgagt 600 tgagcgctac aattgaattt attggaacct caaacacaag catcatgctc aaataattaa 660

ggaaggaggg tatagcggcc agagctcaac catcctccgt tgttcacaca gtaacagcgc 720 780 cttgtgcggg actgatcttc gacggctctg tttgaaatgt atgcccactt tgtgagacaa 840 agacategat atcccegtet gtaageetat eeteateeae ggeteeeete eegataaeae cccttttcct atccctcctc tccaggtatg caatcaaccc tataaatggc agcgtcaagg 900 960 ccccaqtaac caagctagcg aaataacccc ttcgatagtc cggtgcatct gtgacagggt agaaaatcaa cggccaccaa gtgacaaatg caaaatcaaa cgagttcatg aaccccgtcg 1020 cgatggcgcg cagctgcacg tcatggccgg tcacgtcggc caaccagcca taccatactg 1080 cctgcggcgc gtacgtggtg ccgagcaagt agaaggcgaa gaagtagcct gctgttgggg 1140 gatetgagaa gagaatggeg gageetatga caaaggttag geeaatggea atagagaett 1200 cccatcgcga acgcagtttg tcagagacga cagcgtagag gacagttcct actatggctg 1260 tggcatagat agcggttggg tagttgttct gttgcacggt tgtgtatccg cgcgaggcca 1320 tccacagcgg catgacgttg ttagaaagac tctggacgca gagcgagtat actagaattt 1380 gttagagtgg agcgcctcaa atagtcaagg agactaacgc atgaagataa gcggcaagag 1440 atagaactgc cagctccaaa gcacccgttt gaagaccgtc aggtcccatg actgcttgct 1500 gggagageeg agtegagegg cegeatgete etteteetee gegtteaaat accaegeegt 1560 tegatggaca ggcagategg ggatgaagaa eeageetgea ttgtetgaat aageetaggt 1620 tttatttttt ttttctttac ttattttgag ggaaggggta ccgaataacg cgacaggcag 1680 agtcatgacg gagacaatga tgaagatcca tttccatgca ggaaggccac ccttgcctgc 1740 caggetttte aacagteetg ettgaateea gecaceagee atagaceega gatggeeaaa 1800 gacgcagaag atggcgtttc tggtccccag ttcagatcgc ttgtaccatg aaccaaggat 1860 gaacagggct ccgacactat cggggtcagc cacagcccga gccaacaaga ccagacctac 1920 tatgcaatcg ctgaaaacgc cccttcgata gcattcaaca gaatgacctg ccaggcgtgg 1980 gtcgtccgaa acgtgaccat tgtaaggaca ctccaagtaa cgtttgccgg aacgaagaca 2040 tgtttcggcc gcaccagagt gagaagactg gtccccggta tctggcaaac agcataggtg 2100 accaggtagg cggttctcat gtaattgtag tccttacctt gaaagttgag ggcctctttc 2160 attccgctga tatatgctga ggagtagctg gctctggtga cgccgaaaag aaaccagatc 2220 aaggagaaat acggcagtaa tgtagtgtcc agtttcgcca gcaaggcgcg atctttccca 2280 tcggagcccc agagccaaat ggctaccttt gtgcgaatgg acgccattgt ctgttgagac 2340 tcgatagaag tcaaggcggg ggtatctcag ttggagacgg actgaaaatc gaatgtgaaa 2400 atggcgaaat cgggggtcag cctgtgtgac cggattgtgt gatcgagacc cgataagcgt 2460 catgoogttt agatatootg cgtcottgac agagotacat agtotagaat ttcaaataat 2520 ggaggaccct ttacgcgcaa aaagtaggtt cttggtgtct gtatagggat aaattccttt 2580 catggatgca accttatggc aagtcaatca acgtgctctc tagacggcaa caaaatttag 2640 aaagagtata tgttactaag aatataagaa agggaagcag cggccaccgg ttgagcacag 2700 aggcagatat gtacttggat tttcggctac tcttttgtct ttggctcctt ttgcttcttt 2760 tgcacagaca aaaacgtctc ctctcccctc cgctgtacct tgatctcata ctcgtcatcc 2820 ataaagteet teageegeag etetgtegte etecegagte ettecagete atecagtege 2880 tcaagcgtcg ccgccagatg ctcctcaaat tcagggtcac tgcagaccga acgaaaggcg 2940 ttctgcattg gcaccgaatc cgctcttaca atggcgtcgg cgtcgattgc aatgatgttc 3000 atctcatcca gcttcttgat cagatcggct cgggtcatga gctcttgcgc cttgtgcagg 3060 gcgatgcccg gtagtccaga gacgtagtgc gttcggtctt tggccttttc cagctcgacg 3120 agcgtcttgc cgaggagcat tgcgccggac tactccttgt tagccgggtt gattcttgat 3180 aqcqtqqqqq aaacttaccq agagatcctq ctgqtcctca gccttqtcat ccatctcggc 3240 gcccaaaatc cagcatttac acaacagcca gcgcttctct ttctcacaaa tggcgtgaca 3300 ggtcttgagc atgtcctggg accgggcgac ctgatccctt tagtagggtt aattcg 3356

<210> 1762 <211> 1206

<212> DNA

<213> Aspergillus nidulans

<400> 1762

gacctcccca ggtcctgcaa ttagcctgct gtgctgttct atccgcatgg cccaattcaa 60 cgcccactat tatggccttc tattcctga ctttcgccac ggcggcatgg gggtatcttg 120 tgcactgtca tgacgtacgg caagaaccta ctcgtactga cctcttttga gagattccct 180 cctcgcatgg ctgggagaga tactcaaaaa ggaaccagaa gcgcgctcgc tccttgtcgg 240 tgcctcggtg actcttgttt gtcggtttcc cacagtaacc ataaggcata cttttcttga 300

cgggggaaat tgtagatgta ggacacgcaa ccatacctct ccgtgcatgg cggacagccg 360 atagececae gtacecatta gggtteecee ttgetaegge gtttgeegea ggaageattg 420 480 cggcgattct ggaaatatat ctctatttga ggaggtaggt tcccgtgttc gtattctgtt tggttatgct gatagctggt gttattcttt gcagccaatc gtacatctta gaacgactag 540 cgcctcaaca ctatcggatg ctggggacga tgggcaggtt cagaatgctg atactagcat 600 gagtggcaag ggagctgcta gtggtgtgtg ggaggtgcgg tcgtagtgtg tctgggaaat 660 720 atgagetgga gaagggtgtt etaetgtaae tteagetata tgeeggtaea ateaegatat gcacagagtt tgaggccaat tctcgataaa ctgactgatc taacatactt attaaggatg 780 atatcaagag tataacaaat tgggaaccac agtacagaag tctactgagc taaggatgga 840 taaacccaaa gcttggtatg gttatcccat taggaacctt ggaaactgca caattgctgg 900 cgggccttcc gggccgaacc atgaagtaaa agagttgttc tcaccttcaa tgacatcaca gcctaattca gcaccatcat tacaacaaat ccgcagcaca atggcattgt tagacctccc 1020 aaaacctgct ggctcaacag tcggcgtctc ggttatagtc ggcggtcata ttaccgttca 1080 aacgaggttc atggtcaaag agcaagtttc agggcacagc tcaatatgcg cgcccagcta 1140 cagctttcca attgaaaaca aaggcaaagg gtaaaaagat cctagtattc tatagtgtca 1200 1206 cctaaa

<210> 1763 <211> 3066

<211> 3000 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 1763

gcgaaaatga cctatcagag ccaaatagta tccgaggctc ggattcagac tcgctcctcc 60
acatcccgga gcagccaaca gaccgttttc aaccgccata tcagccagta acactatcaa 120
tatggctgcc acaacaaacg accagcggcg taaggttggt ttttttttca aagctcactc 180
tgacccccgc taattattta taatgggtta tcagcccagc agcttaagat ccattcttgc 240
gggctctacn agtggcgcaa ttgagattgg tagaactcag gatactattc aacttcttcg 300
aattggagtg ctaacatgat gtagcaatca cctatccggc tgaatgtatg ctttgattct 360

ctcacgctct tccccagacc taggatctaa gtgatttgta gttgcgaaga ctcgatcgca gctcaatcgc aggctacccg actcgaagaa gctcccatgg ccgccttttg gaaaacaatg 480 gtacgccggt tgtacaacat tgattattgg aaattcttta aaagctggaa ttcgtgagtc 540 cctggtgtta tgcgtataga ctgttgtggt ttggggcgct gatacattgt cgctatactc 600 aggattcgtc gcgttcgata catttaagtc gatgctgcag gatcaggatg gaaagatatc 660 720 aggcccgaga actgtcatag ctggctttgg ggctggattc accgaatctc tgctggctgt 780 aactcccttc gaaagcataa agacacaatt gtcagtctta ccccatatcc cagttgttct gtctatgcgc ctggctttca acaatcacga gacgggtagt agctaatacc gtactctttc 840 900 cacctcctac aggattgatg accgtaaatc cgccaaccca cgtatgcgcg gatttttcca cggtagcggt gtgatcttcc gagagcgagg tattcatggc tttttccagg gattcgttcc gactacggct agacaggccg cgaattcagc gacgcggttt tcgagctaca ccatgctgaa 1020 gcagatggca gagggttatg ttgcacccgg tgaaaagcta gggactgcaa gcacgtttgc 1080 ccttgggggc atggcagget taattactgt gtatgtcaaa tatagttcac aacatcatct 1140 caaaagacat actgacaaca ttatctagat acgtgacgca accccttgac accgtgaaga 1200 ctaggtttga ccaaccagct cttagatttg ggcgagatgc tagctaacag cgaaatagga 1260 tgcaatcgct tgaggcaagc aagaactaca aaaacagctt cgtctgtgcc gcgcgaattt 1320 tcaaggacga aggtatcctg accttttggt ccggggctgt tccgagactc gcaaggttga 1380 ttatgagcgg cggcatagta ttcacaatgt tcgttcacgc cgaccaatcc tattttgtga 1440 cttagtgact aacgcgctac tcataggtac gagaagtcta tggacatcct cgactccata 1500 gatccqqaag qaaggtatat ctgaaagcat agcgcggcat agagaaccag atttagagca 1560 acgacgacga teegagtaaa actgttgtge egatgeagea eageggegtg tttetegggt 1620 atgcaacatg caatagagga agttgatgta cgttcaaaat taaaatgttt gactcccaaa 1680 acgtttacac tattgttgtt tcttaattat ctcagaggtg agtgccagta tttcgcggtc 1740 gatgagecag gategeaege tatecatgae ettgaetagg gteteaeete eetceaaeae 1800 gttgtccagg ttatggacag tgaaaccact tcgatgatct gtgcagcggc tttggccgta 1860 attataagtg cgaaccttgt cacctcggcc cattcgccct ataccgccca ttgctcctct 1920 tegaageteg actaattett gteeegegee teetgtegtg etteegeeag etttgeeege 1980 agtatctgcc acgetttttt gegatttgca tgctgggacc gcgaatcctg catcgatacc 2040 acaatacctg tgggcatgtg agtcagacga atggctgatt cagtcttgtt tacatgttgg 2100 ccaccegege caettgeteg cattttttea gtacgaactt ettgeggate aatgtaatag 2160 tcqctatttq ggtcqtcaaa gttgaacgcg ccgtcaccgc cgcctgtgtc cgggaagctg 2220 ggtaagacca tcacactgac cgcactggta tgggtgcggc ctttggctcc tgttgtcggg 2280 actctctgga ctcggtgtac acccgattcg gtccgtaaga gatcgtacgc cccctctgct 2340 tctacttcca aaacagcctc cgttagagca tctgctcggt tgtcccacgt tcaagcttca 2400 tgagagtaga ccgtaaccct tgatgagcac aaaatgcgac atacatctgc agtaattcaa 2460 aggcaaagat acttgcttca tcccccctg cacctggacg tatctccaac aagcatgaaa 2520 ggtctgcgaa aggatggcgg ggcacgaggg cgcgcttcaa attatccgaa atcgcagtca 2580 gtttagcttc cgtggtttgc aattcttcaa cggcaatgga cctcagctcc gcttccgtat 2640 ctggatcttc tagcatggaa tgaagctctg acattgacta caaagcgtca gtcaaagatc 2700 caatttggtc agggcggaag aagctgacct cgttggcatt gctccattct gcccaggctt 2760 ttqcaactqq acctaqctca ccaqcqcqcc ttqcaatttt gggatcaaag gaggttqtca 2820 gctgattcga aagatttgca tgttcggctg caaggttgcg agctcgcgtc aggagagcag 2880 gtgataagag tttgtctggc gtaaagggaa gcatcgtcag catgtatcta ataaggtgga 2940 agtagtccgt ggggacgctg tataccagtt tgtagacctc tccgctggta gagcagccgc 3000 tggttgcata ctagtcgcgc ggggcgcacc agacatcgag aacacacacc cagagtcgaa 3060 3066 agcatg

<210> 1764 <211> 3362 <212> DNA

ZIZS DNA

<213> Aspergillus nidulans

<400> 1764

aatttgccgc gtggcttgaa agtgttggaa gatggacgca ggcggacgaa gtgtacaggc 60
ttggcatcga ccgagaagca cgaccaactg aacgtctgat ccgaaaatac ggtgaatttc 120
agagacgcta tgaacaacaa ccgcaggaca atggaccttc gtcaccggcg ctccctgcag 180
tgcgcccggc actggccgcc aaagtcgacc cgttcgcttc gagtgcagcc gcacccacag 240

atccccaatc ccagcagcag ggttcaagaa ccacgaacgc gccgaagaca aaatcgggga 300 agccgaagat ggccatattt actgataccg agcctgcagc aaatcaaccg gctttaggcg 360 cacaaactaa agggtgggac agtcttgaat ctaggcacga tcgacgaaag gagaaccaaa 420 480 tagaggccaa accetgggcc ggggaaacat tgaaagetgg aaggaaaget cegccaaagg agaagctagc tgtttttagg gatgaggtaa gttttgtgat ttattcaacc ccgttcgtca 540 600 gcattccqta tatttacqat cataggacta attggtggca tgaacctgga ttggtttact 660 gttatgtatt cagtcaaagt cagatttacc aaccaaagag gaaatgcaat caaacccagt tccagagcac cgcatacggg aagccgtaaa cccacgtaca ggaaggagag agcgagtctt 720 tgtcgacctc gatgcagtgt accccgatta taagaatcct agcattgagg ttagctttga 780 840 qqaqctqaqq qccatgaaqc gtgqctgqat qgacaqggac tgqcgcaaga aaggacctct caagcagate tetggcaacg etgtecaaac agageetaat ecatttaacg acaaageeet 900 tegagaceag ttecaacaaa agetgtegtt gaggaataca gatgaceatg etttgaatea acccatcgte tetgagaaga eteatgaege caaagetgee aaaggaegga agetgaaagt 1020 ccgcgaagtt aagggcgaaa cacagacaag tgagaaacta tggcctacct gtccctaaat 1080 gtcttattag gctaactttc gaaatagtca aaatgaaatt tgactctccc actggaggca 1140 agateegeeg caagageace geagageeta egatgacaat ceataegege getgeaacag 1200 acgaaatata cagcattttc aaccagcctt tgaaagcgga gaccgaaaat gtggccgaaa 1260 gcagtgattt cgatgatgat gactatacca gtgccggtga aagtacggtt ggacgaatat 1320 ctgctgcgtc aagcgatttt ggggacgaca cattccacaa atcgttcgat gaaggtgacg 1380 gcgatgactt cgaaaacacg agcgccgaca gcgttgtcaa tggagaatgg actcgatttt 1440 ccgctgctga actgggcgct gaagcaacct cgttccactc agaagctgct gacccaacac 1500 aatcaacgat tcaccatgcc gaaagcgacg acacagaaga ccaggatgct ggaccagaat 1560 ttgagcagee geaaaggeeg agatteatte cagagatgee agaggattat gtaceaceeg 1620 ttggaccgta ccgagatcca gtcgttgtgg ctcaaagccg cttgccattc atgacaccta 1680 ttgttgaacg caccgagcat tcattccctt ccatgactgc agcgcggtct aacctataca 1740 gegegaagae teettegaae gtgetgaaee egaegaeaae acetegeatg eeeeggatgg 1800 gaaatettet ttecagteeg ettecaaegg aaacaeettt teatggacaa accatgeaeg 1860

qcctagaaga tatcattgaa agtcccaccg caaacaggtc aggttcttct agcctgagag 1920 taccatetee cacaaaggat tecaateeac aaggtaetat aateaaagat aetetttgea 1980 atcccataga ccggtcgatt cgagacacta tccttcagga attgcacacc acgctcgctg 2040 cqtaccctqq ctaccatqct catccqqata cccaatctca ttacqcccct qaqataqaaa 2100 qqttcatqaa aaqcaqcaqc aaqcqttcca qaaqtqqcqq cqaqqcqqcq tttqacqtqc 2160 cgatcatcga tccgccggga ggagagcgca gttatatcat cagacgggag ctcggtgcag 2220 gagectaege tecagtetae ttageggaga geattgacaa tetagaetet gaeteggaaa 2280 tggaatccgt tggcagcaat agcgggcgct ctaccgtttc caacagctta acgcggcaga 2340 aaacaccccq ttacaqcttc qagqcaatca aqctagaqgt tggcccgcca aacgcctggg 2400 agttctacat gatccaaacc gcacatcacc gattaagcca gcttccaacg ctctcgcgtg 2460 cagoogacag tatogtacgt gogcatgaga tgcacatttt caagaacgag agcatoottg 2520 tcqaaqatta ccqcccacaq qgaacgttac tggacctcgt gaaccttgtc cgcaacgaag 2580 ggatctacgg cccggcgact ggagagggag gcttagatga gtctctagcc atgttcttca 2640 ccattgaget etteegeact atecaggete tecacacetg eggeattett caeggegaca 2700 tcaaagccga caactgcctc atccgcttcg acgacaaacc agaccccact cagcagatac 2760 tegatgaaaa cacagateee egegaattet actatteace tteeggeget tttggetgga 2820 aaaacaaagg cettgeeett attgactttg geegegggat egacatgegt geattegace 2880 cgtctgtgca gtttcgttgc agattggaaa acaggggaac atgagtgccc tgagatccgt 2940 gagatgagac cttggacgca ccaaattgat cttttacggt cttgcgggga cagttcacgt 3000 tatgettttt ggaaaataca ttgagagegt cectacegat geaageaaaa aaaegtateg 3060 gtttcgcgaa ccggtgaaga gatactggga aaagattttc tggcccgatt ttttgatctt 3120 ctttgaatcc tatacggacc gggggtttga tggagcaaaa ataattgtac cccccacct 3180 tcaggccatt tcaagcaaat tccggaacgg ggaaagtggt ctttcccccc aaaaaagggt 3240 ggtttaatcc aaacgcggat ttttggaaaa aaaaaaggga gacccattca attctcccct 3300 tttgttcaaa acaaaaggag gggttttttt tcctcctttt aaaaatgggc cccctggggg 3360 ct 3362

<210> 1765

<211> 2512 <212> DNA

<213> Aspergillus nidulans

<400> 1765

60 ggagacgctg gggagtcacg agaactgcgc gcatctagag gggtcttggt agtagtcctt catgccctcc ttagtgacgg tgcggcggat gacgaacttg cggacgtcgt ccttcttgtc 120 aagaccgaag aagttgcgga tcttggtggc gcgcttggga ccgagacgct tgggaacgac 180 agtgtcggtg agaccgggaa gctcccctc accctgcttg acaatgctga gggcaaggac 240 300 ggcgaggtcc tggccagtga tggcaccacg aacactcttg cgcttgcgct caccagtgcg gcgggggcgg tagcagctgt ggccgtcggc gaggagaagg cgggtacggg tggggaggag 360 aactgtacga ggaacgagtg agtttcttgc tttgtcgtgg gagtcggatt gtttgcggca 420 gtcgttacat accaccctgc ttcatgggga aacctgtaaa ataaaatcgt tagccatttg 480 ttcctctgcc gagtttgacg atctccccgc gcgacaagtt aatttcggtg tcgtatccat 540 aacccacgcc caaacgccag aattgcaacc aaatatcgga agatccagtc gtaccttgct 600 tgtcgttacc accagtgatc ttgaagaggt aaccettgaa ttcgtcaccg agagagtcgc cqqqaaccta ataaccaqaa aqacqccqca tcaqccacca attctcatat cattcaccqt gcgttcttca tttgtgtttt cttttgcgta ggacggatat gtgcttcggg aatagatgga tggttcgact gacttcggtg cccatgcgct tctccatgaa aggacgaagc ttgcgctcat 840 cgtcaatttc gacgatcttc tgcgacccat tggccgggta ggaaatgttg agcttcatct 900 tgacggtgat gcgcggtcaa gacggagggc gcgggattgt cgacggtcga agtggtgcgt teggtegtte aagegaaaac aagtgtggat tittgtgteg atticettit ggtgtagega 1020 gaatteggte tgtgggtgge tgagteagee actageetag gaeggttagt getteggtag 1080 ggetettagt cagttgacge etgaggetgt egeaacagag gtaateettt atteaggeat 1140 cgattctgat cttctctccc aaaatcgatt tgatcttcgg aaaatcgttc caatgggaca 1200 agtctgtact ccgggtccta gattatagca gatggacctt tcaaacaatt tcgggctcta 1260 tgettgeaga etttetagta tteeetgaca eetteetett eegeageagt aegtagaeta 1320 ggtgacgcaa tccaccgaca tcctccagtc tccgtgcggt taaatctcca gaaggagaac 1380 gtccatgata gttgccgtta gccttacagc ttacagggaa acctccccct ttctctttct 1440

tocacttocc cotgaggeat gtatatacca ottoctocca atatogttag aatattactt 1500 cgttcgcggt tcgaagtctc acgcgacaca ctggatatcc accccgggcc atctccggct 1620 cttgattttc caatctccat tcagctcttt taagtaacca acaatacaga gtctctagcc 1680 tegaatteee ggettgtgae etaettteta gtateataee gggeagttgg gggggaggte 1740 catatttcta tacgaacgcc gccaattccc gactctccgg ttttactttc tagacgctga 1800 gcgactatcg cggatagccg aaacctgcgc atacgtcttt ctgtctgatt atgcgcccaa 1860 aaatgaggct taccagcaag tttcacatcg tttgcgcctt tgcggtgttt agcatcctgc 1920 tttcagccct gtttctcggc tcgcagcgct tctactaccg cagggttggc accgcggacc 1980 agccaaccgt ggagttccag gcgccagcct cacctgaccg cagactggtc gtattcggcg 2040 atacatggag tgataacaat gctaaagaga ttcagggtgg gaaagtctgg accgactggc 2100 tctgctcttt tgtaagtctt gactgcagcc ggccagttcg gatataccgg ggtttagcta 2160 actgaatgac ttcgcagttc tcatgtcatc atgagaatct tgcgcaaact gccaaatctt 2220 tgaaggggac ctatatagga tctgtcgtgg ataatgagga acttgcaggc accttcctca 2280 acttgtacaa gtcgccgttg tctgatttca gagcccaggt caaacagtgg gtggacactg 2340 agacaaaagg tatccagcaa ctggacgaag cagtcattca tgatcgccgc aatcgcacca 2400 ttgtggtagt ttccgacagg gtttgggact tgtggaaaaa gataaccaag gactacgaga 2460 cagctaccaa gtcaggagcc acatcgttaa agttataatg aaacagttcg ag 2512

<210> 1766 <211> 4008

<212> DNA

<213> Aspergillus nidulans

<400> 1766

ttatgcgttg cgcttaatga ggttgcctct ggtggaggtt cgaatctcat gacacaggag 60
gacattgata acctcacacc ggaaatctac gacgaaagag tcaagggaag caaatgggtg 120
ttcgtctcag agcacgcctt catcctcgct atatggtcaa tgaagacatg catgttgatc 180
atatacgccc gtatcacgta tggtcccaat tcaccggttt actgacttct cgcatctgac 240
ttgacttctt aaacagagag ggattgcccc aaaggaaatg ggtcaactac cttgccatct 300

ALL THE TAXABLE TO A TOWN TO THE WASHINGTON AND THE WASHINGTON TO THE WASHINGTON THE WASHINGTON TO THE WASHINGTON THE WASHINGTON TO THE WASHINGTON THE WASHINGTON

atgttgcgct ggggtttatc gcagtcgagc tatccctctt cctcatctgc cggccgctat caaactactg ggcagtgcct actcccaacc gttagtctct cccactcgta gccttatcca 420 cgctgttaac cacgctgcag cccaatgttc cacttttcaa tactacgaga tcatccaagg 480 atgcgtggct atcactgctg atategccat gcttctaatc ggactcccac tcctaatgca 540 agttcgtgtc ccgctcaagc agaaattgat cctcgtcatc atcttcggaa tgggagtctt 600 tgtcattgtt gccgccatct tgactaaagt ctactgcctc gtcccggagt tgatttcgta 660 cgtctacatg aactggtatt tccgagaaac tactgtcgcc attctcgtca ccaacctacc 720 teteatetgg tecettetge gegaegtett eeeegegete aagagetgga eagggggete 780 gaaacgcggt accaaccgct accgatctgg cccttggaac agcaaccctt ccggtcttaa 840 gcactteggg aceggeactg gcactaceca ectaegeteg ggcaaegagt teceaatgea 900 caaatacgat cgaagcgttg tggttacacc gcagaaagat atgtccgagg tcagcctgga 960 acatacetae tetegeggee agagegatga eggeteagaa egagetetge aaateegaca 1020 agacgtgacg attgaggtca tgcgcgagtc acgaccacca gcaaactatc acctccacga 1080 cccgcaacct taagaaaagg cacgcctatc aaccttcgct tctttcctgt atataatttg 1140 tetgetacce egagecetgt teetttgttg tttgteatge tgttacgaet agaecegatt 1200 ttccctgaat agattatctc ttcggagttg gaagtacacg gataccacaa tatcatcatt 1260 gtttggcccg agctagaagt cagactcgct gaatctcgaa tccaccaaac aacaaaatgc 1320 ctcaccgatg atcggcatcc cgtcccattc tccagttttc cccatttcct caaccatgga 1380 atcogctctg caactactcg atcgggaatc tggtgtgttg tctgcagatc tcccgagcgc 1440 cacgtgatgc ttcctgtaca tttctcttgc ctctcggccc atgccatcgg gctaatcggc 1500 aacactgtcc Cttcctctta ttaaacattt tgttccattg aaagcagcag atcgatatct 1560 gcaggatatt ggagcatcgc caaattctct aacgatctta tgagcttcac tgaggtgtcg 1620 tacctgcgcc atgcaggaga tgagcaattc caaatcttag cgcccaaatc tcggcaaata 1680 agcggcggat aaagaattct tcgagaaatg acggcaatgt gcaagccagt aaccccaatc 1740 agcatgtgga gactgtagcc cacagcagca gcgcatggtt ccgggaattc cgattattcg 1800 acaagagcga tcgagtcaag catcggttga cttcattctt ggcggtcctt gtttcgaaat 1860 ctattagcgc tcctgcgtgc ttcatactgt gtggcgagac gcgtccgtct caatatctqt 1920

tgcaatcctg ccgctaagac ttcgaataat ggtatggtga atgcgggaga acctggtctc 1980 ccactcacga cggtatacag atctatatca cggagtagac cgtcactatc gcggagcgtt 2040 tagctttggg caccggtccc atataatcat atctgatcaa agactgaacg tacaaggtta 2100 cggagtatcc acttagtaca gggcaaagca atcgcttaac agcagcacta tgaatcattc 2160 ctggctatga ttgttttctg gtgagaaccg gcctcgacac tatgcgcttt agccaaattc 2220 tattccatgg gccgaccacg ttgctctcca ccagcgccag cccataccca ggaagtagga 2280 tggactgcac tgtgtctgcc gaccggaact gcgcatcatc cctcagtcca tggttgagat 2340 taggcaaatc ggcatctcgc ttgttactcg caagtttttc aggcacactc gtggcctacc 2400 atggttgaga gatcttccac gggcattcca caggcattct gcggccaggt cggccaacga 2460 tcttccgtct cgagcataag ccgctcggtg ctcaagccta ctactgagca ccgattagtt 2520 cgagtcggtc caacgtctca caggaaatgc tctgtaatta cttgagattt tcgacgagca 2580 aacatcgaag ctggagtatt ccgcttccca gtactaatag acgctttttc cagctagcca 2640 ttgttcgaag taccgccgtg caaaaaacac acgatactaa aatggcgtcc gagtagacct 2700 cgattcctcg aaaccagage teggtaacta tteetgtttg aaacactace teegetegee 2760 cgttctccag tggggagact tatcgctttg actccgattt tagcgcaact cgttgaaact 2820 atacaagaaa accaaccaca ctaaaatgca tagttcgaac tttgacccct cacggcctca 2880 agctggacga caccttttta acaacgagtt tctgatgacc agatgctcgc cacaccttgt 2940 tgttgcacag acctccggaa caaaaggtat ttgtcacgga ctatccacgc gcggcgctgg 3000 cgtggagcct gattcaccta cgcgaggccg cttaaaatag ttcttgttcg tcgttgttgc 3060 agegegtega gagtttatge tactgaatte agtegeetaa eteetetgee atatgeeett 3120 gcgattatac gtgctaccag cctcctccaa tatcccttga gtttagctgg acgtttattc 3180 gaccgctggc tggtgaggat aagggcgaca cttcagaagc cagaagtcct tcacgcttag 3240 aatggaatta acaacgatgt atccaggtca ctgccctccg ggcatccgta tcatatcgtt 3300 ccatctatta gagtataaca tccgggtcac acaagaaaaa gagtcggtga attcaagtgt 3360 cttgaagtag atttattaca acgcatcata cctactagac cacattcagt actcacgcaa 3420 cattctaatg ctgagataac ccagcgatgc tagggttaca agccattgaa tgattacgta 3480 ctacgattgg cttcattaac cggtgataaa tatatatagc tatatgccta cagctgaact 3540

tetatageag egetgeatgg tacaaatgta acateceaaa tagtageaat actaceacga 3600 tgaggattte aggattgega aggggtttt cagatagaaa actetgtete agtaaceace 3660 teggacteeg catactgtat teteteeca tgtetagtaa tecetaggga teateaatet 3720 taacaaggga tetgteeteg cetteataag cgetaeggte agtattagee gteaacatat 3780 ggteaaggga tetgteeteg cetteataag actattgaac tatteetgte gatetatega 3840 cagtgaegat tgaacttaaa attggatatg agagetagag tatactggga atggaggee 3900 ttatteeggta caaatgtata tatatatag gatgetaagt ggetaggage teagtetete 3960 atggaggee gaagetteat gtaggagtet gatgeectee geacteag 4008

<210> 1767

<211> 2052

<212> DNA

<213> Aspergillus nidulans

<400> 1767

aaaataaaaa atagaggaaa cataaaagtc tttcaaacga gaggaatctt ttcatacatt 60 ccaaggcaac gaataagtat tctcccaacc atgagggtgt tccaaggtcg gcgctcacaa 120 cgggttgtat tatgtcagca tggcaaggta gggtttaagg gggagaggtg gccatgttgt 180 cctgatcttg caattgggcc agagcactag caaaattatt aataaacgga acagacaata aaataatcag cggacacata cctgaaagcg ttgatggagg atgcagcctc cttgtcttcc ttcttaccgg cagggggtgt cccagtccgg ctgctggcac cactgtcgtc gctgccacga accaaattgc caccagggcc gaggttctta cgtccactgt tgctgcggga gccgagcata 420 ctagaaggcc caaaagacat aggctggttg gtgttgcggg tggtgcgaag tcggcggagg 480 540 tcatcactgc caactttgct agacgcgtaa tccggcgggg gtacctgtcc gtatccagac gagtagctac gggcatcacc acgtcccatg gcggcgcgtc cacctcctcc gcggctggct 600 tgctggcgct gacgttccat ctcggcctcc tgttgcgcac gagcagccta gaaaagttag 660 tgaaaccaat catctcaaca gatgtgaaga cacatacctc ctcacgaatt tgctggatgg 720 tettaggace tttgtcagca teettegaga eecagegage attaegeaga tegataatat 780 cctgaaaaaa aaattagcat gctgttgtca ccatacagaa attggatgac ttaccattag 840 cataaacttc agacgactag gcaagttcgg agtctgaacc atgaggttga tgcgttggaa 900 qtaqqcqtcc ataaatttac ggttctgctc attgtcggga gaatccaagg cagcaccaat 960 ggtgcgcaga agacttgtca aactctcgac ctcagcttcg tctggagtgc cctcataatc 1020 aacaagette ttgatacaca tatgcatgat acgeteegte aacatgeeca gettgaacaa 1080 ttcaccaatq aacttgacqa gacccagacc acgacgtttg gcagcagcag cagcgtagta 1140 ttcgtcggac atcatagccg cttcctccgt gacaccctca ggcttaggag ggaggttgac 1200 cttccaaccq cqctcqaatt cttcttgaca acgqttgaga aggtacttcc ggaacagact 1260 accaccggcc acaacattgc cgttcttgtc cttgatgttc tcatccttaa tatccatgct 1320 catgetetee aacatagtet tgcagaactt ggcgtagatg gaageecagt gtgeeteate 1380 ggtggccttc tcgaatgtaa gttgaatgac ttgtcggagc gtacgtccgt cagactcatc 1440 cttggattgg gagacaatct ccagaatctg actggatata cgcgggaagt tttccggcgt 1500 catcttattt agagcggcct tgaccttacg ctgaacaaca tccgggggaa ggtggccacc 1560 aggtgtagga ccagaagcag cggcagcctg gccaatactg cgaggtttcc atccagtggc 1620 agaaacttgc agacccggga ceteetttee ggetgtgagg ggcatggact tggecatate 1680 etectettte tittgeetget gettetegeg ettgetgeet gtgegggtgt tagaeetgee 1740 cgaacctgca cgaggcgaca tgggttgaga agagttgctg cgactgagcg gagtaacacc 1800 actgcccatg cccattcgtg ggaatgagaa tgcgctgcct atggatgcag ggcgtgagtt 1860 ggataacgca aaccgcattt cagacgtggt gcctggaggc aaacgggatg gtgcaccaaa 1920 ggcgcccatc tggaaatctg aagtaggccc cccacgagac gggttacgcg acgccggagt 1980 gegggeagat tgaggaeggg atgagteatt ategeegaea gteteaegta etegeaegte 2040 2052 ccagtcgacg ga

<210> 1768 <211> 1510 <212> DNA

<213> Aspergillus nidulans

<400> 1768

getceacege getggeggee agatetagaa etagtgeate eeetgeactg attgaattte 60 atgttaatet atteegteea eetegatett eaagtaceaa teegaaegee ateaaatata 120 aeggtateat tttetegtag egggeaaega gtaaceeete gteatgaaat eagtggtttt 180

taaactqtqa qtctttaqaq tccttcgtga agagactgct gatattgtcg ttcgtcccca tcaacttqcg ccgcttcttc ttttcatttt cttcctccaa aacccgcgcg gttagcattg 300 ccqtaqctqc gttcttgatc ccgtttggtg cggacggcgt cggcgtggac gtgttgcttc 360 gacttgctga tgctgatggc ggatccttcg aaagcgtagc cttcgacgat gactctctgc 420 tagcageatt getetegget geogttgttg aggetacgte egeateggaa tigecetigt 480 tettgegett ettegageea ggggettttt teaacgagtg ggtgaggtgt tgateggeta 540 aacqcttcaa tcqqtcaata aqacqctqct tgtcgtcttc ttttgtagga agaatgggga 600 tgatgttttc ttctgtgtag ggttcgttgc actgtgactg ttagtctctt gggccactta 660 gatgtgggag atacaaacga agacacacct gtaagcactt atcctgcttc aattgccgaa 720 780 ccqcctcctc agagaacaca tgcccacatg ggacaatata aaccgccttg acgcttggcc ccaactgttt cgccgtaaca ggacagatcc agccctcact ctttccttct ccattccctc 840 tageggeega gtttteetee eecteagtat caacttegaa etteaattee acaacatete 900 gaagcccctt gactcgtcca gcgagaatct cctcacagtc ggccttggag ctgattccct cgacaacgtc ctcgccgggc aagaggaatt tcagaatcgc atctttattg tacaagttcc 1020 cagcgcaatc agagacaatc ggacgctgaa gaggcttgtg cgagagtggg caggtggtcc 1080 eggetteacq gaegagttea eggegggttg ggatgetggg aettgttaat gaatetaccg 1200 ctatggctgc ataaaacgac tcacctgcca ccgtcgttac ccatagttgc agagactact 1260 ttaatcagac ttgatgctgc gtaggtagga tgtcatttcc tccgtttctc aggtggcttg 1320 ccacagcttg cgggatggtg gatgactaag cgcatagttc cccgatcccc agattggcgt 1380 ctccaaggtg tcaacagctg gccagaactt ggaactgaag ctagggctgt cgagcatctc 1440 egeactigee attgttggtg gagtgtateg tteaccegge atttgactea cegegttetg 1500 atgctgagga 1510

<210> 1769 <211> 664 <212> DNA <213> Aspergillus nidulans <400> 1769 acgcacacgt ggtgtttgat gactcaattc tctgcagccg aaagctgttg cctgcatgaa 60 gtcacaaagg ggcagggatt ttttcaccgc tacgggcact gctccgagag tgtacaccga 120 180 ataagataac aggcgatcca gcagcccagg gccagaagga ttagacggac tcgagagtta tccctcaagg ctactggaat gctcatcttt ggcagtgaca tgatcacaga tagccaaagc 240 gttgcccgac tcgcgtatga tactgccgct atagcgaggc atgctccgcc gagaaacggt 300 gacctttacg cttactttag gtgatacgct ttctatgagg gcagctataa gatacgctca 360 tgctcccaga atgtcagtat tggtctttat ttggatggag gtatacagga cagttgtctt 420 ggagatactt tgcaatgaca acccacggta tgtatctagt gcatgcttat gatctcggta 480 540 gactagcatt ccatgaggag gcgcctgatg caccggacgc ccgctgttgt atccagtgag 600 atactgggac acaatgcatc gtggtggttg tagacggcca ttagctgtga ggactctttt gacagtttag tggccactgc cggcccggca agcaagccac caaggcatag gaatactcaa 660 agtt 664 <210> 1770 <211> 3444 <212> DNA <213> Aspergillus nidulans <400> 1770 cccggcttta tggtcggagc caaggccgag cacgccggca tcatcaagat gggcgctcag 60 ctcgtctcgg ctgtgagctg ctctactgtg cctcacatct ccatcatggt aggcgcgtcc 120 tacggagccg gtaattatgc catgtgcgga agagcctata agcctcgctt catctttacc 180 tggcccacgg gccggtgcag cgtcatgggc ccagatcagc tatccggggt aatggagtct 240 gtgcagcttc agagcgccaa gtctaaaggt aaggtcctgg agccgacctt gctgaagaaa 300 caggtagaga gtttccgcca gagtgcggcg cgggatagtg agtgctacgc gaccagttcc 360 420 atgctcattg atgatggcat cattgacccg agggacacga gggacgttct agggatgtgc ctcgaggtcg tcaatttgaa tggggtcaag ggaacggaga cacatcatct tttagctaga 480 atttaggtct tgtagctttt ctatctagta tatagtctcg tcgaatttga acqcttqccc 540 ctatecttae tttaacaaeg cecetecaat ategaaeete agategaeaa agtaetatte

ctccccagag aatgggccac ctcctgtcgt tccggagtgg agaatggtga tggtcgatct 660

ggagacggtc cgacgagaat gcggtccgat atccgatgtc cgaggtgcta tccaagacta 720 agtaacatag caccttacac ttgcagtgaa atcaaataga tatcgtcagg acacatctga 780 840 gttacagteg catattttet actattgtge ttecattatg gcaaatecet ceettaacgg cgagaccgtc cacgcggcac ccttacggcc gccactctac gtcgccccat caccattagg 900 cgaggatggc cgaccgataa tcaagaaggt cttgattgca aaccgcggcg agatcgcctg tegtattatt eagaegtgte acaageteaa eatagetace gtegeggtet aegteaatga 1020 gtatgttctc cctttttgca tgaagacacg ttgtcgctaa cagaagcaga gacacatcat 1080 ctcgccatat tagagatgca gacgaggcca ttaatattgg aagcattgat caatgccctc 1140 gcaatcegtt cctagatgga gaacteetta teegcacege tetgtetgta aacgeggaeg 1200 ccatccatcc cggatacggc tatctcagtg agaacgctga gtttgctcgg tccatccgcg 1260 acgcaggaat gatattcatc gggccaagtg ataccgccat gtccactttg ggcaacaagc 1320 gtgcggcaaa agagtacctc agcaagcatg cgccagatgt ccccctaata cctggctacg 1380 taggatcaag ccaagacgca ccggagctta gtaggattgc tgcacagatc ggctttcctg 1440 tcatgctcaa ggcgtctgct ggcggtggtg gcaagggaat gcgaatcatc cgggaagctg 1500 gacagttgca agccgagttg gagcgggcac agtctgaggc cctgcgttct ttcggatccg 1560 ccgattgtat tcttgagatg tacgttgaga gcagcaaaca tgttgagatt cagctactgg 1620 gagactegta tggagaggtt gtetegttet tegagegega ttgtteagtg caaegaegae 1680 atcagaaagt catcgaggaa acgccgtgca cctttctgac ggagaagacg aggcaagaga 1740 tgagtgetae egetgtgege attgeeaaae teettggeta egaaaatget ggeaeegttg 1800 aattegtegt egatgetgtg aetggeaagt tetattteet egaagteaat geeegtetee 1860 aggtcgagca tcccatcacg gaggaggtga caggcgtgga cttggtctcg ctgcagctct 1920 atgtagetge agggggaagt etaegtgete taeetgeget eeaaggeete acceaacaag 1980 gtcacgcaat cgaatgccgc ctctgcgccg aagatccacg caagaacttc ttccctgagc 2040 atggcaaqat ccatttgtgg ctgccagcat ccggcgtgct ggggccaggc cgtgatgttc 2100 gctacgaggc tgcagtacag tcaggctcct cagtctcgat atatttcgac tctatgattg 2160 cgaagattgt cgtctgggca ccgacaagag ccctcgctat agagaaaatg gtcaaagtcc 2220 tegegeatae aatetgeget ggtgteeaaa eeaateaget tetgatgeag egatgeetee 2280

tgcataaggc attccataac cctgcataca caacgtcttt cctcagctta catctcgatg 2340 agctacttca cgagectggt ggectaattg etgagataeg caagteeetg eegatagtee 2400 eggeagttge tetgegteae etggeegeet tatetgegte teaaaagegt cetttteaga 2460 atgtgcggcg gcgcttccga aatcagcacc atgacccggt caatctgcag tatgatgtcg 2520 ttaccatggt cgactggccg tactctctac cggagacaga cccgacgaca ccactcatgt 2580 gegtetggae eeeggataae aeegggeeat eegeeactea agaageacae etgettgeta 2640 ttcctgagat tgatacctca aacgacgtca aaaagcctgc ggggacaagt gcacgctacc 2700 agaaagttag caaagtgctg cgagatgatc tagtaaatct ctcaggcaca cggtacgccg 2760 tgaagattga gtcatggaag cctgcggagg gggaccctgc actcaaggaa tcatggctat 2820 caaqcacett qqaaatcaqt atcaatggaa cgaageteet egeetaegta teegtggeta 2880 tcaatcgact cgaagccctc gcagggtgtc tcaatcgcac gcagactgtg ttctgccata 2940 ttccaqcgat tggagcgtcc gtggagttca agcgtgacac ctctttatcc tttgtcgaga 3000 gcacgcgtgc tgccgctagc ggtgagaaca atcaggagca gaggactgtg actgcgccga 3060 tqccqtqtaa qqtqctqtca acqctcaaqa aqaacqqqqa gcaqqtcaaa tcaqqaqaca 3120 ttgtaatggt gatcgagagc atgaagatgg aggtgacgat cagtgcctct gcagatggtc 3180 agtttgagac aaattggaag gagggtgatg ctgttgagga gggaaagact ctgtgtactg 3240 ttaagtaata tttagcattc gttcaattta atatgcttaa cgagttctgg ttgtcggatg 3300 gggccactgt ttcccgtcaa tgtcgttctg caatggctta cagcaggatc agtacgtgtt 3360 tgtatacagg tagtcacgat tcacgcaagt ctcttctata aaatacccaa tatgtcctaa 3420 tatctacaac ttgctcaact ttcc 3444

<210> 1771 <211> 5031

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 1771

cgaggtagag tetgttgteg gtagatgggg tegtggtgee tgggataege gtgaagaece 60
tegteacage atetetgaeg tegtegtaet tecaagtete egggaaegat tegteaaagt 120
cettgetgta aggetteeae eagagaeetg agttaaetge egtgeegeeg eeaaegagge 180

atcoggocat ctggtcatta tcggggcagg caatgccatc gctgttcttc cagatctcgt tgcacagacc gggcacgtcg aaacgggtca gatcagtgcc gttaagccag tctggcttca 300 tggtgccgtt ccagagtccg atagagggtg ggcccttttc gataagcagg gtctttgcac 360 420 ccgcttcgct gagtcggtcg gcaaggacca ttccagcagg accagagccc acgatgatgt agtcgtacgt gacgtttgta gggacaggca cgcctggggt cgtcccgttc ccattatcac 480 540 caccgccgcc accatcagta ccgcaagtcc cgtcgacgac gttggtcgcg agcgcacccg 600 atgtctcgta gttggaggtt gcagcgtcgc cgctcagctt tcctacccag atcccctgcg 660 cctcqtqctq qaccaqactc aggtcatccg ggcagtccgc gttcgtggga gactcctcgg 720 cctgcgccca ggcgaggatc agctgcccag cacttgtcgt ggcgctaccg gagacgccct 780 cgtggtccca gcggagacac tcttcgcaac ggaagaggac ctcgaacttg tcggcagtga 840 cggtcgacga gatctgagtg agggtcgcgt tgccgctgta gactgagggc atagcgtaac cggaggagaa gcggaaggag gtcaagacgg tgtcgtcctg cgcgtaggcg acgagcaaca 900 ggttactgtt catcgaggag cccatagaga gaccgcacca gccggtgaac tcgctcgtgc 960 tagatgaget geaggaetge egatetgtea geatetetge eettetattt egeateetge 1020 gacattgtca accgggcaga acaggatgac gcaccaggta tccgatgaac tctgtagcat 1080 ccgtatcaag cgcatcctca gggagggaga caccgaaggn aacccggccg acgacgagct 1140 cgcctcgaca gtccaggtgt cgaagacgat cccggtgtcg gggtctgtgt aaacagttgg 1200 gtctccagac tgggcgaagc atggctggag gactgaatcg ctctgctgtt aatatcaatc 1260 caattgaggg ttagggctta gacataccag aaccagccgc caccagggca gcgaatgaac 1320 gaaggaatga atgcatgtcg gagacagggg gtttaaagag aaggtaaaag aaacgaagga 1380 agggaggcaa tcgtcaccag gacgagcaaa acaaagtgaa ctgcaacctt ggcaaagagc 1440 aattgcagat agtgagcatc cctggtcgag cgcatgggtt ggaggaatat atagctggcc 1500 gacggtgagc agtgaccatt ccgagcagcc tcaacctgca acaacaaacc caccgcaaat 1560 gaaacgggca catttaagca cccgcttgat ttccatatcg tcccaggaaa ggagcgatcc 1620 cetteggeat attgeaegge aageaggget gegagtgeag geeteteeaa etecagaege 1680 caagaccgca gggtgtcgca ccttaaccgg gcctgtctca tcttaagagc cgtctctaat 1740 taggttcatt ccgcggcgaa tacggttctg gaatcatgac gggtttccca gctagggttg 1800

ttttatgttg agcttgggtt gggtccggcg tctctatgcg aaacggctct tatggaccgt 1860 gccccgagtc gggcgggtgg gcgacgatca cttcagaata aattaaagcc catccaggag 1920 agagcgaata aggggcgttt gattacggat aagaggctag gctcatacag ggtggactgc 1980 tggttaagta gtgatgaatg ttaaaacgat ggagtgatag agcaagaaat atgtacagga 2040 aaagccagat atcatgcgtg ctatgctccc aaaaataaaa actaaaaatg atacagatac 2100 ccagactatg caaagaggaa gacgacggga tagatgaagg gtgggatgtt gctaatgtac 2160 agcgtactcg attgtgccaa gtggtgcggg cggtggggat cgctctcggc gcctcagcat 2220 taccgtcggt gtcggtgttg ctgtcactgt gatttcggtg attgctgcat gggaggatgg 2280 ggcccgaact ggatctatcg gcgactcgta gtgagtctgg tcgtggccca cgtagagcag 2340 aggcactgtg agaagccgag acctggcgcc aaggctaggg tgggtgggga tgctcatgtc 2400 catatttgaa acggacgagg ctaatcatca accttccctg accggtcacg gcttcttata 2460 gccataccgc cggtggttgt ctgcaatcca ccattcggcc atatgtgcag cgtcgcgtgc 2520 ccaacgcacg acctctggct cccaaggtgc atcttcggga tgcggacgag acggcgtgat 2580 cgtgatggga ggcggaggag ggccgccgcc tggagggga gggtggtgag ggtgatgccc 2640 ggggggaggt ggaggaggag ggtgtttgaa gaattcatga ccatcgcgct cgacgggctc 2700 ttcgtcatgc tcttcgggag tattgctctt gtcatcccga tactcgcgcc aaagcgtatc 2760 catgagatcg aagaagctga agctcgtcaa cggcttcgtc tcctgggggat ccttttcgat 2820 gtcggtgaac cgccactcga cgtcgtcgat gagcgggacg actatgcgcc actgaggccg 2880 tgcggccgac cggacggcga gccacgaccc gccagtattc atgacgctga actgccagtc 2940 ctgcatgccg tttgcctctt ggaagagtgg gcggatgaga gattggccct cgtagagccc 3000 gcggatgtcc cgtgccgctt gtgtggagtt ggggccaaga gaagaggatt cgatcagtag 3060 gtcgatgatg gtggggacga tctgaaggga aatgacaggg tccttcactt cgatagatgg 3120 tagtttcggg tgcgccaaaa cgatggggac gtggaaggag ccaatgtgcg ggttgctgta 3180 gggcgtaatc ccgccgtcgt tggggaggga gaggccgtgg tcgcccgcca tcacgaggag 3240 ggtctcatta cggacgcctt tttcctccag gatatcgagg atctgagcga tccagcggtc 3300 tgcaaacccg atcgtattca gatacttgtt catatcgttg ttcttgccct tgaaggacgg 3360 gcccatgatg ttctcgtagt tgtcgtccgg catgccccag gggtggtgcg ttgttccggt 3420

gagatgggcg aggaagagac gcttattgtt ctcctccgcg tcgtcgaagg cgtcacggat 3480 gtactccttc agctctgtat ccgggtagcc atagtagttg acctctttcg acttgaccgg 3540 gtagtgcttt gcacccgggt tctctatgcg ctctttggta tagatatctc ggaagcccaa 3600 tegtggegte aggagateet gatggteata ggtgtetgtg accgaetgea tecaqatega 3660 ctcccatggc caggtgcggt aatccgagcc gttggtgatg tcggcctggt ggctgagtgc 3720 attgacgacg tgcggcatgc acgggttgta caagtgatac ttgtactcgc ggttaaagtc 3780 ggcgacaagc ggtgagatcc cacacaccgt tccggccacc gatttgatgg tatatgtccc 3840 tgtcgtgaag gcgttgctgg cgctgatccc gccgtacgat ttacgctcgc cgtcgcggta 3900 ctggtcaaag ccagagtcga acccagtcag atactcggcc gtgcgagtga ggttggccac 3960 tgttcgtaca gcactctctg gcatttcctt tccgtcaaac gagtccacga tcttattcca 4020 catgaaggag ccgttgcgca gaggaaagac atcgcctcgc gtgctctcga gtttgaggag 4080 gatgacatgc ttgatgttca cctcgccgct ggccaggacg tcctttagtt cgtccaggac 4140 cggtgcctgg aggttcgaca gatgcagcgg gtcttgcgac ggagtataat gctcgcgctt 4200 gttgtgccag tccctgaacc caggcagtgt ctcctccggc atccagtccc agttgggggg 4260 cttgccaagc gacgtcttac cctcaagcca ggcgtagtcg gggatattcc ccgcctgctc 4320 gcccaacgtt ggacggtgca ttccagcaaa cggcgtcatc ggaagggcgc tggagaggaa 4380 aatatacgac gggtacggtg gccgcacgct acgcaggagg cccagacaaa gcaatggcaa 4440 ccagaccacc agccgtttga tgagcgatat gcgctgcggc ggcctctggg aataatccga 4500 atattcatcc tcctcgtcgc tcttgtagtc gtgataatcc tcgacggcga tctgctcgta 4560 gacgtccggg tcgggcagcg tctcgctgcc gagccgcctg cgccagatcc gcgacgacag 4620 gctggcagcg cgggtgaaca gcggtctaaa caggatcttg aacggctcgg cgagtatatg 4680 caatacgccg ccgacgagcc ggtgcaggaa aggggcaaca agccaggcga tgaccgtcat 4740 gategeeteg aegateaaga ateeggteaa geeegtgage agagtgegga tegeegeege 4800 atcgcggtgg aacgatttcg cctgtcgcca attgatctca gcaccggcgg tgacgaagaa 4860 cgagatattg gccgaggcca ttccggacat ggtcagacta acacaaacaa cataattagc 4920 cacgcagtta tctctgaagc agaaaccaag tacctaaaag aaatcacgac cagcgccgcc 4980 agagcgtcca gccatcgcca cgggaatttt gggtcagatc cggacgtaga c 5031

<210> 1772 <211> 2553 <212> DNA <213> Aspergillus nidulans

<400> 1772

atcgccattg ccatccatat ttctgcatac atcatgagca gtgtctcttc tacgggatat 60 attggctctt tcccaccact gccggtcttt cctggctaag aaaaatgcgt atccacgcgt 120 gttcttgaca tcatggctgc tgcgtttgcc gcattgcgcc atatataatt tgatatccgc 180 atatttcctc aaagcaagca agcactcagc gccatcgagg tcttccttgg tgaggttagc 240 accactgaat tgcagggcct cctcgcaaca actagtgcag gcattttcac tagctgtatt 300 gcatatgcta gtcacagggg gatgcctgaa tatagaggag gggttagacg cggggagcac 360 ggtatctcca tcagcttgat tggtactatg agtgctacct gtcccaaaag aactggtatt 420 gcctttcccg ttaaacggag gagagcttgg tgtagagcgc gcggcagtca agtcactctg 480 agcaaaggaa tegtaattte gatgtgatge gtttgttgag etatetgtta tgettggaat 540 caccgggaat tetttetgee gegaggtete eggacacaga ageagaggga ggtetagaga 600 acaagccaga ggctatgatc tgcctqccaa cqcqcaqtct cctaqctccq qcqattctta ccgagaaacc gccgtcatga tcggaaagta aactagtgtt agaagcacct gcatttacgc 720 ttgctcctct tctgactgaa gcaggcctag aactaactcc ctcgttcgta ctttcgcatg 780 ctctccctct aaccgcagca tgtatacacc taggcctagc gctgcccaca tttacagcag 840 taactcgtgc cctcctggat ccgttagcag gagcaacatc gtggtgtgat tcatqqtcqc 900 agtgatgaga acatctttcg ccatcccttc tatgcatgca ttttggatcg gctgggcatg 960 taccatgaca agtetgecag tegeaatget egeageegae catgetgeee titgtgttie 1020 gtttcccgca gacatcgcat tttgccgttg atgcttggat ctttttccac ttgcatttga 1080 agtgatcaga aggtggtaaa ggaggaacag tttgcgagaa agtcctggct tctcttctgt 1140 ctttggtggg cattatgatg ctttaaccag gatctgagca ggctggggtc agacttggag 1200 aaaagtaggt aggactagga agtacgcgtg tgtcgtgctc aactagaaat attagagaag 1260 acctgtgctt tggaaacact aagccaggga gactcagaac agtcttcagg aaacattggg 1320 attaaatatg atgttggtat gagggaggtc ttgaagatga atgggttgga agaataagta 1380

ggagaaaccg catcgaacag ggcggatagt agtgtaaacg gctcactgaa agccagaact 1440 acaaagcaac cagctcttac agaaaagaat tttagtcccg gtgttgtcat ccttgtggtt 1500 ctcaggaaaa aaaaatctct ctatccatgg gcctggggag gtagcaaccg tgagcgagac 1560 ggatatacac gatctgtctt ttgtttataa gatatggaga aactaagagc gttatattga 1620 ttctataggc atatatcagg agggetetet tateetttgt tgagatteaa acetggetee 1680 gggtaaagga gttacttctg caagaaaatg gcgttcccaa ctttaaaaga actcagcgtt 1740 gttctaagta tgggtacgac atccttaggg cagggaaagc ggaaaagatc ataaagtata 1800 ttctgatgtt attggggatt ttatttatct cttttcaatc agctcatcat gaaatctcat 1860 caacaggegt catttttgeg tgaacccaag acttctaatg tetatttgtg agetgtgaag 1920 atgaaatttg ttagctgagc gctccagagc aggatttatt tccagaactt acggattccc 1980 teeteggget ggggetggat geeaacaace teggetgeeg acttgeeete ageegeggte 2040 ttatcatcct tcatgaaggg gaaggcaaga acctccttga tgctgtagtt atccgtcaag 2100 aacataacca agcggtcaat gcccataccc caaccacctg tgggaggcag accatactcc 2160 aagctagtac agaagttete gtegataate tgageetegt egteaceetg gteettetgg 2220 cqaqcctqct cctcqaagcg gagacgctgg tcgaaggggt cgttcaactc agtgtaagca 2280 ttgacaattt cetttttgca gacgaatgee teaaaaeget egeagagaee agegttetgg 2340 cggtggtact tggccagagg agacatcatt tgagggtggc cagtgatgaa ggtggggtta 2400 atqcatqttt cttcaataaa ctcqccaacq agcttgtcaa gcatacgggc gttggtgagg 2460 ggcggtgagc actcgactcc agtcttcttt aggaccttct tgaggaactc gccagtttca 2520 2553 gcagtgtgca gctggtcacc gggtgggaac ttc

<210> 1773 <211> 2096

<212>

DNA <213> Aspergillus nidulans

<400> 1773

ctgaccaaga agctcgctaa tgtatgatct aatcatgtca gcgatatcca ccttcagtat 60 tataatcgac gtactctgtt caataaactt tgtcatattg cgtactgaca ggacatatga 120 tagtgtcctc agtacgacct gatagaacgc tatccacgat aaagctgagg ataccgaact 180

ttggcgacag cagcttgccg gttcgtgacc gtccaccttc gatgaaacac tcaaaattat accccttctg cagaattgtg tcgatatacg cttggacaac ggtattgtac agtggatcat 300 tcccgaaact tcgccgaatc cacatggcgc ctgcgtgttg tagaaaagct cccacaaaag 360 ggatattgag gttgtctccg gcgacgacaa cgggcaacgc aatgcctaat cgatagcaga 420 480 taatctggag cgaaacatag tcgacatgcg atttgtggca aggcagaaag acgatggact gettettett ggeegeetet tetgeaaceg eacgtageeg eagaatttee teactggata 540 cgtggatgcc tggaaaaatc agcatatagg acaaaatacc acccaatata cttaccctgg 600 tggtatgctc gagtgagaag ctggctagca aggtagtatg cgccgcgaat aaacctcttg 660 ctctccattt tqcagatcat gttatccaac atctggtcca ccacctcgtt aagattactc 720 tcgagttcct tccgacgttg cgtgtgagta cgcgcaaact cgccagtcct gatctgtaaa 780 agcccttctt tgtcttccac ctccagtcgc gcctctgcga gctcttttac cttctcccgc aggatcggac tcgccaggat atgcgatttg atctgctccg taaaaccaga atagtatatc ggctgcccaa tgatatcatc gtaggcgcgc cagccggtcc ccgacatcat gtacgagctc 960 acttcgcgca agaagtcgaa cgggttctca cgaaaccgcg ccatattatt gatgagattg 1020 cgttccgtaa tccctccatc ttgcggctct ggacctccag tgtaaccgct gggatgaatt 1080 gtaacctgat caccaacgat ttcaaggtct ggggcggatt cacccacaga tgacttcgcc 1140 ggcgacatcg tcgcgtgagg ggttcggctg cggggacggg cgaaggaacg aggatgggta 1200 attcaagcag aggaagcttt ggaagtgtca gactttgcag acgtaggagg ttgagagacc 1260 catgtcatgg tagacgagga ccgtgaccgg gaaaccccct ctccgcagca gcagctaaag 1320 toccaacaaa ttgctgtgat cgaccgggtc gccatttgcc ccagactgtc tccgtggccc 1380 cgacatccga ggatgctgat cacgtggcta gctcccgcgg ctatctttgc ctggattcct 1440 gcggtgtcca tcagggcatt ctactgtgtg ctgctttgaa cgctgcaaac gtgggcacga 1500 cagtgattaa tatgtcaaga tttgtgtgaa gaaaaacact tatctctgga tggcccgccg 1560 atttcgtagt ctttccggta caacgtgaat ttcgctggaa cactgacaac cctggcacct 1620 cggtggccaa ccaagctcaa aggatcgtct ccaaaccatc gccatgtttc ggcaagcaag 1680 actactgtca agtacggtgc tcaacactgt ttattgaatc aagtaatcta attttatctc 1740 aagatgccag ctcgctttct agaactctta ttcacagtca ctcctccctc gtccgccact 1800 actegittaa agtetteege gatgiteeae eteteegaag eetitegeege gageteetige 1860 teteeaageg caetgitigge etegigeeta caatgiggige eetigeatgaa gigeaeetet 1920 etetgateeg teaggetigee teegaaaaea eegaegitegi egitgageata tiegitaate 1980 eeacacaatt egiggiteaae gaggatetet eeagetaeee gegaaegitag gaegeegatig 2040 tigeaaaatt agaagaattig aacacagagi gitagegetaa gaeagaaate gigtigta 2096

<210> 1774 <211> 5111

<212> DNA

<213> Aspergillus nidulans

<400> 1774

cacagcctgc gctgaggtag gcaggccatc aggttcggtc agacaggccg tgattgacgt 60 gaccgtcgga agcacccgcc agcctgcccg ctgtattaat tgctcgtaac ttcttaccat tactctacac tcaaaacact acgttgacga gactttagct ggcccggatg ataatactca 180 agttattgtt atccgcgccg cgatgaaaga gaaggctatt atgtctccct ccgagacaac 240 tccacttctt qtqccqgtcc aggtcgctcc ccagcgccac cgatatcctc atgacaagct 300 acgccgagcc tgcagttatt ccctaagtct aatcctcgca gtagcccttg tcttattcct 360 atteceteag getetttee eeegtgaggg eggttegete tggtegtate tteetggege 420 acagccttac cccaatacct ggccgagcgg caacggcctt gatcaggagg agctccagac 480 540 cctcctcctg ggtaccccgt ctgcggcccg tgcccgcgaa tggagcaagt attatacttc aggaccccat cttacaggta aaaacctcag ccaggcgctg tggacaaagg agcgttggga 600 agaattcggc atcgctgata ccaagatcgc tacttatgac gtttatctca actaccctct 660 720 cgaccatcgg ctggctttat accaaggcgg taacatcagc tatgaagctt cgctggaaga ggatgtccta gaggaagata gtaccagcgg tttacccgat cgcgtaccga ccttccacgg 780 atattcagca agtggaaacg tcacggcttc gttcgtcttt gtcaactttg gcacctatgc 840 cgactttgag gacctggtca atgcgaatgt tagtctctct ggcaagattg cgattgccaa 900 gtatggtcgc gtcttccgtg gtctgaaagt aaagagagcg caagagcttg gcatggttgg 960 cgtggttctg tatgatgatc cacaaacaga tggagagtac acggaagaga atggttacaa 1020 accatatccc gaaggcccgg cgaggaaccc cagtgctgtt cagcggggta gtacccaatt 1080 cttgagtgag ttgcaccttt tagttcctga ctgcagtgaa taacaggtat aggctttgct 1140 cccggtgacc ctactactcc cggctatcca tccaagcctg gttgtgagag gcaggatcct 1200 catcacttta ttccatctat cccgtcaatt cccgtttcca atagggacgt tcttcctctt 1260 ctcaaggccc ttaacggcca tggtccaaag gcatccgact tcaatgaggc gtggcaaggc 1320 ggtggtcttg catataaggg cgtggagtat aacatcggac cttcgccgga tgatcttgtc 1380 atcaacctgt ataatgagca ggaatacgtg actactcctc tatggaacgt catcggtgtt 1440 attccaggct cgcttcctga taccatcatt ctgggcaacc atcgcgatgc ctggattgcc 1500 ggcggtgcgg gagatccaaa cagtggctcg gctgtgctga acgaggtcgt tcgtagcttt 1560 ggtgaagete ggegegetgg etggaageeg etcegtaeta ttgtetttge eagetgggat 1620 ggtgaagagt atgggctact aggttccaca gagtgggtag aagatcatct cccctggctt 1680 tccaaatcca atgttgcgta cctgaacgtt gatgtcgccg cgtctggaac ccggcttgcc 1740 cccaacgcaa gcccgctttt gaataagctc atttacgaaa tcactggcct tgttcagtca 1800 cccaaccaga ccgttccggg acagactgtc cgtgatgtct gggatggtta cattggaaca 1860 atgggtagtg gcagtgattt cactgcgttc caggacttcg ctggcattcc tagttacgat 1920 ctcggattta gccccagcag ccaagaccct gtctaccatt accactccaa ttacgacagt 1980 tttgactgga tgcagcgatt cggcgaccct gattggcttt atcatgaagc atgcgccaag 2040 atctgggctc tggccgccgc gaagctagcc gaaactcccg ttttattctt taatgccact 2100 gactacagcc ttgggttgga ggagtatgtg gatcggatca gacctgctgc ggacaatctt 2160 ccgaacggcc tgacttttga cttcggtcct ctctacgaag cgattagcag gttgcagaag 2220 acggcaattg agttcgatgc ctatgcagcg gacctgacgt cccagctcac ggaggagctt 2280 ccatggtatc tctggtggaa aaaagtccgg ttgttcttcc tgatccatga ggtcaacact 2340 aagtacaaaa atatcgaacg ccaattcctg taccagcagg gattagacgg acgtagctgg 2400 ttcaagcacg tggtatttgc ccctggtctc tggactggtt acgccggtgc ttacataccc 2460 cggtattgtg gagagcctgg aagctggaga cgtagctaac gccgcggtaa gtggctaatt 2520 cagttgtctc cgttccatat gagtatgcta acgttaacat caacctagaa atggcagtat 2580 atcgtcattg agcgcgtcaa ggctgcaaca aaactgctcc agtagaaggc gctctgagtg 2640 tgaatcacac agtcggcagt tgtcgaatcc cgcgaatgta caaacttagg cgccccatct 2760 gaaatttatt gagccatctc cattgagacc acttgtctaa ggttcgatgt atgcagactt 2820 attagccagt tgatatatat atatagagag agagagcacg tcgtcttcag aaccggcgcg 2880 atcggtttct ggggtacaac atcgatacgg gcgctcggat ctctgtaaag aaaaaatgct 2940 qtqaaacctc agaaatggta tgggttgatt agccgggttg cgaatgcagt caccttctac 3000 atcatatatt ggctttcttt cgcagatatt aagacttcgc cggcttcaga ggtacggttg 3060 ctggggcatt gtatataaac aacctccatc ggctcgactc cgctgctccg cttaaagagt 3120 tagacaatct caattagcag ctggcaacgg acagattagg acccaagctg tagaaagaag 3180 cggtatgata agaggaggca ctcaccatga atcaatctca tccaaaagtg aaggatcgca 3240 aaaagagggg aagatcactt gacgcagcct ggctctctgt gcggaaaagc ggcagagcag 3300 caatcacgac agetteteca agtettgagt cettagetet agaetttett ettetetea 3360 cactatette tttttgeett eccattttta tettttattt ttgttegttt etgttteet 3420 ttcaaaaagc ctcgttgtcc gaagatcttt agctgtctcc acagcatcta ctcgcttctc 3480 agttcctgcc tgctctttga atgcatgcaa gcactcccaa gctgccagtt cggcagcttc 3540 tcattctctg taagaggctg accgtgcccc caacaagtta gatcttctgc taaaggctgt 3600 gcgcgcacga atatgtcgct ttgcagaacc tagtacgtga tcgagccttg ccctcagttt 3660 caagacacgg ctaaactggt cttatcggac agtcgccgtg acttcgtacc taccgtacct 3720 tgtaggcttc tctgttcatt tttccttcgg ccctagtcac tgcgctaacg ggaacagcct 3780 gaaatgattg aaagcgtcgg cgtcccgcaa tctgaagtcg caaaatgggc gggtcttacc 3840 tcggccatct cgtccttttc ccaggccgct atggccgttt actggggtac ggcttcagac 3900 cgtttcgggc gcaagcccat catcctgctc ggactcactg ccaccatggt cctgtctcta 3960 gctttcggtc tgtcgaaatc gctgcctatg ctcatcacgt gccgcggtat gatcggcttc 4020 atgaatggga atgttggcat tatacgcact atggtggcag agatggtaca ggataaggag 4080 ctgcagccta gagcgttcag tataatgccc atggtttgga ctattgggag tatttttggt 4140 ccatcgtttg gagggtctct tgcaaggccg acggagaagt atcctgagat ttttggccac 4200 tcttggtttt ttaaggagta tccgtttgtt ctgcccaata tggttgctgg gtttttcttt 4260 attattggta tctcgaccgg gttcttgttt ctacatgtat gttatccctt ctatgttaga 4320

gggccgctaa catggttagg aaactctaca cacaaaacaa ggttatcgtg attccggtct 4380 ggtccttggc cagatgctca ctggcctttg caccggtaat tgccggaagg tcacaaaaaag 4440 gttggaggat gatgagacga cccctttgct tggggagcgc ttgcctgcat ccaaacacca 4500 gatcaaggcc gaagtgaaaa agcacagctg gagagaggtg cttaatccgc agtccgtttt 4560 aattctctta gcatacaccc taatgtcagt gcacacagatg gcgtttgagt ctgttcttcc 4620 agtattcctg cacacacctg tgcagcacct ccaggacaat ccagacgtcc agctgcttt 4680 caagttcgtg ggtggatttg gcttgtgtga gtacctagcc attcgccctc taccctacca 4740 taaattaact cagtaccttc agactcccag agaatcggct ttttctacac cataacgggc 4800 tgcatcggaa aagcctagcc gccgtttcc catatctacc cctgacaccc taatagcgt tttccggat tttccgagaa tcttaatgg ctttaattg tccaactacc gatcgattt 4980 aacttccggt ttacaatttg ttaccaattc caaggtggct agtttttgg accttatggg 5040 ttgttttaat t

<210> 1775 <211> 4663 <212> DNA

<213> Aspergillus nidulans

<400> 1775

aaaatataaa caggaaggg ggacacagta ataggaagcg aaaaaaattc actttataaa 60 aataggcttt aagggttcg tteececaag tacaactttg eecaaggtaa tgaaggeege 120 cataaaaggg ttetttaaag ttggetcage ageettgagg gttacacaaa aggggeaaaa 180 etttageag gegteetega aeggttetaa eggggaagaa agetteaaaa geeetaagte 240 agatggtga tggecaacce eegtttagae aaagtggttg agtggateae aaaaaggatt 300 gtteeagtga etteateta geacetattt geaggttegg tatttgetgg atetteatga 360 aegaaaagae egetgeaggt aatetegeae aaeggaagae aaetegtgaa aatetetge 420 aageeatage eeeteettge gagegaagaa aaatgeatga ggaceaagae ttacgetate 480 gtgtatetat atggtteeg geattgeegt eegtaacaaa geggegeage egaggtgeet 540

cgggctcccg gctcgttcat ctcagatgca tgcttgttac atggaagagt cgatcgtcta aggcgaggtg atattgagcg aggagtctat ttagttttga ttctggtact tcaatgctta 660 720 tctgcgggtt gaagcttttt taaagtcaat ggaacgagct tgttgaaagt ctagaacaga 780 ggaccttgag cattagctgc agactttcca atcctctccg ttctctgacc gatcatcata gcctctcacg catctcattt acagacaaat tgccaccaaa tatgaatgtc cagaaccttg 840 gaatttcctt gccttgctga atggttgttt gaagaataag taggtgtatg catcgtttat 900 gatgtggcat ttagtgttga agttatactt atcgaacgga tgcataagta aataagcaag 960 agaacaattc aagagatgca ttaaaattca atattaaatc gttgttgaga acgccttttt 1020 ctgcagatcc cgtctatcgc gtgttcatca agataatatc ataatgtgat ggtagcgcct 1080 aggacaacgg gggtatagaa ggttgaatcc taagtaatga taatagatga agtcgaagag 1200 attttattgc caattggcga gagtagtgcc agagggacat ttatgagcgt ccagaagtgt 1260 aggtttgctt ggggaagggg tagctgtgtt attattagca tgagtgctcc taagtgcttc 1320 tgatattcaa agagggaact cacgaaggtc ccaactcttg gatgctcaac ttcgcgagcc 1380 actggccgag gtcgacgctc tcttcaaggg atttgccctg cacaactccg gcgacgaaac 1440 caccggcaaa agcatcacta gagcgcgaat cgtcagatgt gttcagcgta gccagcttga 1500 aaacttaccc agcaccgttg gtgtcattaa tggcgtcctt cgaaatttcg tgcacaggga 1560 actccttgac ttcgacttca ccgctggtgg taacagtagc ggtgatggtg ggcagagtgc 1620 cctgggtcac aacggcaatt cgggagcggt tggtgttctt cttgggcagc tgagccagct 1680 tcttcgcaat ctcgacaatg tcggtggtgc cccattcgtg gctctcggcg taagcaacag 1740 cctctgtctc gttgcagaat gtgtagtcgg tgtaggggag gacactgtca agctggtcct 1800 tgaagaactg gggaatgaag ggagcggaga gagacagcat aaagacctaa tgagtcaggc 1860 ttgattagcg gagtctcaag ccgtaagata cggacccagt gtttcatacc ttgttcttcg 1920 cagcggcctc ttcacctagg gcctggatcg cggggacaca gactgtcaag tggtagccac 1980 caacatagta gtactgggcc ttctcgacaa gcgaccagat gtgaggctgc ttgagatggt 2040 ccaccttgta ttcgttggct gcagcaaggt gagtgcacat gctgcggttg tggccggtaa 2100 taatgacacc gcacttgcca gtgggctgag catcatcgac gcggtactcg gtgtggacac 2160

cageettett geaggegtee tggaggatgt eggegtaett gteettaeeg acaeageeaa 2220 tgtagagagt cgagttatcc ggaaggatgt actatgagca attgaatcag caattgtcat 2280 atgcagatat cacaaacgaa ggcggattac ctgagcgcca cgagcagtgt tctgagcggc 2340 accaccagca atcagcttgg catcacggtg ctggagcaat tcttcgtaga ggcccatgtg 2400 cttctcttcg gcaaggatag catcgttggc tttgagtcca tacttctcga ggagagagtc 2460 gtcactatcg ccgttattag ttgggcccaa tgccaacaaa ttagcgcctt tgttcaacat 2520 accegacage ttggatatet gagegaagea caagaageat cagtaatttg ttgtgecagg 2580 caggttggga taaaaacggc ttgtccatgc aagggatcta tttacgcacc cagaaggggg 2640 ttctccaagc agaggagagg gtagccttgg ggagcagcca taactgttaa ttctccgcac 2700 cgagatttct ttttcttaaa aagaaaaaaa aagaagaaga agaagaagaa tgtggtatag 2760 actcaaaaga gggaggaatg acaggatgag aggagagtga gagggatggc ggggagtcgc 2820 ccggcctaaa gaattactat ggaggggcag cagatgaaca cctgaaactc caggccgcaa 2880 tatttcatcc ggtgcagccg ctttgaggct tctgattggc tttggggagc accagaacat 2940 catctcagtc ggagtccgga gttgcgcatt cttctagtct tctgccctga agaagacccc 3000 ccaaacaagt acgagtctct gggtccttcc catgatacat gcccaaaatg tcagatcacg 3060 ctattcaagt cgcggaaacc atccagacgg catccgtcaa ccgagcgcca tccgctgccc 3120 gcgacatcaa caatccgacc tcagccccgg agaaggccgc agtcgagctt actccttctg 3180 atgctgacag catacetteg gacetegttg atececateg ageaeteegg eegatetege 3240 geogacatac getecetece ttacetgatt taeggttega geagagetat ettteaagee 3300 taagaggcgc ggatacatgg gggcgggtag cgtggatcac catcagagac caggtacgga 3360 cgcctcttct agtccattcc caaatacttc gattggaatt gttaagcact ccaaaaaggg 3420 aaaaccatgt ctgactcaac ttacatctag gttctgttac cgcttgttca aggaacgctg 3480 tggacacttg cgctctcggg ttggcgattc tggaaccgta cagcgtccct cagcgggcag 3540 actctgggta gcagggttag gagatggtgg tatgaggtca acaactggaa acttcctcct 3600 cttatatcga agaatcccaa gacagcggcc gcgcaggtag aagacgtatg tggtccacgc 3660 gatgttttca aggttgactg actggtttcc gcgaaggatg ctgacactga gggagttctt 3720 acagttctat actgcgcaat tttccaatgc tggcgccgat taaagccttg cttgttgtat 3780 tcaaaggact aagtgatggt catttctcgt gtttggcatt cctggcgttt aggttgcaaa 3840 cctttgttca atttcgctca tatattaagc aatatttatt acttcggagt tcagaaggtc 3900 ctcagaatca catttggtac acatcaaagt acagcatect tcagcacege getaactaee 3960 cactttagat ggtcataata aaaaatcaag catgtctatc aagaacatct ccggcctggc 4020 actcaagtat gacagcccgt tgccattgag tttcaagatc acaagaattc cccattcaag 4080 tcacaagctt ttctagatac tgaacactct aatcccagta caacctttat tgcgcccttg 4140 acaaaacagt accagaacac catttgctta gacaaagtct tgatattacc agacacttca 4200 tgtaatgtgt aagtggcttt acccagccag aattgttaga ctgtcccatc aggttgttga 4260 actgaaggca tcgtagtgcc aacggggcca ccaagaccct gtgtggcccc gccacttgaa 4320 gccagaggag ctgaagtagc aggtgtttcg gcaggggcgt tcttggtgtc aaggctagct 4380 ggtgtttccg gaatggaatc ctggggcgcg ttatccactg gcgcgggctg ttgcaaacca 4440 gttgtggccg ccttctgact atcagaggta gtttgtactt tttgttctcc agtattgtta 4500 tcatcaccct gtttgccgtc cctgagttgg acaacaaggc tcggaggttt cccgttcatc 4560 accgattcat ctccactcac gtcctcaaaa aaatcgcctt cgaaatcatt ttcgtcttcc 4620 4663 tcctcqccac cctqccagtc gtttccgctg gactgtgcgt cgt

<210> 1776 <211> 1651

<212> DNA

<213> Aspergillus nidulans

<400> 1776

tegacegtaac acgegggaac egteetggtg tegagaeggeg gaggacatee tegataagteg 60
tegaggtatg attgaatgta gatgcaaata aagatacage teacategat eeggaaactt 120
etgeacagaa eagaggtgea gacaateega gtaagettgt ttatgaatae tteetgeggt 180
ggacaeggea gtgaeggeag ggetgagtte ttatgttgga gtgggeeegg cataacatag 240
eateatagte etegegaggg etgeeetgaa eagggateat egeggaettg geeacteagg 300
aataacetee tggttteete aggatgaeet ttgeeeegta geecatgeag gaataegaee 360
ggaegaaeeg gtgeeattga tteeggaata etgageetga gaeeaggttt eegagaetet 420
ggtteeteae gettegegeg tteegeetgt geatgtgeat tgattgatta etactggtta 480

tttatccact tcataagtga tcgctcggcg cggtaattgt tacgtagtga gacgactgac 600 acagtccagc tgacacttcc aacattgctg cctgacattc caggaatttt aaagaataag ctattccacg tgatacaccc tgagctaatc ctcaactgga aggagcgcca agagctggac 660 agccagatcg cattcaatca cgcagcgact cggccaggct cacctgtgct ccatatcttc attgcttcac cttcgtttta ccccgggatt gcgtggactg gcttcttcgc atctctctta 780 catcttcagg tcgcttcttg ctccagtctc cttttccgcg ttttttacct ttcccgcggg 840 900 ggatctttgt ggccgccgcc atggcatccc gtgagtttct gcccgttgtt tgatccccac cactcctatt cctggcctca gctgcagttc ggttttgctc acaacaagtt acccggatca atccagtgaa gcaattcatt cgcaatgttc ggtcagccaa tactattgca gacgaacgag 1020 cagtcatcca aaaagaaagt tccgccatcc gtgcgtcgtt caggaaagaa agccatgatt 1080 cgagcattcg gttagcattc acaactatac tctactatat gcttcgcttt gaaccaatat 1140 ctcatatgtc cggacaggag aaacaacgtc gctaagctac tttacctatt cacactcggc 1200 gagcgtacac atttcggcca gattgaatgt ctgaaattat tagcgtctca tcggttcgcc 1260 gacaaaaggt tgggttattt aggcacgatg ttgttgctgg acgaaaacca agaggtcttg 1320 actctggtga cgaattcgct gaaaaagtga gtggtctctg agttcttcgt ccgctcactc 1380 gtctgatctc ttcatattct agtgatctca accactccaa ccaatatatc gtcggtctat 1440 ccctctgcac tttgggcaac atcgcttccg tggagatgtc tcgtgacctg ttcaccgaag 1500 ttgaatetet eettteeace gecaaceeet acatteggeg aaaageaget ttgtgegeta 1560 tgcgcatctg tcgcaaagtt cccgatttgc aggagcactt ccttgaaaag gcaaagaact 1620 1651 tgttgtcgga taggaatcac ggtgtccttc t

<210> 1777 <211> 4121 <212> DNA

<213> Aspergillus nidulans

<400> 1777

ggactgccta gttttgcccc aggctcacat gtcatccaac ccggcgtctc atagcttaca 60
gaggcgatgt tgtgtgtttt cacggccttc cacgggggc gccatgggcc atcagtcatt 120
tttcacacaa gttccttcag ccgctggagt tcctagagat ccacgacctc tccgagacag 180

atctttccag gcacgcattg cgcaggaact gcttgagtat ttaactcata ataattttga gcttgaaatg aagcattcac ttggccaaaa tactcttcga tcgccaactc aaaaggattt 300 caattacatc ttccaatggc tgtaccatcg aatcgacccg ggttaccggt tccaaaaggc 420 aatggatgcg gaggtcccac caattctaaa acagctgcgc tatccatacg aaaagggtat cacgaaatcg cagatagcgg ctgttggagg tcagaattgg cctacatttt tagggatgct 480 540 ccattggttg atggaactag cacaaatgat ggatcgattc gccatgggag aatatgatga agectgegeg gagatgggag tggaegtete gggagatega ateatettee ggtteeteae 600 aggcgcctac catgattggc tacaaggggg agaggaagag gatgacgatg ctgctgcgca 660 aaggttgata ccccacattg aacttatggc tcaggagttt gagaaaggca atgagaagta 720 780 cgttcaggaa atgcaggttt tggatgccga aaacagggca ctacgcgatc aaattgagga gctggagaag aacgccccgg atatggctaa gcttgacaag cagttcagaa ttctcgagga cgacaagagg aaattcgaag actatattca gaacgtgcag ggcaagatcg agaagtatga gagtcggatt gctttcctgg aggacgagat cagaaagaca gagtcggagc tgcaagccgc agaagaagaa cgggcgggac ttcaagctag cgtcgatcaa caaggcctaa ccattcaaga 1020 tatcgaccgc atgaacactg aacgtgaccg gcttcagagg agtcttgatg atgccgtcag 1080 tcgtctggaa gagacacatg cgcgtgtgat ggccaaagag tccgaagcca gcgcgaagct 1140 cgaggattta gaggaactcg tcaagaccta caatacgctg ggataccaga acagtctcat 1200 cccgtcaact gccgtcaatg cgaacggaca agaatatgag ctgggcctaa atgtgaacga 1260 gcgtagtttc tccacatcgc agattggtgg cattcctagc aggatctctc cagaagcaga 1320 taggetteta geegageett teaetggeta teateeagea eatetgttga aettggaeet 1380 tcgaggtatt gttcgcagta atctccaggc actccgcaag gagataaacg agcggagaaa 1440 gcgtggtatt gacgcggatc tggaaagacg gaacctgttg gacaacatta aagaggccat 1500 ggatgagaaa cggagtgaag tcgaggccct ggaacataag cgacgcacag cggaggaaga 1560 atttgagagg ctcaaagagg tgacaactac ccagaaactc gcctcagatg cacagattga 1620 gaaaatggag aaggagctgg caaagatgcg agccacgatg agtgagagcg ttcagctgat 1680 ggagcagcgc gaaatgaaca ctaacatcga gtatgaacaa ctcacactac gggcaaatgc 1740 actccgggag gaactacata ccaacgtcga gagtatgttg aatgacgtta tccggtttaa 1800 ggtccatata caaaaaggtc tagaagacta cgagaacttt gtggtggatg aagtagaaca 1860 agagttgggt ggcgacacgc aattggacga ggatgcccca atgtcaaccg aggaactctg 1920 aaggccacaa gacgcaacac gatcaccttc acctacacta ctgctggact tcgctcacgt 1980 getttageae accatgetee aatacagtae ategateeeg getagttgag tteteeggat 2040 gacactgatg acgtgcccaa catggtcatg aatgcggtag ttgaaatctg cgctcaactg 2100 gttggccagc agcacttgtc tggggtttgc tattgcaatt cctccttctt gaggaactac 2160 gggggtgctt tctttgatga gcgcccatga tactggtgtc ggatacttag cacctcctga 2220 taccggcaac atgtgatgtt aatcggtgta ttagcatctt ggtatcgttt ggcgccattt 2280 tettgatttt gtggaeggga etttegtete ttttgeteag etttaeettt ttttttttt 2340 gacggataca tgcttgtatg gtttgcttta ggagattatg gacattatgg agagtctgat 2400 accatttgtg ctttggtttg gtgctatacg gtttcatttg gttatacata ttctaccagg 2460 tcactggagt tcaatgtcaa tgacaacata tattccacac cacatccaca tgcccaactc 2520 ccaggttcca cgcaagctga gtcacaaatc ttccgcgcgt actctcctaa tcactcgata 2580 agttctgtcc gagcaggccc aatcaccggc atgcttgaga tatacaccgg ccacactagg 2640 acgcagggct acgacctttg aacttacctt tctacaatag cttcggttta tttctcacca 2700 tattcaaggc ctagatgtta tcgggttggg agggccaaac cacgcgcctg tcttctcaac 2760 aacgaccata taaagcgctg tgctgccggc cctccgattc ccatctatca ttctcagcag 2820 gacctccgct ctgttctcaa gctcatttac aacttctagt ctaccgtctt tccaccaaca 2880 tgaagtcctt gactattctg ggtgctgtct cggccctttt cctgggcagg gcaacggctc 2940 aaataactgt tgtgcgtgca atgccagaac attcattcat gtttgtgtgt tcactgacag 3000 atttacagac tattcctcct tttccagatc ttcctaccat gtctataccg accttgactc 3060 toccaaccag tatatetett cettecetee caagcattge gatteetaeg ettectaeet 3120 cgcttcccga atctgtttgc tttgctgtcc cgactattcc aacatcgatt tcagtgccca 3180 ctcttatggc tgccgcacct accgctgggc cagatagcaa caccacgcag gtgcttaatg 3240 accagtttga geggatgeae eegeggeaaa ttgeaccaet tggegeetga aggatetttt 3300 gcttattttc cgaggctcaa atggtgtggt tcaatctgta ctggctccat caagcttcaa 3360 cacgattgtg ttcggaagtt gatatgttac ttttttgctt gatttaaagt gcttgattcg 3420 ctgctcaaaa gttgaatatg agcgaatttg cactgaatgc aaggctatat tggaataata 3480 ctgaagccga ctgcgctact tcgtgacttt tacctcaaac atgccccttt tgaaagcgta 3540 aggtatctac tagatgctcc ttgtattctg ttcagctgga tggagccctg cgcttctcat 3600 gcttaccggt ctccaaccca ttgacaacct ctctaagcca tacacagata gtagacagtt 3660 agatccatga ggcgttgagt ctttcgttat aaattttgtc ttgtcctaag aacaagatta 3720 ccagagtgca tactttgggt gcatctaaag ataagtgcct gaggcagaat tgtcattatt 3780 tgaacgcagc cgattggttc cttatttgct tactcatcgc tgcccttgga gcccaaaaaa 3840 gccaaagaaa tcacgacttg agtaggactt tgaacttgcg tgacaagaag ccaattatta 3900 ctgcgaaaac tcgacccct ccaccttcta cctcgtcaca cgagttgctt ggtcaccaga 3960 gtaatccgtg tcctacgatc tcccctttag cgagccccc gggaatgcag tgtcaactca 4020 attattagac atgcgcaaca gggtatcact ccgacggcga caccgagatt tggatcacct 4080 tgcgctcgcc ttattacctt ccgtcgtcc atgacaaggt g

<210> 1778 <211> 1337 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 1778

acttcctcca gccgggggga ggagcaaaaa aaaaagatgg gtcccttcag acatgcccaa 60 aaacacgtat tgggcaaaca gtttctatat gggattgttt gcgatccacc ctatagtgtt cgtgagggtc tctcggtact tggttccagg gatactagcc gtcgtaagga ggagctcatt 240 atcgacgggg tcctgcgcat cggtatgtcc tcttctaagg tctagcccac gccttgcctg 300 ctaatctttc ccagtcgacc cggatacatc ccgccgaaga aaccctacgg cttcgaagcc 360 atgatgaacg atatcctcat ttttgcagca cgtactctcg tcaccggtgg gcgtttatgc 420 atgtggatgc caacatccgg cgaggaagaa gcagaactct ctgtcccgat gcaggaaaat ctcgaagttc ttagcatttc cgtgcagccg ttcaacaact gtaagtatct tgatgctctg 480 aacaatccat cactttaatg agcacagttt aatgctttcg atttcttcgt tagggtcacg 540 600 acgtettate acatacegga gaeteeetga gggegtattg teegaegtat categgggeg

gcggaaggat gatgccgctg gtgtgtcggc cgatgatctg aatgctttca ggagaattgt 660 atgtccactg tttcccactc ttacttctcc attaggggca cgtcctaacc tttcgaaagt 720 acttcatgaa aaatcccaaa agctcaagtc cggcttccca atgacatgca ctatatacat 780 agettactca ataaacaccc aatatetgta acacetgtat ceegagatga ggecattgte gaacatgaca tctgtggagg aaaaggtagc agcaagtttc gctcatcttc taggctcaca 900 accttccctt cccttcccgt tcaaaccctt cattttcagt aaactcctcc tcaagatcca acceptate tgatetaace etttegacet ecettgeaat etceateete agateageat 1020 taagtttttc cgcctcctca tcgaccaggt cttctcttt cccccggcca aacatcacaa 1080 aactcatttt ggccgctgtg cccgccgcgc ctaacggcgg tctaggcacg atgtggaagt 1140 gtacgtgcgg aacgacctga gcggccccga caccttttac atatcatcac tttagcatca 1200 gatgctcgta cggatatata ggaaaagaga agagtaccgt tattttggac cacgttccag 1260 ttccagttgg atctgtggta gtacatctgt gatctggctt tactctcaca acacngtnct 1320 1337 catcacgctc agacaga

<210> 1779 <211> 3603 <212> DNA

<213> Aspergillus nidulans

<400> 1779

tgcagagccg ctggttacga tttccactgc gcgaaggtta tatctcgagg tatttgcctg 60 ttttgcgagc gtggccatga tggctggaac ggaggccatg aaattgatgc ggtaaatatc 120 catgtagagg aggtattggt cgacattaaa ggatttcatg atgaagactt ttgcgcctag 180 gcgggccgcg ttgaggcagt agtatgtttg gccctgcaat cacttagttc tcatgcaatc 240 taaggaaggg tacaatgaaa tgggcaagaa tacataggca tgatacatag gcagcggagc 300 cagccaccga tececegeca tgtcgagecg etettgegg etettgeete tatggteatt 360 cgatataatg gctctctttg cgaggagctg agaagagttc gcgatagcat tatagtgcga 420 tatctccacg cctttgggaa gtccggttgt tctttcaacg tcagagcgat catcacttgg 480 cagagacata cacacccgct agagtagttg attattgcag tcgtctcttg agcttctttg 540 agcgtttgaa tcctcttcca tgaccaagag cgaacctcat cagcaggcct ccagatcctc 600 gtccaaggct ggactggtaa tgacgagtca tttgaaatat cttcaggatc gcagaagagg 660 tacacccgat ccctcggtag accaactctg gatgccgcat ccagcgcaac agggacctga 720 gtcgaacccg caaggatgag ctttgcatct gaattgcgca actgatattc gacctctgca 780 tgatcaatac ccttggtcat aaaacccctc agaaacactg atggacaatg tagttactca 840 cecttaacac tegcacece egetaeggee gtaaagacac atetteetge aagaaceeee 900 cacaggagga ccgggaagaa gagagcattg tgcgagtaca gcagcacttt atcgtttggc 960 tgcagaccaa ggtcttctaa cccctttgca atctgtttca cgagcacttc tgcttgcgca 1020 aggctgaagt tcttggatgg gttggaggca tcaaagtact gcggggtttg gcgggttgta 1080 ggcgtgcccg aagaaaagac gaaggaggca acgtccgtga cgggaatggg aattcggaga 1140 ggagacgtca gaactgtcat tattgatctg gcactggttt tgtagatgct ggtagcttga 1200 ataacaggag aagagtgcag gtacctaaag taaagatagg tgtgttgggg taccgaggta 1260 gtcttctctc tacttcgtct cctcgcagtg attcggctat atgccaggaa agcttccccg 1320 gggcgaggat ccagcttgct ttcgtgattg caggtgcttg attggccatg aggttttcta 1380 tcgaatgctt ctatcaggcg atgttttgtt gttcaataca actaaatagc cggttctaga 1440 acacgccctg gcgattccca gccgcaattt gacgacagta acggcctttc aactatttac 1500 aattgctctg tagaggccct cgccactggc caattcagta atatacatgg acaatttctt 1560 tagggggtgg agagcaggct tcgtaccact tatgaaaccc ttcagtagcg ttacgcttag 1620 aagacaagcc ttaagagttt gtgtatagat caaccacgat cccaagtggt tactctttgg 1680 tttccggaag attggaggct ttgcacacct tcagggcgcc ttgagtaatc tattatagcc 1740 atattattgc tctagtaaaa gtacagttgc caataagtat aaccaacgct gatatgcaac 1800 catcgacgcc attataggtt tgccaaatca aaaacaccgt taatgcaata gtctagcagt 1860 ctcccaacct tgggaatgcc tgaatatcgt cacatatgtc aagtcttatg ttcaatcctc 1920 accggcgggg agtggacgga gtcaatcctt cccgcggact gcgacttcgg gcccttcgtc 1980 atcttcttca tcctcaaaat cttcctcatc gtctgaagcc acgctctgtg tctcggcttc 2040 ctcgtacgag tccgtagcct gggagacgaa actagcccca agctcttcct cagcaatttc 2100 gtcatcgtca agttcgctac cgtcgtcgct cagctcgccg tcatattcat tgtctacttc 2160 tteetetteg teggettgge ttteateete getatetgte gttgatatgt egteaaaate 2220 tcgaggaaca tccctccaat acatgaaatc ggtatattct tcaccgccag cttgaaccag 2280 caagctgact ggaggaaaga agtgatccac cagctcacgc atagagacat agctactctt 2340 gtacttgttc aagcttaaaa gggtccagct gaacctccgc gttcgagtta attgtgaaga 2400 tcctgctgga cgggatgttc acagatcggt agctgagagc gtccgtaagc ctattgccaa 2460 agcccgcgta gaaaggattc tctttcccgt tgaagaggcc gagaatatcc cgcaagcacg 2520 ccatcttaaa cacttcgggc ttcctcaagt agatttccct tcgaagcgcc gccatcgttc 2580 gateeggaet catgategta gggeettteg gaageetgta teegteetgg caaaegeeat 2640 agatatacga gcgagtggta tctgcttgtc caacggatct actggtgaga tacatgatgt 2700 tgtaaccgtt gttgacaatg tcggtataca acttggccac accagcgtga gtccagtctc 2760 gaccgatcat attcagcacg tgacccaagg catccgacct ggtgaggtta gtggtatgca 2820 gacagacage acaacaaaaa etcaettegt gatggtteea teaatateeg agatgacaat 2880 tggggtatct ccgcgccata gatacatgtt ggccgtacac gtggctttgt tcacactgaa 2940 ggacatgtca ttaatgccag gctttaattt cagtgccttg agctggtcgc ttgtgagccg 3000 tagegtettt geatagetge gaaceggtte tgetggggeg gtgttegggg gegattgegg 3060 cggcgtgggg attccgggct gcacgtcaga tttcgcgcga tggtgtcgca tctggaaaga 3120 cgggtcgcga agggaattgt cgctgtcact atggtagcca gggtcagaaa tcgcattctc 3180 gctcatagcg gagccgggcc gcatggcgtt gagggtcgct cggcggttgg cggcctcttt 3240 agectetteg etactatata tecacaagtt tecatgeteg teegeteeaa ttagggeece 3300 gatatcatag ttcccttcca gttcctccgc aagaattttg cgtgccacga cttccgcacg 3360 gagagcatcc tcttcgttac tcttgtaacc tgtcatgtcc agcatgaggt cgccgctgtc 3420 agtaacacgg gagggtatat tcgacgtaga tagtttctgg gacaatgaca tcgcacgtga 3480 gacagcctct tttagagaga ttggaggtgg actttgggat cgacggatga gatccggatc 3540 ttcgtttgaa ctggctgatg caggccgctg tagctggaga ctataatcgc ccgtactggt 3600 3603 gcg

<210> 1780 <211> 2530 <212> DNA

tgttctcgta cagcaggatc tgcgtaaagt acgttcgtta atactgcgag cctttactag 60 tagagetgae geattegatg eegagtaeta gtgttgeace aateacaetg aaaagteagt 120 caaacgtgtt tgatttagaa gcaagtccat aattcatacc atcgtggacg aacagccctc 180 240 gttgtgttcg atgcaatagt caccttgaca attttggcag ttccgttgac agtccaactt gcatgcggcg cactgaacga ggttaataga ccacatatat caatttggta catcgcttac 300 cgttggcccg cactcccagc agtctttact cactccaggt ccgaacccct cattgccagc 360 420 acggggtcct ctaacagctg tctgatgagg cgacagtttg ctcctcacac gttcggggcg gggaagacag ctgttgcaaa accacttatt acaacgatga caccacctat cggcgaggca 480 atcggcgcaa cgagcgatca gcacagggtg ctcaccgaag acgagtgctg gccgttttgc 540 tgcagccaaa gatgacgaat gaaatggtgg tggtgtgaga aggggaaaat gttcggctgg 600 ggattgtccc caaatagccg ggccttcttc agaagtgtgg caaccgtcgc aacccatagg 660 acccagggca attgttgcga tagctggtcc gagcagccgt tttccaggtt gggcatcttc 720 cgtgctgggg gatacagtgg cgcagaggtc gacattgtgt cgaggaccgc ggcagaggac 780 agcatcaaaa gcaatgattc cttcacactt ttgaagagtc tctgcccaac cttcctcaat 840 gcgatgcttg agcagtttac cggacgagtt ataccaaacg ttttgacgct gtttttcctt 900 ttggttctgt gtgggcggca cgtcgccgag cgtgcgttga ctgacgcact gtgaactcca ccaatccttg tacttgctcc gaactgcagc tcgagggcga tccgtgggag tgaagtagta 1020 gatacetttg atgcgaggcg taccggcggg ccgcgtaggc cgaactgcat agttgagtac 1080 ttgcatgagt ttccgctcat tgagatgtcg acattctcga attgacagta gactcagatt 1140 gaagcggtcc gacagcacca ggtccgaaac aagatcagct ggaacgggca ggccatctaa 1200 aataagcgtc cgtacatcgc tcatgatcga gcttcgctcc aaattggcaa agatgcctct 1260 gagaggccca gagtagaatt catcttcagt cagtgattcg tctatgcgct cggcccgcca 1320 cgtctgacca ccacggtcaa tcgggggctg atcagtcaac cgagcgcctc gacaatgaga 1380 caaatcaagg tgtcggaaca catatggcgt ctccatgatt agcgagcgca caaagcgcga 1440 agttgccgac agggccagga gagtacctgg agtgagatat ggcaccaagt gatcgaggat 1500 caagccattc cctaaaacat cttcgatcga ggttggcttt cgctctacca ccggttcagg 1560 ccgctctttg acagtttcct cctcatcact gagctcaatt tcgcgaacga ccggaacaag 1620 ccccaattcc ttgggggtca agcggcgggc gccatagaag aagtcaggag caaagctaat 1680 gagattetgt eggtaagegg ceaeggetee aacagecagt teetegeeae gattaateat 1740 taaaccggca tttggttgga tctcctgtag agcagctctg gctttgacga gctcggtttc 1800 gagaaggttg atggtggatt gaagaacagc agacatgttc tttttgttgt cgggatcgat 1860 gctagtgacc aagacagacc acagtgcttc tgacatgcta ctaatgtatc aggttagaaa 1920 gcaacaacgg atctcaaaaa gagtggcaaa ttccggtccg cgatttgttt ggttgggaaa 1980 tccgtggagc gctccacgga atattgtgcc ctagtcgaga aatatatatt gctgctgtaa 2040 accgggtggt ggattcagac gtcgaacgga gtcgtttgtc gaaatgataa actggggata 2100 atagtaatga gtggtaataa gcggggaagt acgaagtata aagacccgat atggggagag 2160 aaaaagctac tacggaatag gaagacgacg gagttgggaa gaataaacct aaggatcagg 2220 ggctgccgaa agcttcaccg gacgacaagt cgggtattac tccgtatatg aaaggatcct 2280 atttatccgt atgatgtcct ttttaagata tgtgataatc ccatccgcaa aagtactccc 2340 tacaacgtag aggctgcaaa aagcaagcca acttggcaca gtagtggaat tttactgcat 2400 aatcacgact gtggaaggtg atacagcagc cttctagcca attcaagcac tgcatatctc 2460 ctcggggttc ggagtacaaa tctgtactct gtacagtggt gtagaaggcg aggtggaaag 2520 2530 agagtatggg

<210> 1781 <211> 2339 <212> DNA <213> Aspergillus nidulans

<400> 1781

gccttccatg gcaaaaatat gtacctcagc cttatcaaag acaaccttat gggaaaaact 60
taatttaggc gccagattca acctctggtc ccctatctta ttatgaaaat tttcatccac 120
aacattgccg cgagtgttt ttgtgcttaa acaacggtaa aggcaggaat cctagattga 180
tatcagctca caagttctga ctccggctaa atccttgtcg gccagaatca ccgaccccag 240
ttcaataaaa attgtttctc ggccggaacg tgctttaagt tagatcctca atagcctcac 300
tccgttcccg gttccggtaa tcaccgcgcc agaataagct agcgctatcc ccaggatttg 360

420 tcgattaaag atgggcccag atccgggtct tgctcaggaa ccgggttggt ggcataatac ccgaataatc tatacttctc ttggttcgac ggagcttgag gcggaaattg cggggatacg tagctacata taatagtcct aatactgttc cacaccgttc aagtaatttc cttgtccatt 540 600 gactatatag accaactccc ttagtcatga ggctcattca cgctgtgctt ggtcttcttg 660 ccggtgcggc tcccgccctt gttgcagcca gccccgcagc gccaatcggc aatggccgag accaggtaíc taaagcagta ggccgacact ttgagattga cggcaaagtg cagtactttg 720 780 cgggtacgaa ctgctggtgg ttgggcaatt tgctcaatga tttcgaggtc gagcttgctg tctctcagat tgccgaagta cgcctccaac atgacggata tcggatcgag tactgatgat 840 ggcagaccgg gtataaagtc gtccgaacct ggggcttctt cggcgtcaac gatccatcca 900 accccggcca gcctgtctac taccaggtcc tgaatgaaag cttgtacgag ggtggcttgg ggatcaacta cgggtctaat ggtctgtctt tcatactcct tcgttcacct gcaatcaagc 1020 gcagccctaa cagacatctg aacgcaggca tccgccgcct cgacaccgtg gtctccctcg 1080 ctgagagata cgacatccag ctagtcctga cattcatgaa caactggaac gactttggcg 1140 gaataaacat ctatagcaac gcattcggca gcaacgcgac tacctggtac acagacaaga 1200 aaagccaaag ggcataccgc gagtacatca aatttatcgt caatcggtac aagggctctt 1260 ccgcgatttt cgcgtgggaa ctaggcaatg agccccgctg caaggggtgt gatccatccg 1320 tcatatacaa ttgggccaag agcgtcagcg catacatcaa gaaattagac aagaagcata 1380 tggttgcact cggagacgag ggctggctct gtccgcccga gggagacggg acctatgcgt 1440 acgattgctc agagggagtc gactttgtga agaacctcga gatcgagacg ctcgactacg 1500 gaacetteca ectetaceeg gaateetggg gttacaacta cagetgggge agegagtggg 1560 tgctgcagca cgacgccatc gggaagaggt tcaacaagcc cgtcgtcttc gaggaatatg 1620 ggactccgct caaccatacg cagctcgagc ggccgtggca gctgacaacg gtcaaagaga 1680 cgcaggtggc ggcagacttt atctggcagt ttgggactgt gctgccggtg gagggaacgg 1740 agtggggaga tgtcaattcc atctactatg gaacggaaga gtacgaggtt ttggccgtcc 1800 agcatgcgtg ggagatggcc aggaagaagg tgccgcggca ctagagctag tgataacagg 1860 gtacttgcta tctaatcaaa gacacatctc agccattatt agagttcaat aagtggaaag 1920 gaaaagtttt tcgcaagcag atcgcttcgg gtaagccgtg gttatagtat ttcggcgact 1980 agcaggcatt ggacgcagag tacgatgcca atggacatga gcggcgcatg tcgataactg 2100 agttttcctt ggatggtcag cecegaacac taacctttgg gaaccacgtt ggctctaaag 2220 aggccgtat catttgacg gcctggagaa tcgatgctta cagtccagtt tcgattag cagtccagtt tcgatcagt tcgataatg 2280 ctggtctgt ttcttgattg cagtccagtt cgcattcgtt gaaaccggat ccaatagtg 2339

<210> 1782 <211> 2078

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 1782

tgttcaagta acagtacatg catcagctcc tccgctcgtg gcgttcgcca gttcttagcg 60 atcgaggcgc cggttctcgc tcagagcatt gacaatagcg cgcatgcgtt ccttcgctgg 120 gattatetea ttggetegae gggtgttetg atttgggett tgagettgta eegggetgge 180 caccgtcttt gtgtacggcc caggtggggt gcgtcgggct cgtgttcaag gtcgctgcgt 240 tgacgatttt gactgggcca gtcggagcgg ctgttgagtt gatatgggag agagatgagt 300 tggtattcaa tgagttgggg ggcgtgaaaa gagcggcccc agtgggtaag aagcttgcgt 360 aattgcaaat cggtctgttg agtctgctcg aggcgacgga atgtgtcgca tcgaaatatg 420 tgtcaggtgg tgagacagca atgtgtggca caacctatac aaatgtcttc tgtatgtagg 480 caagegagat ctcaacaaat ttgggtegee acttecattg atgatetgte ageteataae 540 tagagcattt tccatttcac tcatttccta atacaattaa cagatcctgt tcacctaccg 600 tettteacta tatacgcaac atgteagacg teettageag ttgagtetea etectagetg 660 tcatccttag gagtgagtat cttttctttt ttatgcgaaa ttctcaggtt tatggaggaa 720 tggctgaaac gcacgaggag atcgaactac ttggtcactt cacctcttgc ttgctgaaca 780 cagcctatta gaacggtgca agatagagga cgtctgttga taaaagacag aaagagagag ttctggggta ggaggagact gtgagttgag actagtatct tgacgccagc gcacaggctt 900 gaatatcccc agccgactga agagtccgcc cgctaaaata ataaggatat gaggtactac caagcagtaa tgctttctcc cgtcggtttt tccctaatag ggttttcgat caggggattg 1020 ceggtacggt ggcctatgca gcagtatete acataatgce egteeggaae tgtecagete 1080 ctcgaatgaa acgttcttcg aagaattgct gcgtgaacgc actttgaccc attctccttc 1140 tccagaacaa ccccaaactc cgtgatcctc ttgcgataac aagtacggcg agcgcatgga 1200 ggcacattgc cttcgaactt gacctgaccc agcttatgta ccgttgacca agaaaacaac 1260 acaatgccga catcacttga ccaaatttac ccagctttct gctcgtttat gccccgagtg 1320 ggcactacat cgacaggtgt tgaccagcag tttttatgtc gtcttgtctg ttcctaactt 1380 gtacttgagt ttttttttt aatttttta ttcttccttt ttttttat tttttat 1440 tttatttctt catttcttc tctctttatt ttcctatttt cattgttttc tcctttattt 1500 tttttttcat acttattttc ttattttcct ttccttttaa tgtacaattt tgtttctttc 1560 ttcttttttt tatctttact ttatctttta cttattcttt tcttcttcct ctctatcttt 1620 ttatatttct taattttcta tttttgtttc ttattatttt tttcttttt tttctatttt 1680 tttctattca accttctctt tctctctatt cttttttatt ttccacatta tcttttttt 1740 tttttctctc ttatttttt tttttttt actatattta ttttttccct tttccttatt 1860 aacttattat taatcatttt atctattctt tctattatat ttcatatttt tttttatttt 1920 tatcatttat catatattct ccttctatat cttttctatt tccatttaat ctttttctct 1980 ctttttcatc ttttaccatt taactctatt ctcctctctt tttttncacc ctctcctttc 2040 2078 ctctcctcct cattattcct actattttt ttttatat

<210> 1783 <211> 4341 <212> DNA

<213> Aspergillus nidulans

<400> 1783

cgacgtggta gagagcgtca agagcggcac ttgcaagacg atagcagcg ttaagtcatg 60 caccaaggca ggaacgggtt gtggtggctg tatgcctcta gtgcagtcca tcttcaacaa 120 aaccatgctg gacatgggtc aagaagtctc aaaccagcg atgtgcttcg gcccagtttc 180 tgttttatcg ctaatttgt gcagtgtgt tccatattcc atactcgcgg gcggaccttt 240 acaatgtcat agctatccgt caattaagaa cctttgacga tgtgatgaag tcggctggaa 300

agtgcccaga ctcgctagga tgtgagatct gtaagccggc aattgcgtct atcctctcca gtctcttcaa cccccacctt atggacaaag aatatcacga acttcaagag accaacgata 420 480 gattcctcgc caacattcag agaaatggga ctttctcggt tgtccctcga gttcctggag 540 gtgaaatcac agccgacaag ttgattgcaa ttgggcaggt agccaagaaa tacaatcttt actgcaagat cacaggtggt cagcgtatcg atatgtttgg tgccaggaag caggatctac 600 660 tcgatatttg gactgagctc gtcgatgccg gtatggagag tggccatgcg tacgccaagt 720 cactccgaac tgttaaggtg agatttattc ttaagtcaat gcaaaccgag ttaacggaat tcagagttgt gttggaacaa cctggtgccg attcggcgtc ggagacagcg ttggaatggc 780 840 tatccgcttg gagcaacggt ataagagtat ccgagctcca cacaagttca agggtgctgt ctctggctgt gtccgagagt gtgccgaagc tcaaaacaag gagtgagtaa cgtatcactt 900 tttggtaaaa gcgccgttaa cgtgaatagc tttggtctta ttgctaccga gaagggattc 960 aatatcttcg ttggtggcaa cggaggtgcc aaaccccgtc attcagagtt acttgccaag 1020 gatgtaccac ctgaggaggt gattccgatc ctggatcgct acgtgatctt ctacatcaga 1080 actgcagaca aactccagcg aacggcgaga tggctcgaga gccttccggg cggcattgaa 1140 tacctcaagg acgttgttct caatgataaa cttggaatag cagcagagat ggagcgtcaa 1200 atgcaggagc tggttgacag ctacttctgc gaatggaccg agacagtcag aaatcccaaa 1260 cgtcgcaagt acttccaaca attcgccaac actgacgaga cggtcgagaa cgtggaaatt 1320 gttaaggage gegageaagt gegeeegaet taetggeeea aggaeggage caacgaagae 1380 ttcaagggtc accaatggtc cagcctctcg tggcagccag ttatcaaggc tgactacttc 1440 tecgaeggee caeeegeaat etegteegee aatateaage geggtgatae eeaattggee 1500 attttcaagg tcaagggcaa gtactacgct acacaacaaa tgtgccctca caagcgaacc 1560 tttgtcttgt ccgacggtct gattggcgac gacgacaacg gcaaatactg ggtatcgtgt 1620 ccgtaccaca agcggaactt cgaactcaac ggcgagcagg ctggccgttg ccaaaacqat 1680 gaggcgatga atattgccac attcccagtt gaggagcggg aagatggctg gatttacatg 1740 aaacttccac cagttgagga gctggattcc gttcttggta cggaaaagtg gaaggtgaag 1800 aagggtgaag ctgtggaccc gtttgaggcg tatgacaaga agtacagcgg gatgaaaggg 1860 aagagagccg gcgccaaggg aattgagggc agcaagccca ctcggtctcc ttcaaacaca 1920

atagactggt agactgacga ggatacgttt tgcgatgtga tattagtatg gtggacatgc 1980 ttattggttt gcatggcgtt tttctattca ggcggttcta tgcattatac ctagtgttaa 2040 acaatctatg attatactat actcgaatcg gtaacagtcc atagaacgct gcctacataa 2100 gttgaattgc ctcgcgacat aaatgcttct ctgtacaatg cagagtacgg agtagggcct 2160 gatatggttg atgcctgagg ccaaaacact cgatgattaa actctacttg attggccggt 2220 gaggttgtta tetettegae geageeagae ceatttteee teegeaatee teeatetgee 2280 ccgataacac tattaaaaag ggcccattta cctcttaaga tctccgcgga gccaattcaa 2340 ctctggtttt tgatttctgg cctcagagac taccgtcatc atcatggcac acaaaaacgg 2400 caccggaacg gtccccgtgg agccgtcagc acatacttgc agtcgacgaa caacaaacag 2460 ttcaacactt gaacttacag ttccgaggag atcgtggaca tttttgtcat tcttcatgca 2520 gtgacatcca gatatacgtt aaagttgcac ggaggttgct ttttactgcg tcttcaacgc 2580 ccacatggac gagtctcgac ccataacagc cagttccgtt tggttccagg ttctaaatac 2640 ccgcggagtc tgtactgcga aaaggctgga ttgccttatc ggaaggctaa aactctgtgc 2700 gagatgtaga tccggtctgt gggtcatata cttttcttat ctcgatgtcg ttgatagcgg 2760 tragetreat cetragerae accaeatrea egetgaegge ettgaetreet eegetgeeta 2820 ttagcctgcg gaatatgcgg catggctttg acactcccac gggccagcgc tcccatgaag 2880 ctcactgagt gggtgcggac caacaccgtt tgaaggcagc cttgcctatt tggtctgatt 2940 aatctcgcgg ctttctcgtt acaaatacca aagagacatc actcgggttg ccatttctaa 3000 tcgtgatcgg gttcgggacc ctgatagatt actgcctgat tgttcttgtg ctggctcccg 3060 agtgtcctag ccctgacgac atgctgatat cccggggaga tacatgacac ttccttttca 3120 gtcagacatg agttgtttct gattgacgat tgtgcctgtt gtttatatag caggcccgtc 3180 tctcattgat ctggctatat cccaggataa caatcaagca attgtctagc ctatttgata 3240 tctttctacg aactgcagtt ccctttcttc taatatcatt cgtcttattg gttaaaacca 3300 tatatatcct cgaggtatag aatagcacgg ccgatccgtt cttctacaag tcgagtttag 3360 atccaacttc atccttattc aaccagatca ggcgaagtcg ttgaagagat ggacttcgcc 3420 aagctgctgg tagcctctcc tgaggtcaac cctaacaaca gaaaggccct cactattcca 3480 gtcctgaacc cattcaacac atatggccga gtcttcttct tctcatggtt tggcttcatg 3540 cttgcattce teteatggta tgcetteceg cetetggta gtetettett eegacaaceg 3600 gactgaagga atcetaacag tgaagccagt tgactgtcac tateegegat gatetegaca 3660 tgteccaaac acaaattgca aactcaaaca teattgettt actagetacg taagtteeet 3720 geatgcaagg acaagaegea gagecageee taaceetata teagactact agttegactt 3780 atcetgeggee eectatgega tegtteegga eetegtacet teetataegg actgeggeetee teateeggaetee teeteggegee eeteggegee eeteggegee acattegtte eeteggegee eeteggegee teaggeeteet teateeggea eeteggegee acattegtte eetggeggee teetaggtaca 3960 gggttttttg acaagagtat agttgggaca gecaacteee tagetgeegg tetaggtaca 4020 getggtggeg gtateacata ettegteatg eeggeetaca teggaeteee tagetgeeg tetaggtaca 4080 eaaggeetee eeggaacaaa ggeetggege gteggaetae teggaetee teggaetee tateettaate 4140 gttgeeggee eeteggaetg eeteetee tagetgaea eaattggtee 4200 gageggcaca tetggatgaa ggaggatace eteeegteee aceggaeee ettecatta tgegataga eaattgeee 4320 atteeeggeg tegaaaagaa a

<210> 1784 <211> 4903 <212> DNA

<213> Aspergillus nidulans

<400> 1784

acacgggacc ggataataga ccagcgtaat cctctgagcc gatactgtaa ccacccctac 60 gccagtagtt gaaggtcagg cgcacctgga taaattagaa ctcagttgag actggtagag acgataaaac atacgctcca tatgacggag atagctgcga tagtatccaa gttgagagta 180 cgaaggccgg aaaggcgtgc ccaaacagca aaatgaacgt tgaatacgga cgggaggata 240 300 gaccagaagc gatcgacctg agagtagttg cggttgatct cagagaagac gatgaagaga acagagagga agatagtaaa tgcaagcgcg gtcgcaagcg gattggtgga aagatagatg 360 tccttaagag catttacatc ttttgctgca atcgcaggct ggagacgttc agggagcgca 420 gccacttgcg acagaaatgg tcgcacggca tggttgaacg aaacgcagtc tgccagagac 480 540 tcgacgtcag gaagtggaag cgtcatggtt gttgacgaag cagaagcagg agcagaagca

gaagcggaag caagaacagc aggcacccga ctgcgaaata gattttccca catagaggag ataagatact tggttaatcg attataagga tatagacgca gataaagggt ggaatacgtt 660 720 catgaaatca caacaaacaa ggccgagtca cactaaagag cttaagcggg gtgcgctaat 780 ccgcattagg tagtaagctg tcaagtgtcg agtcccgtga ccggtgtcgt tttcgcgttt gctcgcgaac tgaagatcaa tttgccaata atacctatag acaaccccag actgtcgtag 840 ggggagcatg gtggaaatga ttcttagctc atcaacttct actgctcata gtgtgatttg 900 cctggctgac tgtcatggcg ggcaccaaag tcttgtgcgt ggctgagaag cctgcaatcg 960 ccaaagctgt cgcacagcac ctatctggag gtcgtatgga aactgtaagc gaatgaccta 1020 acttgctgaa tgtgaactga aaatggaata gaaaaatgtc actggaaatc gatttgtgaa 1080 gaactacgta tttgatttca atttcgggaa tcaatgggga aacagttctg tcacgatgac 1140 cagcgtctta ggacacttga caagcttgga atttgagcgc cagtacagtg gttgggcatc 1200 ttgccctcct gcagctctgt ttgaagctcc cgtcaagatt gctgtcgacg acgtaggtta 1260 agccgatgtc tgtccatcag ccgtctttgc taagtcctaa ttgcaggata aaaaggcaat 1320 cgcaaacaac atcatgaagc aggcgacgca tagtcagtac ctggtcattt ggaccgattg 1380 tgaccgggag ggagagcata ttgggacgga ggtacgcgat caggcgaagg cgggcaatgg 1440 acgaatcgtc gtcaagcgag ccaagttcaa caatactgag aagatgtagg tagatgcacc 1500 acceptttea tgtgtgette gttaaccgat ttaagceacg ttetgaatge tgcgaggtet 1560 ctcattgaac ttgatgagcg gcaagccaac gcagtggcgg cgaggataga gctcgatctt 1620 aggattgggg ctgcgttcac tcggctgctc acactccagc tacaaaatct tcatgccacc 1680 ctgacacaga aggttatcag ttatggtatg ccacgccgtc cattttgaaa cgcgctccca 1740 tctgacagac tactatccaa taaggatcct gccagtttcc gaccttggga tttgtggttg 1800 atagatatct acgagtgaag cgattcaagc ctgaaacttt ctggggaatt aaggtcatgc 1860 acactaggga tggtatcaaa gtgagctttc tctggaatag agtccacctt ttcgacagag 1920 ccgctgtcac tattatgctg gagcgctgtc tgatggcaac aaaggcggag gtcacaaagg 1980 tgaatcagaa geegacaage aagtggagge eettaceatt gacaacagtg gaettgcaaa 2040 tgatgggaac aaaatatttg cgcatggaca gtgcaaaggt catgaaggta aatgctctat 2100 cacgtaaaat gctaatatgg tgactaatgg aacctagatt gcagaaaatc tgtacactaa 2160

aggatttata agctacccac gaacagagac cgatcagttt gacaaaggaa tcgacctgaa 2220 gaagcttatc gagaaacaac tacctgatga gagatgggga gagtacgctc gctggtgtgt 2280 tgctcactct ctaagctcta tcaactacta aactgcatta ctagtctcct cggcggcaat 2340 ttcagaactc ctagggctgg gaggcacaat gaccaagcac atccaccaat ccatcccgtc 2400 tgctgggtta accccaccac actgactgaa gatgaaagaa aggtgtacga gtttgttacc 2460 cgacggttcc tcgcctgttg ctcagacgac gcaaagggac aatcaaccga cgtcgagata 2520 cgttacggag atgagatgtt ccacgctcac ggactcctag tcttagaaag gaactacctg 2580 gacgtctacg tctacgacaa gtgggagagt acccaacaac tacctaacta tcaagtcggc 2640 gagctattcg aacctacaga agcgaacatg ttcgatggaa agacctcgcc gccaaactac 2700 ttaacagaac ccgagcttat cggactcatg gacgctaatg gtattggtac tgacgccacg 2760 atggccgagc atatcgaaag gataaagagt cgtgaataca ttggcgaaat gacccgagga 2820 agcggccgaa acgcggtgaa attactcatt cctactcgtt tgggtattgc cttgatacta 2880 ggctatgaag atgttttcgc tgggctcgca gacagcccct ccctcagcaa gccttttttg 2940 cggaaacaga tggagctgga aatgcgggac gtctgtgctg gcacgaggtt acgaacacat 3000 gttgtccagc aaaatctgga tatgtaccgg gagttgttca ttcacactca aaggcggatg 3060 aatatgctga aggctgcatt tcggaaatac attgtcgaag gagaggatgt gtgaagtcta 3120 ccattcgtct ccgatcgact gacgcccttc taggactggg tcatagtcct tgcggaagtc 3180 cattgagect acagteettg etgtggaeat atacaettaa etgecagaaa tetgaetaat 3240 tcagatttct caattgaata taagcatgcc tttggggtat attctgctga agcctacgct 3300 gttctatgag gaaagaatgg gttcttcaag ctttcgagta tgtctgctta aacaaattct 3360 tctttcgcaa aagaccttgg atcatgtggc tgctagatga agattcttac actacacaaa 3420 ataattagga acatccattc ctcgagatac taccacatcc aacatcgcac gctcctgcgc 3480 cgcgccgttt aaatcgtgcg taatagcctc cttcatcaat gtccatgcac attttggatg 3540 agataacttc aatatttctt cttcccattt ctggggattg gcaattcgct gttggctgct 3600 gagctcgata ttgccttgtg catgagctgg atttcagact tattgacctt gggagggcat 3660 gcttgcgcgg cttgacaatg ctctcttgtg tatatgggcg agatagaaca accctgctga 3720 agatgactta tactaaacta ttttctcttc cattgctctc cagtcaatct gaatgctctt 3780 tcgcaaagta gtaggaccta gcgtagtttg cggattagca agctcatttt aagtattctc 3840 tatatcagat agactcagca caagaccatg cttgcgtgag accttgtcag caactgagac 3900 ttatttcggt tgactcgagt tttacgcttc ttcatcagcc ctcctgcctc tggtctcatt 3960 cggccgcatg aaataaaact cactctctcg ttgccactga ttgatggatt ctatcctgga 4020 actgaaccta ttcaactgtt gttgaatctg ctcgccgcgt ttctcaagag taccgcaatt 4080 tttcttcagc ccgtcgacag atatttgcag ttgctctatc cgctcatcga taatggcctt 4140 caccatggcg gcttcccctt cttgcatacc cttggttgga ccgaaggtct cgttcaagac 4200 gagtatgttc actgctttga ctagggcaaa gaatcttttg acagggttga gagatattgt 4260 gataaatggg ctgaagactt tcttaatcgg ataaataacc ttcttgacga ctgggtcgaa 4320 tgtttgctga actgaaacga agcttccttt gactggtatg agactcttat cagctatggg 4380 actgagcaat atcttgaccg aagcaaggac cttcttgact ggaccgattt tcttttcctc 4440 aacactctga cgaacctgcg tatcgatagc catccaccgt gccaaccaaa cccacaatac 4500 taaaccaaat actcccaaca cgacgaaaag cataactgcg tacgtctggt cagagaaaga 4560 ttccagaccg tcttgagaga acttcgcgga aactgaagtt gtcgagttcg gtaaaacatc 4620 ttccagagac acgatagacg agtttctgaa cccgcctgcg gacgacctat ctttctcgta 4680 gggcaagcgt gagttggtgg aggaagacgc actactccaa gggagctttg acagagagga 4740 ccaggctgag gccacaacgt ggtggttgac cctggggacc ggtccgcctg gccagatgaa 4800 gtaggcagcc gagactccga tgagtacttg ggctgagaat gtgggattca tggctgatct 4860 4903 tagagtattt aagcaggaat gattgtagtg caatgagtct gtt

<210> 1785 <211> 4456

<212> DNA

<213> Aspergillus nidulans

<400> 1785

cgatccaggt ccacgtcgtc gttgttgctc gggctagggc actgtttgtc gggactaggg 60
tgaggcttga gcagaccatg ggctgcctaa ctcaactgtt agtctgctaa gtcagacaca 120
catagagttt gctgaacggg gctgactgaa acaacgtcgt attggtctgt atctgacttc 180
agaatgctat cagtctgtac gctgtactag atcacttgtt cttccggcct tccagcaccc 240

ccagcacgtc tgccgcactg tccttattcc cctttctctt cttgggacca cgcttcctct tgttcccqcc tcqctctgat tctaggacta tcccctcgtc atcctcgtca tcctcaatcc 360 tactgcctcc aaaaccgtag tccaagtcca tggcgtcgag cgcttcgcgg cgctgcgctt 420 cctcaaggaa cctcttacgt cggaggagcg tttctttgtc cacgccttct tcgtcgtcgg caatgtgatc cgacccctca gcagcttgtc gtaaggcagc ggccctcttg agcgcggcaa ggatggtcgg gtccttggtt agcgggttgg tgcgatgacg gtcactctcc acttgctctg 600 cttccttccc tgtactgccc gttgcgaaat agttccgcgg tcttgccggc tctgttctgg 660 ccgcctccat ggttggttct tccgttgtct tttccttccc gagttcctgc cgtgacttca 780 cttcagctgc cacgtcgcct tcttcctcat ccgattcgga tgaatcctct gacccgtcac cgcccagagg attgtagtca gcacccacgc cttcgaagat atcatcgtct tcttcttccg 840 cagtctgggc ggctttgatc ttggcggcaa cgtcggccgg cacttccatt cctagaggtt 900 ttggcttgga ttccttctcc ttctccgaga cgggatcgcc agcggtggct gtggctgtgg caggcgccgt ggtccccgct ttatccagcc atctggtttt cctcttcgtc ttgccatccg 1020 cgtccgtaat caggaggact tcccttcgcc ggccgttctc gtcctgctcg atgaaccgct 1080 tettetetgg ettegtatee ceaatettet tgaacegege acegagaacg gattetggeg 1140 cttgggcagc tgcaggggca gaagcagccg ccctgctcgc tttcagttct cgtagaatct 1200 categogegt ctttctctga gtttgagtag gcgctggcgg cggcgccata tttccccttt 1260 tetteteett teettegge geagaeggea gggatteace eccetttige tegageactt 1320 tatcaaactc ctcatccacg tctacctctt tctcgggctc atcatcagca gctgctcctc 1380 cgtctccctc ttcatccctc ttctccttcg tccgctcaac atcctctccg gctttgatcc 1440 tcctcagcaa atcccaatcc aaccccttaa ccatatgcgt actgctcaag tcccctccaa 1500 ccccaagete cetgegtgae etegtaageg tetecteate aataagacee teettgaact 1560 tctcttccag tcctttcaac tccgcctcgc gctcagcaga tttggcgtcc tcgctctcgc 1620 gtagtcgcgc cgcggcgcgg tettcatacc caactggtag cttcgttccc ttgggagcag 1680 cggaagactt gaactttttg ttcggtggtg gcttcccgtc gcgctcgcgt cggtattcgg 1740 ctagctgcga tgcgaagtta ggggctgtca gagtgcgtct agacagaaca aaatcaaaag 1800 atcagctctt ggatgtcaca ataaggacaa tagatattaa gcgtgtgaaa acatacggtg 1860 tcatagggat gctcgagcgc atccgcgagc ccagcaatgc ctgcgctggt ttcggtgtct 1920 gtccaccgct atcgctccca ccttgcggtg aagcagcgcc atgttttcct gcatgcgaga 1980 agccggtcgg actcgcgcta gttgatttgg atgatcggtt attgtcgaga agtagccggc 2040 ggaattgctc gttgttcatg gtggaaaggt gagtggtgca gatgcgggca gattaggcgt 2100 tgaggagttt gagctatata cgtggtagat attgacccga tggagctagt tcacgtgtac 2160 tggcaggaac caaatttgcg gaggccgaga ggtaccttag aaagcggcga cgtcagtgtc 2280 gcattcggcc gtagaagcgc actaacttct gaaagctaca agtataaatc gataccaaaa 2340 taatcccgta acaagtaaac cccaagtttg tagttcatcg attgtatggt attgtgtaat 2400 gttccagtat ttcagttctt ctactttaaa tttttagagg cgaaagccgg caattgttgg 2460 ttgattatgg acatatagct caaaccagga acttgagtca tcttgccgca tgggataaat 2520 acaatcaaat gcaaatccca atagacagct gcagaaaccg tacacctaaa ctatgactct 2580 tttgcgcgca acagcagcag gaatgagcaa ataaaccaat actattcaga aagcaaaggt 2640 tgccagaaga agatacaagg tagaaaaaga ttccgtctaa ttttgacaag ccattcgtcg 2700 tectegttee teccatecae gtatacteat geacaaataa egatagatga tgaagaggga 2760 tcagatagtc tcaaaccctc cattattgat gtcagcctcc atcctgcgac tgatggtcgc 2820 cggaacacta tgcgacaacc agacgtcgcg aagaagccga tcgtagcgtt tctggtttag 2880 catgagegge etgttgegge ggagaeceat gteaaetteg eegtggeggt egaggtaggg 2940 ggcgttgtgc cacgagccgc tctggttgtg gagatagagg acggcgcatt tacggatgtt 3000 gatgaagagg ccgatgtttt tgccgcacct gaagacgaag ggttagtaag ctaattaggt 3060 tactagagta gggcgaaaac agaatgcact ggagtttatg acttacttca caacatgctg 3120 gttgcacccg ccccatctgg tgttgctatc ctggcaacaa acggcctggg agcaaaagat 3180 gtctccacag aagaggcaga tgcttggatc ggtgagctcc ttctttgaat ttgggcaccg 3240 gcgccggttg gcgagctcaa tcaagctgtc gaagtacttg ggtaggccga ctagttcgaa 3300 gatggctggg tgcgaaaggc taggccatag tttgtggtct ccgatacgaa cgccagcacg 3360 agatgcgttc cagtggaaga tccagcctga gatcatggcg tcgaggggct taccgctctt 3420 gcgagcaggc ttcactgaag caaatatttc gtcaagagaa ggcatattca gaatcttggt 3480 taagcgatcc agctctgacg cgcccacgtc gccgaagcct gtgctgggga actcgacgcc 3540 atgttgcaca tgaagtaaaa tgaccgcttt tcgcaggaag gttagggcgt agcttgatat 3600 gaggcggtgt agagcaatga tcacgccggg ggttgctgaa tcctcgccct ctttgacata 3660 gcctagttca gttggatgcg aagaccctat tcctctgcct acggagtttg ccttgagctc 3720 cgagaccaca gtgttgaaga actgccgagt gacctcaaac cgttcgtcag aaagttccat 3780 atctaacaag taatgcgcat caccattctg ggccagctct tcctttagtc ctatgggcca 3840 gacaatgtac gtggtggcaa cettgacaat etcagegaca tageacatet geaceaagtg 3900 gcggacatca atatccagga caggaagaag ggcaagtgaa cattcggcaa gaaacacgaa 3960 cgtgtccttc gcgaatagtg gctcgatttg gtggacatca gcgaggagtg atgtaccttc 4020 aaagaatgga tggcccacaa acagctggca tagcttctgg tgatgcatct cacggaactc 4080 ttccagggac cgactttggt ttccgccttt gctctgtaaa ccaccgactg atgcgtatgt 4140 caatgcagtt tcagccagga cacgaaggtg cgtcaacgtt aattggggta ttttgtcaag 4200 gagegtgeag eetggetegg atteaacace aegttgageg attteaaceg eageaatact 4260 gaagccgaag ctctggaata aagagtctgt gtgaataata tcatcattgc ccagagtctc 4320 tggcggatgg ctaaaggttg aatagatctg attcagccga agggtctgct tcagccgtgc 4380 gtagatctgc agaagctcag tcatcggcgt atcactggag gccagggatt gttgggggga 4440 4456 attcggagat gaaaga

<210>	1786
<211>	4077
~212×	DNA

<213> Aspergillus nidulans

<400> 1786

gatcgtttta acatcatcaa caacatcttc tagcacttta tctttgactt catcgttgac 60 ctcaacaacc acaatctcgc tcacctcgtc cacctcgaca actagggcga ccctgcatac 120 gacctcgttg ccgatgacca cacattctag ccttcccacc ccctctggct cccatccaac 180 ctcctccgag tcccaatctt cagcaagaat gacccccggc tcacaagccg gaattgtggt 240 cagcatcctt actcttgcat ttgtcctgat cgcgctgatc aactggcgat tgcaccgccg 300 aaagcgtgct ctgcagacgg ccatcctcgg ggagaaatat cgaccccac caaacaagca 360

aaattcaatc tacaagttcg catcgaatct gtacacaagc agtaccctga cactggtcaa tgtagctgag atgttcaagc atcagagcag agacagtcag ggatccatca gcggccgtag cagcagtate tattetagge agecaaegee gttteegaee ttateeeagg cagaettaet 540 600 qqqctcctac agagggggtc tgtggaggaa ccgtgtgtat gatgcagcaa gtcgtatgta 660 ttttgctctt tcttccgtcg caaacatggc catggacaag gtcaagtcag tgccgcagaa 720 gcagaaatca gcggcgataa ggaggagtcg ggagtcgtac gagtatggct tttccgagga 780 ttatctgcat attcccccac cggagccagc tgctcttcga ggtgttgtgt caagacttca ctctaacagt tcctctgctc tacgctccat tacaaggaag tttaacccac cgcggccgcc 840 aaccgacact gcgtcgccaa catggtgcag cacgaacagc cctagccctt gcctagaaga 900 gtacgatcgg aacacaccgt cacagcagtt ccaaggccta tgcgaagacg cagatattca ggacctagtc aaagtgcgaa gtgtctcttc tggtatggtg gccatgagca atcccgccga 1020 catcagcgta gattccttgg ctggtcgtct ctcaggagaa aaggaacgcc agcctcagca 1080 ttcgcctgaa gaatcactgc cgacgcaaga tccaagtaag aacaaccttt ctaagccaca 1140 actgaagttg ggtcaatcag caattcagcg agagatttca ccggtcaagt tgtcgacggt 1200 tcaaatgttc cgggttgaga tgacctttgt acctcgtaac gacggacata tgtaagtgag 1260 cgaaggacag cttgtgcggt tggagcagaa attcgatgac ggctgggtaa gtctgctgtt 1320 ggcatcccga taactaatga tcactgactt tcgtgttcag gcgtggtgta ctgtggtcga 1380 aaccggaatg cagggcctta tccctcgggc ctgtctctcg acctggcccc ttaaggaacc 1440 ccggccatat acgcccagca gcatctgctc agaccgtggc ccaggaagca cgaccagcct 1500 ttctcccaca gactcccagt ctgttcggtt ctaccagcgg cattctccgg gaacatcaaa 1560 gtctggtttg ggatcaaagc cgccgagcgt gaaatagcaa gtattattcc cggcactaat 1620 atgtccggtc aatcctgtaa atataatact gcatatattc tccatgtctt atgcgtatgg 1680 tcagaagttg tgtgtatatg cctttatgaa ccgtattcga cgcaatgttt tatccaagat 1740 cqaqcccqat attqcactqa qcaqccccat gatcatctag atttgtgcca ggcaccgcca 1800 gtcagtaatt cctagctact cgtactatgg tcacgctgat aagaggctct atgccgcggg 1860 tgtcattgag tatattcgac tgctcagaca gtggaaatgc agaccagata ttacacctgc 1920 gcagaggcac cagatggttt ccacatgaaa ctcgtctatt tgtcataagt aactactatg 1980 ctgcactttg ccgtttttgc tgctgcgcat gtcgaatgaa atattgtgct tcagccctca 2040 gttctaacat caagcggtcg tagtagtgtg tgtcactccc catgagctct ttctgtctat 2100 atagtactga caacgaaact attaatttgc aataaagccc ttcaatctta tctttagtat 2160 tcttatacgc ttgttgagaa taccggttgg cctttctcaa cacgttgctc gtcagcttct 2220 ggattccggg caagtggaat tcctgtacag aagcggaatc atgaaccgct agcttaaaca 2280 taatcatacc gagctgaact acgtgaagcg gatcacatag gggcaaggag tctccccgaa 2340 cccagaaatg ctgttctcct gtactttgtt gacccggtcg ttaggcgcat tccacatccg 2400 atcgtcagaa tcgctgttac aaagttagct ggttaaccgg aaggagcagg ggaaaaaatg 2460 gaaaatgtac atcattaacc caacatggtg gatactgctg ctgtcattct cgcagtcaca 2520 tgctccgccg aagaagacag catcaccagg ctggcgctct tcataagggt attttctgtg 2580 aggctatgtg agcgattttg atcgaatgtt acttgctgca gacgtacttg tacccaagtg 2640 tctcctcgct ggcgcagtac atggaggacg tgacgcggag gccctccgtg aagaggtcac 2700 ggccggttac ctggcacact gcccagcaga caaggccgga acagtcgtat cccacgtcgc 2760 cgtagtcata tgggggttgg tcatcgctgg gaccgtcgca agagccgccg ccccaggcgt 2820 agggagtccc ttccgcggtc agagctttgt caaggatagc ctggcctacg gtgccctctg 2880 cagatggggc ggccctgaca gcgcaggcga ggagggagac catcgcgaga tacttcatga 2940 tagcgttgat ttatgatcga gtttgatgag ttagagtctg tcgttaattg ggagtcaata 3000 cagaattctg gttccagtct atcgagacag tagccctttt atatctactt cgctggagta 3060 ctatcaccat catatteget gateattatt aggetgagat atatttaaca agateagegg 3120 ctttcacgtt acattcgcct tatacattat tgaacaggaa ttgattgtct cttggtgtcg 3180 tatcgctaaa atgatctacg ctgaatacga gaaaccaaga tcgagataac gccgttgatg 3240 gggccgcgtg aacgggaaag accaagccca atggctagac gagggctgat cttcgctgat 3300 tgctactctg ctgtgacaac ggcagggccg ctaggtatat gagataatgg caaggggcga 3360 caggaggtca aggtcatccc cacgcatccc ccgacgagaa tagtaacaac taattctggt 3420 tatgagggca ccttgaaagg catttgttag tagtttcgaa catctcgcac cagcaactta 3480 ctaaacctag tactcataga catttgcaaa cgacttggga ggaattccgg acagcgagtt 3540 ccctaaatag tagcaaattc ctgaacaacg taagagctcc atttccagtg gaccagtagt 3600 cccaggcact tgtcttatca tccagttatc ctatgtacca agtaggaact cgactggatc 3660 ttggaggtcc tttcatctgc tgtagcaggt gcttcacaga cgattgtaca agggttgaat 3720 tcgtctacct ctccgctcaa gggtccgtct gtcttgtcga gaatcaattg gatgcaagtc 3780 gcagcatcaa gagcacgcta atactcttat caaagcggag cgtagaaggc aagaagggct 3840 gggcttatct tgttgactga cctgagttta atgactcctc taaagtatag cttcggtctc 3900 tcctcccatc atattgcatt ttaacacagg caaatgaata ttattcagca gatctacttg 3960 cctgtagaat cacgattttc tctttgcatt ccgccataca gaagcacacc atactccacc 4020 atgaccttgc gttgacgcca gaatcgacat gtcgggaagc ctttaccaca agagcgt 4077

<210> 1787 <211> 2400 <212> DNA

<213> Aspergillus nidulans

<400> 1787

gatatgacca tcaagtcgta agttgattca cgacttagaa gacttcggaa tgtgtgccgc 60 gcatgcaacg tctgaatagc aattgcatat gggaatacca tggctgtgga ttctttctcg atcgcaacca cctcatcaaa gctaatgaca agcgtggtaa cccatcctaa gatattgctt 180 qaaaaqcaaa tatqqccctc agaaatgtaa atgcgtccgg ctaagatgat ctcacgttgc 300 aaagcacagc tataatcttc aataaggtaa tcgtcttctg ggacactgcg gaaaagctgg 360 tgaaagtccc tgttgcgttt tttgcttgcg acggcaaatc cagtcagtcg gggtagacta 420 gcattagege etggaacee aagtgeaagg gegeeagege caategeace aattgttgae gaggttgcac cagatgagcc tctgtggcgt cgccgagcta gccgactccg tacactaccg 480 540 cttcggaaag gtctcgtgcc aacttccccc tcgaatgcgc tggcacctga gggagtctgg gcgcctgtag gctctttcat tgagctagct tggacatcag aaccgtcgtc cgccaacgcg 600 660 ctatccqcct tttcqtacgc catagtgact gcgcgtgcaa cccgcatatc ttcaagcttt 720 qcaqcaqcat catctcqctg ggaaacggct gggcttcggc gcgtttctgg tcctagatcg 780 qqcttcqtaa taacgacacc atctggagtt gagatagatc cacccggggg tatatcgaga tccaaatggc tgaaattgag atcaccagaa cctagagtgt caatagccat gggcttcttt 840 tecteeggtg gagetttgtt gattteatea gattetegeg eagtetegtt tgaeggetgt

gcttcggagt cattggcttc cggtatggtt ggattacggg ccttttgggc attgagagtg tttgtcaggg tagaggcggc agtctgtgcc gctgaaaaca cggaggaaaa gaacccagtc 1020 tggggattcc cgaccttccc ttcttcaatt gtcgggctag cagctatcga atttgatagc 1080 ttactcggct tcggatttac agaagaagta gacctaacac gccgatgaga gatcatgttg 1140 cccgaacgtc acaacaacgc cggccggtaa atcgcgggat gtgatagagg acggagactc 1200 tgtgataccg gagttcacaa caagaggtgc atgttcaagg tgaggggtgg gcggcgtcac 1260 tgtagtagaa gggaatggga tggcactgtg aggaggtgtt tgaagacggg gacgctccgg 1320 cgaagatcga aaggtctctc ccatgagatc cgtacgtatt ggttctggaa ttgatgggat 1380 cggcgggggc gcctcagcta tgctacccgg ggccatcttc gaggacaagc tgcttcgtcg 1440 gctcgcgctc cacgaactct cacccgacgt tgattcggct cggtcacggt ggacgatttt 1500 cttgtcggag ctgaacgcat tctttaaacg ctgagtcttt gatacgtttt tcttcttgtg 1560 gttacggtcc gtaggcacac tcagatttga gcttgctggc tggctagccg ggcgcactgg 1620 ttccgtgtca agattcgagc tgcgaagatc tgaggttgag ccactgacgg ccgactccgc 1680 atcaccatgc gctccatctg tatcattagc gtcagccgag gctgttttga tgagaggtga 1740 cgcattgagc gtcagtatcc tgaaacaatc cgtggatcta agctgcggac ttaccggtcg 1860 ggctcagagt cgtcggttag gagattcgag gggtcgtctt gggaaccatt accttccggg 1920 ggaagcaacg aggcgctaga cgctctcgcg cgcggattgt tagagtaact ggacaaaccc 1980 ccatcattgg tctccaattc tagagtggct ggaacttcat cgaccagtct caagtcatcc 2040 ctcttcttct tacgtttctt tctcgatgcg aggagcttcg acagaccgct agatcccgat 2100 ttagatgatt ctgcctcccc cgcttgcctg tcggacgtgg aatcgatgga ggaccgacca 2160 ttgctccgac cagagettec aacagtetee aagtegaceg gaattgtett tgageggate 2220 gatctattta agggcggagc atcggttggc gcgggctcgg gagggtcagg gagggcgggg 2280 atcttaagca gtgctacaac tctctccctc tagggggtta ggtaagtgaa agagaatcac 2340 atccgagggt ggtagtatga actaggaaga ttgaatatta attacacatg atcatatggg 2400

<210> 1788 <211> 3711 <212> DNA

<213> Aspergillus nidulans

<400> 1788

60 qaaqaagat ttacgactat ttagcctaga tgaagtatag ttttgtgcaa tgctcgatag cgtagcatac aaccctacct agtaatgagc tacttgggct gctagaataa atctcccaat 120 ccaagctaat gtagtcagag ctgaacgcaa gtctcgtaca tggccctacg aggcatcaca 180 atagccctaa agagtatcac gtgaccatac tagcaccgca atgagttcag gatccgacaa 240 tagcgaggct gtatccaagt gcgccgaata atgtctatca ctgtagaaat atatctgatt 300 cgctcagctg gtcgataggc gaagcatcgg agttggcgga gttggcggag ttgcaggact 360 420 tgctggatta gggctgaggt cagacggact ctcactctcc gctatagaca ctgggcgatg 480 ttqtaqqcaq cqatqggaga atgtgcattg cacatggtcc ggagatttct ggagtcaggt catgcagtct agatcctgac tgcagtagaa tgtgcagatt ccggagcttg gggagttaac 540 ctgcagtaag ctcagctcaa gcaatgatcg gtaggtaggc ctggtggcca tatcagctat 600 660 agatgcgatc cgcgcctcaa gcgcatttca agccctccct cttcaatacg tttgcgatac 720 cttagagaaa caaatcaaca tccatcaact ggcacagatt catctaccaa ctcaacgtga 780 ttacccgtcc agctttgacc taaacctcca taatccccat ccacaaggca ccatgggcag cacatcttcc gagcccacat acgacagtga gcccatcgag attattggcc tttcgtgcaa 840 900 ggccgctggg tccgcagaca ggcccgagaa actatgggag atgcttgcgg aagggcggaa tgcatggtca gagatccctg atttggggtt taaccacaag gccgtgtatc atcctgatag 960 tgagaagctg ggacgggacg tctttccttc tagacttgag tttcagtggt gaagtggatg 1020 ggaagcaaga acctggccag actaacgcgg aatcttcgca gacgcatgtc aaaggggcac 1080 attttctcqa qcaaqatgtc gggctcttcg acgcggcatt cttcaattat tcggcggaga 1140 caqctqctqt acqqtcccta tgaacqattt caggatgaat ggccaggcta actgagcatg 1200 atgtacggat agaccetega teegcaatte egetteeage tegagteegt etatgagget 1260 cttgaaaatg gtaccacct cccccaaca gcccttgcgc aaggctgaac agagagtaca 1320 gctggcctga cgattccatc catcgccggc accaacacct ccgtctacgc cggcgtcttc 1380 acgcatgact accacgaagg tetgattege gacgaagaca aactgeeeeg gtteeteeee 1440 atcggaaccc tctccgccat gtcctcgaac cgcatcagcc acttcttcga cctcaaagga 1500 gcaagcgtga ctgtagacac cggctgctcg acggccctgg tggccctgca ccaggccgtc 1560 ctcggcctgc gcacgcgcga agcagacatg agcatcgtct ctggatgcaa catcatgctg 1620 tcgccggata tgttcaaggt gttttcaagt ttgggaatgc taagccctga tgggaagagc 1680 tacgcctttg actcaagggc gaatggatac ggacgggccc agggcgtagc gacgattatc 1740 gtgaagcgac tcgcggatgc gctgagggac ggggatcccg tgcgcggcgt gatccgcgag 1800 agctatctga atcaggatgg aaaaacagag actatcacct cgccgtcaca ggaagcgcag 1860 gaggcactga tcaaagaatg ttatcggcgc gcggggctgt cgccgtcgga tacacagtac 1920 ttcgaagcgc atgggacagg caccccact ggagatccga ttgaggcgcg ctcaatcgcg 1980 tcagtatttg gaaagaatcg agagcagccg ttgcggattg gctctgtcaa gacgaatatc 2040 gggcatactg aggcggccag tggtcttgcc gggctgatca aggtcgtgct ggccatggag 2100 aaggggttca tcccgcccag cgtaaacttt gagaagccga atccgaagct gaagctggat 2160 gaatggaggc taaaggtggc agatactttg gaaaagtggc ctgcaccggc ggagcggcca 2220 tggagggcga gcgtgaacaa ctttgggtat gggggtacga acagccatgt cattgtggaa 2280 ggggtgccga agagattata cacaccggca aatggaaatg agaccggcca gataaagcat 2340 gagacagaga gcaaagtget eetettetet ggeegegaeg aacaageetg ecagegeatg 2400 gttgccagca cgaaggagta cctgaagaag cgcagggagc aggatcctcc catgacacct 2460 gaacaagtca agaccetcat gcaaaatete geetggacat taacgcagca eegcaetege 2520 ttctcctggg tctccgcaca cgcggtcaag tactcgacct ccctggacac cgtcattgac 2580 gccctcgagt ctccgccgcc ggcctcaaga cccgttcgca tccctgactc tccattccgt 2640 attggcatgg tcttcacggg gcaaggtgcg cagtggcacg ccatgggccg cgagctgatc 2700 gccgcgtacc cggtattcaa ggcaacccta gacgaagcgg aacagtattt gcgccaactg 2760 ggggccggct ggtccctcat cgaagagctg atgaaggatg cagccacgac aagagtcaac 2820 gacaccggcc tcagcatccc tatctgtgtc gccgtgcaga tcgctctcgt ccgcctgctc 2880 aaggcatggg ggatcactgc ctcggccgtg acatcccact cgtccggtga gatcgccgcc 2940 gcgtatacgg ttggcgctct ctcgctgcgc caggccatgg ccgccgccta ctaccgcgct 3000 gccatggcag cagacaagac gctgaagagc gcagaggggc cccaaggcgc aatggttgcc 3060 gtgggtgttg acaaggctgc cgcgcaggca tacctggacc gcgttgagaa atcggcaggc 3120 cgcgctgtgg tggcatgcat caacagccc agcagcatca ccattgccgg cgacgaggca 3180 gccgtcgtcg cggtcgagaa gttggccact gaggagggcg tctttgcgcg ccgactcagg 3240 gtcgagacgg gatatcactc gcaccatatg gagccaattg cgagcccgta ccgggaggcg 3300 cttcgcgcg cattggcca ggaagatgct gagtctggta ccaaggacca gactgatgtc 3360 ccgggctttg cggatgccac taaaccgggc agcctagacc acaccgtctt ctccccc 3420 gtcacgggcg gccgtgtcac agatgccaaa gtcctctctg acccggagca ctgggtccgc 3480 agtctgctcc agccagtgcg gttcgtcgag gccttcactg atatggtgct tggctccaca 3540 gatagcaga atattgacct gatcctcgag gtcggccgc atacagccct tggcggaccg 3600 atcaaggaga tccttgccct gcctgacttc agcagcaga atgtcagcc ccctacatg 3660 ggctacctcg ttcgtaaaga agatgcgcg gactgcatgc tcactgctgc c 3711

<210> 1789 <211> 3423 <212> DNA

<213> Aspergillus nidulans

<400> 1789

gtattacaat gttgactgcg cacgattttc cgagcgcgca tgtcgccgac gcagccggaa 60 tggacatgat tctcgtgggt gatagcttgg caatggtcgc tctgggcatg caggatacga gcgaagtgac tctagatgac atgttagtgc actgtcgcag tgttgcccga gctgctcaga 180 240 gcgcctttac agtttgtcaa gcctgatgaa gactttgttt gtgcccacga tcctaacaat 300 cgttatgcag gtttcagatt tacctatggg ttcgtacgag gtgtcgccag aacaagctct tcagtcggct attcgaatcg tgaaagaggg tcgggtgcag ggggttaagc ttgaaggtgg 360 420 ggaggagatg gctccagcca tcaagcgcat cacaactgct ggtattcccg ttgttggaca 480 tatcggtctc acgcctcagc gtcaaaacgc gcttggaggg tttcgagttc aaggaaagtc 540 aacqacqgac gcactgaaac tgttaaagga cgcacttgcg gtacaagaag caggtgcgtt 600 catgatagtt atcgaggccg taccgccaga gatcgcaagt attgtcacac aaaagctcag 660 tgttcctacc attggtattg gtgccgggaa cggttgctct ggacaagtac tcgtccagat 720 tgacatgacc gggaacttcc cgcctggtcg cttcttaccc aaatttgtta agcagtatgc 780 caacgtctgg aacgaggcac tccaaggcat ccaacagtat cgtgaggagg ttaagagccg

agcgtatccc gcagagcagc acacataccc tataccgaaa gaggaactgg ttgaattcca gaaggctgtt gatgaattac ctgaagagaa atgattatgg aatagttgcg tcttatgttt 900 tgctccgctt ccttcatcaa ctactttggc agtggcattt cagggtgtgg tacctactat aacctttgta caaattgctt ctaaacgcgg tttacgaacc attgcacaaa tatttataag 1020 ctgtagtata tatgaatttg atttgtgatg ctgagctcgt gcttaacgtg tacccgatcc 1080 cgccgccaac tctttggaac tttgaaaaca agaactccat taacatcaaa aatgcatcaa 1140 gtagttagcg agtaacaaca ggctgagaag cgctgcctcg tggaaatatt tcgaagaccc 1200 aaagcacgtt atcattacaa ttaatattac aaaagtccca gtggtgctag gtggtatgga 1260 tcataagatt atgtaattta gaatgtatca acacgtgaca tatcatgtga ctgactacct 1320 aaccacgcat gttaatcctc gcgtgcctat tctcatccaa cacttcttca cgcatcactg 1380 ctccagcaat aaggaagcta cctcgcgcac tagtgttgat attgagtatg tgctatagtt 1440 gtgtctcaca tcgccagatc taagagcttt attgccttgt tgtcgtagaa cagatctggg 1500 tggcgcgcgc gcaactgtct ccagaggcac acctgttacc tacaaccgcg ccgtagaaat 1560 ctgaaccttt caatcgctac aatcgatcgc catggctggt aagctcagta ctatacgctg 1620 gatgtcttgc gccaaccaca ttgtccttgt ttaggcgact agaactccag ctatacccct 1680 cacgtggatt agtgagctaa ctccagcgcc agatgaaccg cgtcgctccg gtcgctcgac 1740 caagggccag cacaagagcc tcgacatggt caacgaaacg ccaacaaaga aaacgaaagc 1800 taaagcgcag cccagagata aacccccgaa accctccgca gagcctaccc ccgcgcctag 1860 cgaggaggaa gagattatcc ggtgcatctg cggcgaatat gaggaagagg aagacatcga 1920 gcgagatatg atttgctgcg atcagtgttc agcatggcaa cataatgatt gcatgggttt 1980 gacattcgcg aagggcgaag tgcccgatca gtacttctgc gagcagtgca agcccgaaga 2040 ccatccggtg ctcatggaca agatagcaag aggcgagaag ccatggttag aggtagcgga 2100 acgaagaaga aaagaagctg aagagttgaa acaggcacga cgcaagaagg gaaggagagg 2160 aggcaagaga ggcagaccaa gcgaaccgaa agagcccaag ccctaagaag agcacaccct 2220 ctcgtacacc ggcacctccg agcgtcaggt actcctcccg ctgaaccacc cagcgcctgt 2280 gatcgctacc ccagctcccg agaaaaatag tcattcgcct gagaagccac catccagttc 2340 tcagaagcga aagctgagtg aacaggaggt atcgacgccg gagtcggtaa gtagttacat 2400

tccccatcaa cgctagactg aaactctaac tcacatcaag ggccccaaga cgaaacaggc 2460 aaagatttcg ccgcctgctg caagcccggc acctcacgtc aaccagtcgc cagaggataa 2520 agagccagtt ggccaggata ctaatcaaac gccggccgcg gacactacga agactgaacg 2580 actgaagact cttgaagata tcaccaatcc ggctaggagg aatgctgcta gcgcgctaac 2640 taaagtgttt gtggaccaga tctccagtgc cctggcggga gggtctttca aaatgtctga 2700 aggcaagacg ggggaggaag ttggtcagca acttggcatc tcagtcgagg aggctttgta 2760 tcaaaatcta atggggggag gtggagaggc tacctcagaa gcttataaga tacaactgcg 2820 ggcgattttg ttcaacgtaa agaagaaccc ttctctacgg gatcgtctgc tcgtaggtag 2880 tttaactcct gatgccctct ctagaatgag ctcccaagag atggcaagcg aggagctaca 2940 acagaaagat gctgagatca agcgagaggc tgaaagacag cacatgatca ttcaggaaca 3000 agggcccgg attaggcgaa cccataaggg agaagaactc gttgaggatg atcagactaa 3060 tgtttctact gagcctgtct tctcaaacat tcctcgtcgc gttaccgaga cggatgggag 3120 tccggcggcg cagagtccaa ctagtccaag tgctaagcag ccagagactg acggccataa 3180 ggtcaagaca gacgctacac cagctgaacc cacgcctcat gacgaacatt tcccgacccg 3240 gagccattct cctggcgccg gtcaggacca agtcttcccg gaggtggcca cacacattag 3300 ccagccaata cccactggca acgtccaggc cgatgcagag attgatcagt tgttgaaaga 3360 cgacgacgaa cccgagtctc caccatattc accgaagacc accacgatga gggagctgtc 3420 3423 tgg

<210> 1790 <211> 4183 <212> DNA

<213> Aspergillus nidulans

<400> 1790

gacgtcgctg gcgcaatacg gacatactac gtctggcaga gtatgattgc ctcctacgac 60
accacttgga aagggtggcc tgtcttgctg gcagcaacgg tggaaatcaa cctcggcctg 120
gtatggcaga gaatccccgc tggcttttca gatagctaat tgacatagat ttgcgcctct 180
gctccagcat tacgaccact ggtcaacttt ttcatccccc gtcttcttgg cacctcatat 240
cgctacggtt cggatcgcgg ataccgctcg agaaatttcg agaactcgcg ccagtcgtgg 300

aggeteaagt cattgaetgg aaactegteg aaaccateta ggeattegaa ettetacaat gtcgatgcaa aaatatccag tgatcacctg aaggttttcc ggactgtcta gatgaatccg 420 480 cctgcctaca cttgcacgtg ttatgctcca ccgtgatccg cctgtgatcc cagcaggcga 540 cttcaattgg cttatatggg gacgtcgcgc gtctcaccaa cgacagtgaa actctcaaaa accctacgtt gagcgaaagg tcaatatcgc ctccgactcc gtctatacga agtgatgtaa 600 ggagtattcc cagccgtcac acgaaggaat gtgtgtaacc tcgaccttca ctatttctaa 660 catctctttg atgattcttg tctatcttta attatcttct acaccataac atatgggatg 720 780 gttctggaac ctagcactct acacaaataa cgagtacatg taaatatgtt atgagggcaa atagcctgct caattgccaa taaaaaaacg ttcgacttcg aagacggtaa taattattgg 840 tgatagctgc tcctccgcag gtcaacttct agaaaatata gttgtgagcc gatgacgagg 900 acacgttggc taagatcagt aagtggccat tgcgctcgac accccaattt tatgttataa teccegcagt gacacaacat attatagtea catgttetet aagaacaget tgactggetg 1020 atggatacga ctttgcatac ctcaattatc tacttaaacg ggtagacaaa caattgtcat 1080 ctggatagcg agtaatgaca gtcctcgctc cctttaggca tctgtttccg atctagcacc 1140 aaatttgatg atcgcggaca atttgccgat aggtaccccg tgactctcgg tggcttcagt 1200 tcacgcatcg gcaccgaagg aggaattccg tgatgtcttt cgccggaggt ggaaccgcca 1260 caccatagag ggaaagaaaa acggaccgtt gttatcaatt acttctggtc ttggagatct 1320 ggatgatggt tcggtgaagc tgacgaatat tattggtcga aatcgccgaa gctgccatag 1380 cttcttctcc gcagggctgc tgggatcaca gcagtccatc aaaataccag tggtatttaa 1440 gaccgcaagc ccgcatttcg ttcgcagagt tggtctgaat ttatttgtat ctcaacttac 1500 tcttacgatc ttctcatatt attcctccgg tttcgtatac agtcgagtgg tcgtctcgaa 1560 gctgtagtat acttcttatc tccccgctct tatcggagct tgatcaaagg gctctttctc 1620 ccactteett taegtegtet tteteettte aacetgatee tateegteaa gecacaatgg 1680 cttctgcctt ccgctccagc ctgaagctgc gggcttcagc tcgtctccca gctgttcgca 1740 ctattacaac cacaccccgc cttcgagctg cggagaagcc ttacttcccc aatgagccta 1800 ctgctcccaa gctggctacg gccattcctg gcccaaagaa caaggccgct agcgaacagc 1860 tcaacgaggt cttcgatgtc cgcagcttga acatgctcgc cgattacacc aaatccgtcg 1920 gaaactagta cgtcaatttg ccgtcaatct accccgcgca gtgtttgcca gggctaacac 1980 cgaaccagca tcgccgatct cgatgggaac atgctcctcg atgtgtacgt ggtcaatcat 2040 attttatccc tacttgtaga cgaatggcat ttctaacccg actgcagtta tgcccaaatc 2100 gcgtccattc ccgttggtta caacaaccct cacctcctca aggtggccgc ttcgcccgag 2160 atggctacct ccttgatcaa caggccagct cttggcaatt tcccttccgc tgactgggct 2220 cacatectga agaceggeat tetgaaggte geteceaagg gettggaeea ggtgtttaee 2280 gctatggcgg gttctgacgc caacgagacc gcttataagg ccgctttcat gtactaccgt 2340 cagcaacagc gtggcggtcc cgagaaggaa ttcaccgagg aagagattca gtctagtatg 2400 ctgaaccaga cccccggatc tcctcagctg tctatcatgt ctttcaaggc tggtttccac 2460 ggccgtctat tcggcagtct ttccacgact cgcagcaagc ccattcacaa gctcgatatc 2520 cccgcctttg actggcccca ggctcccttc ccctccttga agtatcctct cgaggagcac 2580 gctaaggaga acgctgagga ggagcagcgc tgcctgcagg aagccgagcg cctgatcaag 2640 gaatggcaca accccgtcgc tgctatcatt gtcgagccca ttcagtctga gggtggtgat 2700 aaccatgcct ccccgcctt cttccgcggt ctccgtgaaa tcactaagcg caacaacgtc 2760 ctcttcatcg tcgacgaggt ccagactggt gttggtgcca ccggtaaatt ctgggcccac 2820 gaccactgga accttgagac tcctcccgat atggtcacct tctccaagaa ggctcagact 2880 gccggttact actttggcaa ccctgccctg cgtcccaaca agccctaccg ccagttcaac 2940 acctggatgg gtgacccctc tcgcgctctc atcttccgtg gtatcattga ggaaattgag 3000 cgcttgtttc tggttgagaa cactgccgcg actggtgatt acctctactc tggccttgag 3060 cgcctcgcga agcagtaccc cgagcacctg cagaacctgc gtggtaaggg ccagggtacg 3120 tttattgctt gggatactcc caagcgtgac gagttccttg tcaagggcaa gggcgttggt 3180 atcaacatcg gtggtagcgg acagaacgca gtccgcctgc ggcctatgct gatcttccag 3240 aagcaccatg gtaagttccc tgttatcgct actaatgtga acatggctaa cttctcacag 3300 ctgatatcct ccttgagagc attgagaaga ttatcaagca actgtagggt ggtctgggct 3360 aatgattgct tattgtgcgt ttattccacg gcgttataat ggtaaagtgg gagcaggttg 3420 totcaaatca ttgcatttat cacaattata tgagttcgag ttcagaaatt tgaagatccg 3480 atgatggata gttcaagcta ttgcagctgg tcactgaatg ctaccaaagt cttggcctcc 3540

cagaatcgct tgtaatatat gtaaaccagt agatatcata acteccgcgg cgaaatgaaa 3600 teggetteca gaaagaacta eeegtaaact eegattegtg tgcaaatatt tageagagac 3660 agagcagaaa gggtatetet tgegttetet ggtateeetg ageaacaaaa attteeggee 3720 acaagceacg tatgeetege ttttacgeat aaagtageag atageeeaac aattaeeeet 3780 etteeteage egtaetteca teeteeggta tgtaeettat teeageatee teetagatgee 3840 caataactte ggtaggaage gageetgtga ettteaeege atatgeeea gggacataac 3900 egteeagteg ttgeeageag eetaeeeage ttgttgeegg gteattgaea gtgaetagge 3960 eeteaaatae etgtgaggtg eaeteetgaa tgttgtegt gttgeeggg aggeeaagga 4020 eattgteega gtteggacaa eetteaegea tgaatttetg attgagaaaa accagttaae 4080 tattgatgee gatagaaga eeatgeagge geggaagtg egetgeagge tgg 4183

<210> 1791 <211> 6447 <212> DNA

012

<213> Aspergillus nidulans

<400> 1791

caggaggatt gttagcgaac tccttcaacc tatccgtgat gatctcaaaa aggtcgcgga 60 120 tqtcaccatt tttaacttcc caaataaagc agaacgagct tctgagctcc ggcgtctgct 180 taacaagatt ggtgacttta tcaacagcaa cttgcaggga gagaacactg gttctctctc ctctctcgaa actcgactat ggtatgtcga atatcgcaca tctttaagaa cgatatctaa tattatgctt aggcactatg tctctgtcca ttactggccc aacaaagacg cgggaggagc 300 taaacttcaa gaaatgtacc acaaactgat tgaagtccac aagaaatctg ccgaacacac 360 tgtcgcctca aaaggagact aaactatctc gatcgcagcg aaaagcgctt tttccgaatc 420 tgtttgaaca ttcgtttttc ttaccatttc tcgtttatgc atacttggga aagcatggcg 480 agcggcgtct ggtgtggtcc acttcaggga actctgaaca tcatcccctg cagtggcctc 540 gataatgatg ttgcatgaga tgtctcttgt ttttatctat tttgctccct tcgtccactt 600 660 ttttttttgg ctcttcgtct tcttatttgg aacgatccgg gctcgggttc aggctcaact gtatttgacc aaccatatct tcttcatcag cgctacctct acttacctcc atcacctata 720

780 ctattatcat catctagatc cgaacccctt cctatctgcg ctggcgttgg ggtcagatgt ttacgggcat tcatgtatcc tactcttatt cattctggga gatatgctga aatgttgcta 840 gacgttgttt ctatctctac tgcgccaact gtgatttagc atgttctgtt atgattcacc 900 tataccttcc tgggcgaagt ggggtgcttt ggtggctggc tacctaccct gtcgggtaac 960 agatataact cgagaaaagt gttaggaact tgagaataca tgatgggaca gactctactt 1020 cgtgtaatct tataattagt ggcagtgtgt aaccctctga ttaggtattt atagtccagg 1080 tatgctgtga taataagacc aagtactgaa atgatctagc gccagaataa tgaacaaagt 1140 atgaaaaccc gccgagccta agctcccatt acccgcactt tcttacgtgt aaagacagat 1200 agaagacaga aagcgtaaaa aaaaaaacct caaaacggtc cctggcttag gaagtaaagg 1260 agagcgtaga atataacagg cctacaaggc aggagatatc acggcgggat ttggtaacct 1320 gcggccgcta tagggtgcgc tggattttcg ggcatcccgt ttgctggaac aacagacgtc 1380 tgcccagtgg cgccctccgc gctgaccagc gtgctaagaa gccggagttc tgcgtccatc 1440 aagtcatcga atatagcttc tttctccaac cacgccagtt tcctcttcgg tctaattttc 1500 tcccaagtgc tcttgagatc tgcaccttct ttttctgccc agtggatttg cctgcggaga 1560 agcctgtata actgatgtgg gttcatttcg agctcgtggt cgtcgaatcc agtgtcagaa 1620 ctgaactcaq gaacctcaaa ctcgtcaagg tcctcagtgc cggctgtgtc gtcgttgaca 1680 ccttcgctgt attgctctga atcgtcgcga ggtgggtgtg atagtttcag tttgatgcgc 1740 tggagcttgg aggctggggt gccaacaggt gtgccgccgg acgagaggat atcgtgacgt 1800 ttqqqaacaq qgtcagacgg gcgcagggcc tcagtctcgt gtacggttct catgtgcttt 1860 gcgagggcat cggaacgggt gaaactgcga tcacattctg gtcggattgt aagcatcgcg 1920 ttgagctcat tgttacgcga aacaaatggt aaagaagcga aggggtaata aaacatacca 1980 gggagcgcgc agtagaaggg cttttctctc gtatggctcc tcatgtgcgc acgtagcgcg 2040 tagccgcttg catgcgtttg accettccga gtacaatcgg accattcgca ggaatatttc 2100 ttctgccggc taccgacatg ctcgttgtgg atgtgttgga ccaagtcgtc catgttcccg 2160 aggtetttaa aateacatee tteecategg cacaeggtaa eetggtegtt geagaaceeg 2220 ctgtagtcct cgtcttggtt tgcccctatg agcgacagag tgttgggtga gttgggaatt 2280 tegeeggaeg tateggaega tatagaagae gaeggggaeg gaggeggagg tageteatee 2340 tggaaggaag ttgacacggg tgtgttacgg tcccaggaag ccatgccggt gcggcgtcgc 2400 tttgacgggg gcatgttaga tgatggtgtt gagacgccct gcttgggatc gtcgcggtcc 2460 gacatgtcgt cggaggcaac ggaggagagg ggggagccag gagaatcggc cattgggaac 2520 ggggagtaat gtggacgggc ggaatgagcg aattgatggg tcaagagcgg gggcaataag 2580 gtagcgagca gatttggatt ggggagaaat ccagggtttg cttgacgtga tgctggcgtc 2640 tggagtcgag tatacagccg gcacgtgatg aggctattgt ccaccacttt tgttcttttt 2700 agettegeae acetecaace tecaacecae aaactacaae aaaacataaa teaacaacag 2760 cacattagcg ttactgagta agttataacc aggttatcct tgcctcaaca ccgcactgct 2820 tcaatgatga tcacttcaag aattctgcaa ttccgacaat ctccaggctt ctgtgagatt 2880 qcqtqttgac ctactacact tgacctgatt gaaaatactc ttccgtggca cgctttgtcc 2940 aaaacgctgt tggatcaggc taacaataat cctagttctt ccaggttcaa tttcaatatg 3000 gttgtcacac tgccttcgcc ggcctgtagg tgccgttgag actgccagct cgcgctgcca 3060 agctggcgtt tcccgggcta ccacatcacc gatgacatga tttagatccc ccggactctt 3120 cqatctqatc atatctgcta aaggtgcgag ggtctccttg cgtaactgtg ctctgtgtca 3180 cccggatcgg acggtctcaa ggtttgcggg cagccactca taggcaccca atcggctttg 3240 cttcgtataa cttgtagtcc tcgaggaaaa cgcagcgagg tggaggtgtc actgcacctt 3300 gaaggacggc gttctacagg tgttggaccc ttggaaatta accctgccta caagttaatg 3360 gtcattcaag agcgacaagg ctagaccttg ttagacgcgg ctcatgctct catctcaagc 3420 gtagttctca tcttggccta ggttattccg tcgtcaaccg ggacgtggcc tattgcagtt 3480 gggcccaaga aggcctgatg gaacgaaatc tcagcctaac cgtgccgcga aactcaggag 3540 aagaggtttt caccettetg ceaggetagg ataettttee tgacagegga etaatageea 3600 eggatatget taaacateet ettetgaaat ataategttg aageaacege gtteattagt 3660 gtcatttcct gcagtatcgt cactcataac gctaaactct tccaatactc caaacagaaa 3720 gacctatccc aacgaatcca taaagagtag ctaaaatata ataagtataa tagtcaatcg 3780 gcgctccacc aactacacca atccaatctc gtcactccca ttgatcgcct ctcgaaactt 3840 tttcttcaaa acttcaaaga gcgtatcaac aaagccttca gggtccttcg cggcatttgc 3900 atcatcctta gctgtatcca tgcccttctc cttcccattg tcaacgttgt tctcaagctc 3960 cgtcacagtg ggcgtagatg cacggctatc gtcaatcacc atcgtcgcac cactatcctg 4020 cccattcatg tccgtatgca atttgttgaa tttctccagc tcctgcatgc ccagtcctgc 4080 gaggatggct gccatcaagt ctgtctcgtt ggggatcaat ctctattgtt ggtattagtg 4140 gtttgcatct atttcacaat acaaataaag tagcactggt ccggtagggc atgacgaggt 4200 ttgacgtacg gggtcaggga ctgcagatcg ggcttggatc tcccccgctg tttcaggacg 4260 tataqcqttt tctqctggga tggggatggg aaaggctgtt aagggtgaga taaagatggt 4320 gaaaccaagg actaaggtgg cccatgattg ttgtggtgtc atcgctgtcg tcgtcctggt 4380 agtagatcta tacaagtggt tggagatggt gagatgtggc cgtacgaagc gaatcccaaa 4440 ctgcaagttg cctaaatata accactagct agatgctcca tcctgacgga tatatcgaac 4500 aggcgtgtgg aatgaaggcg tcgtttcgtt gctaggggtg gcgtcgctcc gctggcatgc 4560 aggeagttee caacetaeee tgeecateee catagaagta gaeteagtge etagttegte 4620 cqaqccaaqc acqqtccqtt ttqaagaggc aatgcataaa cgtctgcact ccaattaact 4680 gaccaatttt tggagtatct ctgctgacca tattctgtct agaaattggc cttagatttg 4740 actcgactca aagccatttc ctatgaaggc gggaatttcc gctgaaaatc ctgtctattc 4800 agtcaaagct tgcacttgaa gcttggatca gttgaaacaa ggggttctag caaagccctg 4860 agcattccat ggctctgaga cagaggcact agcttggggc tttcgcgttg gaatgtccaa 4920 ctcgcgtttc gatctagtgg tttgtttaca gtcgataatc gagcttgtag agtgcctgga 4980 ggtggcggtc gggatctcgg gatgtgtctg atatgcccgt ctgcaactgc cggttctctg 5040 actctagcgt ttgggtttgt cattcgtgta gtatcttgac gttcttgacg ttgtaaattg 5100 ggtagataag gtcaaattaa gtatgtatcc ttgtctatac actcaaaggg tttgatatct 5160 tegaagtaga aagggtagag ttgttttgat egegaaaatg eecegeeatg gatetgtete 5220 cgcccgcgat gactatgaca gcattggtgc aatcgacgtc gaaattcaaa cctagctaag 5280 atcaacgaag ataatcagtg gtgctccaag tctcatcggc aagatacctt accttgactg 5340 aatcgaacag cataacatca ccacaatgtc cgcccagaat gaaccgcaag ccgaagcaca 5400 atcaccatec tegggagagg aggggteete teeettagge teatecetet accaaacegg 5460 cttgcaaacc cgccaatccg tcctcggcag cgcgcacgtt aaccgctcat tgtccaacag 5520 caacgcattc acattcccaa tgcaagaagc catcaccgag tttgcctggg gctcgatctg 5580

gaaceggece gggettgace gtaageageg gagtetaatg aatattggaa ttetgatege 5640 gctgaaccgc cagctggaat tgggagtgca tgtgcgcggg gctgtgagaa atgggctgtc 5700 tgagctggag atccgagagg cggttatgca tacgcttgtt tattgtgggg cgccggcggc 5760 gatggaagga atgaggactg ttgataaggt gctcgaggag ctagaaaggg agggggagat 5820 gaggaggag gatgaagagt gaacaatgga aggacctcgg gctggtatgg gctatgccag 5940 ttgaattaga actacggtac acgctgtgag tatttgatct tgtaggggta tacctattga 6000 gaccagaget etgeecageg ttetgagttg gactgeatae gttetgeagg tactatgtae 6060 ctacccgttt gcactcatag gcagtacaag ctatgattaa agctggtctg aatacagagt 6120 atagcatagt ataattgaat gatctggccg gagagacagt caatcaccgc tcacgatcag 6180 ataagtgcgt caaaggttgt aaagctacga gataccaaaa cctacctagc gtcccggttg 6240 ccgtgcacca gcattcagca actcttatcc gtagcctctt gccggatggg aagagcatct 6300 agtcataggc gagatgaaca cgcaatcaag cagcgagcat gactcttgct tctgaacttc 6360 ctggtggctt ggacaagccc tgcagttgcg gcagctcagg aaggtgacga agccacggca 6420 6447 teeggagete atgaeateeg ceategg

<210> 1792 <211> 1620 <212> DNA

<213> Aspergillus nidulans

<400> 1792

aagacgaaaa gaaaacctga tgttcggatg tacacatctc gagcctttct cattatccgt 60 cggaggatcg gaaagtttgt ctgtttactg agtcacgtgc taccagcaga ctgcgcaggg 120 tagttcatcg atgcgaccga tgtccagctc aagcgaacat ccgtgacgag tttgaaaata 180 cctaaatcct tcctcgatgt ctccagatgt cggcgggaat gagcttcata aatatggcac 240 gatgtaattt tcctggccgg gaagcgtttt aacaatgtgc aagcgccta gccgctcccg 300 gtctcaagta gctactactg attgagtcaa gggaagtacc gtaacgaaaa caagctgaat 360 tgagaaggag agtaagaaa agaagtaagc cattcataca ttgccgcgtt cacctacagg 420 tgtgcgaaag atatgaacga ataccggccg gctgtagagc attcaccacg ctccatcgac 480

gagacgaaat cgtccgcagt agagaccgga cagattgaaa tcctgccgac ccaataacac 600 cgtcacaatt tgcgcaaact tgagtacttc tcagcttata taaataatgc ataatatcat attitigicta tacaactaac teegeeeggt titeetitee titteegaag agteaeegee 660 720 ggatectaat actecaaegg tateceeaga cetaactaea tgaaageatg taagaeagtt cataacagag tggatatcat aaaggacgtc gtcaactgac gattgtagca aaaaatcaaa 780 cgaaaatagg tgaaaaagtg tatggagaaa ggatgaaggt agatgccagt cagccacaat 840 ccagataggt actcctcccc agttgtaaga ctaacatcag ccaaatgaaa gtcgggtctc ccaaataagg tactatattc gtaaacgtaa ggtcgtaatc gtgtacaagt cccggttggt agacggtcac caacctcatc gagacatcat gcagttgcct aaagcagtga agtgtaagga 1020 tgggtttact ccccctcaa ccccttgatc atgttcttca gcgcgtcaag aagaacagct 1080 tegteeggtg getegeeace agggaacgáa etetetgttg cetegeetaa tgeeegagee 1140 cqtqcqctct taaqaacacc cttgatatag tctttgtcct cgtagtcttc cagaaggaca 1200 qcctcaaaat catcaatggc tttgttagca cgctcgttga aggaagcttc gtcggaagag 1260 qtatccatqq qgactggacc ggggttctgt ccacccatat tgtagggctg ctgctgttgt 1320 tggttgtgct gttgatgctg gtgctgaggt tgatgctgtg gcggacccgg gtttgaaggg 1380 tagctctgcg gtggattgtt gttcggcggg agaggctgtg tattctgggg aggatatgga 1440 gtcgaatgtt gtgggggagg tggcggctgc atgtgctgcg tctgcgcttg tgcttgctga 1500 qattqttqat attqqaqqaq ctqcqqtgqa qggtcqqaqg cqtaggqaqa ggtgtatgta 1560 gtcggtgtgg tttgcgcaaa cgcaggagga agatgtgttc tatcggaatg gtatcggggc 1620

<210> 1793 <211> 5777

<212> DNA

<213> Aspergillus nidulans

<400> 1793

atccatatta cactgattge etecettget ecceaaattg etetteetga teecegteee 60
teectgtgge egeecacece ecetecetgg acgaecetee acatgtegga gtgtgeatet 120
taccegteca gtateacece agategeace eattecacea etectegtee gaeggetega 180
agggaeegea agagegeace geeteaceeg gtggetteee eetteeetee aatcaagetg 240

ttgagccctg tcagcttgcc tccaactggc cgacctgtca ctcccctcca acccccctaa atccgcgcgc catgaataac gattcttttt catccttcaa atttcgccga ccatcgagca aactccataa ggaccctccc ggttacggat cccgcgccct taacagccag cagagcacca 420 480 cgtcactaaa acggcaccct tctgcccccg tttacccgcg ctcctctgcc gctgggagtc 540 qaqaqcattt gcgaactagg tccaacgcat acggctcgtc atcctcgtca ctcgatcaga 600 atagegeggg egetteteeg gttetgggga geagegatte tggeeattte eacageagte attcatcccg gtcccgacct ccatactccg gccggttttc cttgaacgat cagagctcag 660 atgaattaat tggcgccccc ttcgattcgc ggggtatgtt aagcgccctg gaagaacata 720 ccgctgagcc cgacaatagg agttatcaac caccagaccc cgccgaaagg tacactgaaa 780 840 agcccccgaa tttccgatcg cagactacac caaacccacg agccttgaga caatcagcca gtttcactac tctgcctccc cgtatggagg cctttccgaa cgccgctggc aatgaccgcc 900 cgacaaatac aaagcgtttt tccgatgagg ccacccctgt cagacctccg gggcccagcc gaagcaagaa aagcagtttt tcgagcttcg ttaatagcat gctaggttcc ccccgtggaa 1020 tcaaaatttc tgcaccagag aacccggtcc atgtcactca tgttggttac gataaccaga 1080 ccggccagtt tactggtctg cctaaagaat ggcagcggct gctccaggag agtggtatca 1140 cgcagaagga acaggaggag catccacaga ccatggtcga tatcatgaga ttttacgaga 1200 agaatgcccg aggggatgat gaagtctggc ataagtttga ccatgcttac cctcaacagc 1260 caaccgccgc gagcccaata tcccagccag cgggctccac tacgtatggc acgcaacgaa 1320 cgtctcctcc caccagccct cgattccctc agaaccatga ggggagcttc gaaaacccac 1380 gagcaccgcc tecgatteec egegeegege ctategetge acatgecatg tetecgeeet 1440 taggaggget tgtccctaac cgcgcacctc ctaaaccacc aactgctgct gctaacttag 1500 ttccgagtcg gcctgcgccg caacctccta cgtcgagccc ttattccaat atctctacca 1560 ggccatcccc ggagacgcag agccctcaat tcagcacgcc tcccattcca gaaacggagc 1620 ccttgccttc cgagtcgcaa cgcagccgat cgaattctag aacaaatggg gcgcaaggtc 1680 catggccgtc ggtgtcaccg agtcattacc aacaacagca ggagcaggca atggccgtag 1740 ctcagcaagc ccttgccaat aagcagcttg aacggagccg tagccaacgt cagcagcaac 1800 agtetecacg gecagaceag atgeegateg egeageeege acteeegeag eacgeteett 1860 cgcctgaaga tgttgctctg acacaagctt cccagactgc gcgtgctgca ccggcagctc 1920 ggcctcgcca aagaccccgc caaagtaatg ccatggatgt cagagcacga ttggtcgcaa 1980 tttgtactcc cggtgatccc acaaaacttt actacaactt gaataaaatc ggtcagggtg 2040 catctggtgg agtcttcact gcttatgaac agcataccaa taattgcgtc gcgatcaagc 2100 aaatgaatct ggatctacag ccaaagaagg atctcatcat caacgaaatt ttggtgatga 2160 aggacagcaa gcacaaaaac atcgtcaact tcttggacag ttatctccat gggctagact 2220 tgtgggtggt tatggaatac atggagggag gtagtcttac agatgttgtt accttcaata 2280 tcatgagcga accccaaatt gctgctgttt gtcgagaggt acgtttcttt gagcgatatt 2340 tgagttctag tactgatttc gtctcttaga cgcttaacgg cttgcagcac cttcactcga 2400 aaggtgtgat ccatcgagac atcaagtcag acaatattct tctttccttg gatggcaaca 2460 tcaageteag taagtgggae attgeaacat taegeteaga etgaatttta atgattegea 2520 gccgatttcg gtttctgtgc ccaaattaat gactctcaga acaagcgaaa caccatggtc 2580 ggcacaccgt attggatggc ccctgaggtt gttacgagaa aggagtacgg acgtaaagtt 2640 gacatttgga gcctcggaat tatggccatc gagatgattg agggagaacc tccttacctc 2700 accgaatcgc ctctcagggc tctatacttg attgccacaa atggcacacc taagatcaag 2760 gacgagcaca acctgtcgcc tgtcttcaaa gatttcctcc attttgcgct cagggtggac 2820 cctgagaaac gagcatcagc tcatgaccta ttgaaggtat gattatgcat ctcaacacag 2880 cagactggct ctaatccttt acagcatccc tttatgaacc tttgcgcgcc tctcaatcac 2940 ctttcgcctc tagttaaggc tgcacggatt agcagggcgc aggaaaaagc ccagaagggt 3000 ggtgtttaga tctcagcctg ttggcgtcct tatatgtcga tgtctactat attccttcag 3060 atacccatta tcactgatgt ttcactttta cccgatgatg tacctggcgc cgcttatgac 3120 ttccccattc ttttccgaac cttctcttcc tttgcaggtc tttcggttat ttccaaacca 3180 aaatgataga cggcgatgac ttgatgctcg acatgggatt acaaaccttc gactacttga 3240 tgctatgctt agtatctctc tcctttgctt gacgacgttt ttgcataccc gtattattga 3300 ccttcgtgat cagttgcctg taacatgatg actcgcgtca ggctgatgca ctcccttctc 3360 gcgcctgtgg ttacagcagt ttgttttggc tttggttgta tcggccaccg aaactggttg 3420 atgctgcgaa catgagacgc ttgagtcgaa aatccgatgc gaatgctgga ggcctatcct 3480 atggctttat tcctgttcaa gcagttgtac ttggttcccg acgttgctcg agattctaga 3540 tgatatatcg atatactcga tcgtatgacg atcgaacaaa agtatatggg ggttttcttt 3600 acggttctaa atgcttccta tgtcctctca ccatataata ccgctagagg cttatatagc 3660 taagcactac cataataaca totggaagta ocaagtgggo caagactaaa ggaaagaata 3720 ataacagtat tagtggtgcc ttaactgtgc ccggggccaa attaggtaag ctagtggtct 3780 ccgccctcg accttcgtca ttcggatcag gttccagcaa ccattctaca tcttgttgcg 3840 gttgcacctt ttgcttctct tagaggtcct ttgcccagta ccacctgaac ctttggacat 3900 tagcttatct tcaaacttgc ctttttattg ctgcgaaaat ctccggccga cttctcttga 3960 gcttctgatt ccccgcacca agtgttctcc ggaccttgga tcgcagcctg agctccgtat 4020 ccacgcagct tgcagctgag tgtcgttcta ataacatctt atcaaggatc gcaggagcac 4080 aacaatcacc ggcaagcttc ggtagcctcc attttacgga aagatttatt tgatcaatac 4140 ctatcggcta taattcgatt tgctctgaag gcggagatta gaaagttgga cactcgcgat 4200 gttccgcgca cagcagaacg cttttgacga tgcagtcggt acggtgcttt tgagcagtat 4260 cctttttgat gaaggggggt tcttagcttc tatatgctaa tcgctcgttt ttcgcaatag 4320 ccaaagcaac ggatgagaac ttgacctccg agaactggga gtacattctt gtatgcaatg 4380 cccgctgcat ttccaagaca tgcctttttg gatcagttaa gcatagatca tctaacattt 4440 gatgtcgcgt tcacaggatg tatgcgataa ggttggggct gaggagtcag ggtaggatac 4500 tggtctttga tcattgacaa gtgatgctgt tgaacaactc cactgactgg aatcaaatac 4560 agtgcaaagg atgcggtcgc cgctttgatc aagagactcg cacataggaa cgccaacgtg 4620 cagctgtaca ctctcgaagt gcgtgtcaca atccttccac caactgcgcg agactgacgt 4680 tatttagctg gccaatgcat tagcgcagaa ttgcggccct aagatacatc gcgaactggc 4740 gtcacgaagc tttacagacg cactettgcg tetegetggt gatagggtat geetecacet 4800 tagtctaacg gatcattttt actgactggt ggaacaagaa cactcatcag caggtgaaat 4860 ccaagattct ggaacgtatg gaggattgga cggagatgtt cgctagcaac ccagatttcg 4920 ggattatgga acaggettte atgaagttga ggacacaaag tacgcactat teegttteet 4980 gaataggtct tatagcttac atctcccaag acccgaacct acaacccccg tcgaagcccg 5040 ggaagcggga gattaccgac ctagatcgcc agaaagaaga ggaggaattg cagatggcgc 5100 ttgetettte tataagagag aaateeggtt eageeeetea geegeaggtg gagagtagta 5160 geteggtete ageteeagaa aaceaageae aagetgegee tgetggaeea gtteetteag 5220 gtaettetge tgetacagtt teetagagtta gagetttgta egattteeag eegtetgage 5280 eeggagagtt acaattteegg aagggagatg teategeegt eetagagtee gtgtataaagg 5340 attggtegaa gggeteetgt gagageeaga eagggattt eeegettaat taegtggaaa 5400 agetteetga teeeactgtt gaggaactte agegggaage teagatggag geagaggtgt 5460 teggeeagat eaagaatgtt gagaagetat tgaetettet aageaeggeg ageteagaae 5520 teaatgteea ggagaatgag gaaateacaa aettgtaeaa eteaacatta teaateegee 5580 eeaagttggt tgageteatt ggaaaatatt egeagaagaa gggtatgtet eeeaacteet 5640 taggteagte teettteagtt actgaettae aetegeagat gagtteaete aaeteeaega 5700 aaagtttate aaageeggaa gggaetatga ateteetetg gaggegteta tggeteaaee 5760 teeacageag eaatttg

<210> 1794 <211> 6582 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 1794

gcgaacgggg tgaatggagc tgagtaggag ctttgatttt gttttcgtgt tgtgttcata 60 tcagactgta cttaatactt actgcgccta attgatccct tgcacgtttg tacgtttttg 120 ttcttgacca tcgctcttcc ctaagatgaa gacagacggc acgcaactcg cgctgaggca 180 gtagcgactg tgaaaggcac tctcgcctcc cagaaaaacc cttactactt gttactatat 240 acaggataag gctccttagc caccactgac tctaggcgnt ctttgcattg agcagctgct 300 gtctacctca aatccagcgt tccacatcaa aattctcctc agcagattta ttatgggcag 360 cacaagcgat cttcagttgc tcactgatga actccgctcc acactcaagt gtcccatact 420 taccccagac tctgatggtt acgcaacaag tatcctgcga tggaacgacg cggtgccgaa 480 540 cgctgcggta tcttttcgct ttcgcttgcc cgtgcctgga acttgtcgtg ctgactttct aggccctcgt ggtatacccc gaattagtcg atgacgtcgt aactatagtc cgcggatgcg 600 tcagacacaa ggttccattt gcggtcgcct gcggtaaaca tacgacaagc accggctcct cgtgtgatgg cggcctcgtt atcgatctgg cgcacatgaa ccatgtggcg gtggactcgg aatcgcgact gatcactgtc ggcggaggct gtcgctggaa agatgttgat gacgcccttg 780 agggatatgg gctggccatg gttgagggta tagtgaatga tacggggggtt ggcggaatcg 840 900 tcgctgcgac cgtcgtcctg gcagacggta gtatcgccac tgcgtccaca gaggagagac 960 ccgatctctt ctgggctctt cgaggcgccg ggcaatgctt tggcgttgtc gtcgagttcg 1020 tctttagggc tcacgagcac caggatccgg tctgggcggg cttgcttgga ttctcgctgg 1080 atcatttaga agctgtcttt ggctttgcca atacgttagt cgagagcacg aatggggact 1140 cggctatggt tattcagctg tccagatacc ccttctcgcg acagggccgc gatgtgggaa 1200 tcatggcaat cgttttccat tacggcgatg ctaaatcggc cgaaactgtc ttccagccct 1260 tgttcaacct gggacctatt gtcaacacga ccaaggctca gtcgtacgca tccgtcaaca 1320 acatgttgac ggccgaggca aaacgcggtg gccgcaacgt atctaaaggc gccgcgtaca 1380 cgacacccct tcgaccagcg tttgtgaagg agacgatcat ccctgaaatg gaaagacttc 1440 acctcgaagt accggggtcg gatcggtcat taatagagtt tgaattctac aagccagaca 1500 aatggtgtga ggttccagtg acggccacgg cacacgggca ccgagggcat gtccagaatg 1560 tcatgatcgg cctctactgg aacgatgagc aggacgacgt gaggatggag atgtggtcgc 1620 gecacatege tggcetagtg getgeagage gagecageca tggtaggeca gecgagggee 1680 cagttactga gtatgggaac tatgaccatc tgtctgcgca tgcgcgcgat gttttcggga 1740 tcaactactc gcggctggtc cagctgaaga agcggtatga tcctgataat gtcttcaaca 1800 aatggtattc cttggtggag tagatctttc tgtaactgat tccttcgtat tgcacggcca 1860 ttcttagact cgtgtatctt tacgggcggt ctattttatt ttgagttttt tttccttatc 1920 aacagettta gtaattegat egaaaaatea aaatetatae aeteaaeteg egeeettgge 1980 tgtttgagag gctgttttgt atggagaagc cagcacttgc tgcgtaaact taggccgctc 2040 agcgacttta ggcggtgcgg aaaaatgacg aattagggct cagctaacca taccaatctc 2100 gacagcaaac aacagcaaaa gctgacatct caccggaaaa gagccggcag gaaacgaaga 2160 gaaacccagt gacacaaaga cccttccttc caggctgtat tcgaatggtg tcgacgcaaa 2220 aatcaggctg ctagccgcct cgtgcacagc cctgcaaccg cactgaagaa tttgccgcta 2280 ctcgcgacgg aattgatttc caacacgcac tgacagaaat tcaataatta gtggagcgta 2340 cccacatcga teteacgetg atgettagee caattgatea egaaagetge geetacacet 2400 geetttegat tggcateggg eeectetgga tgettatete eagteteegg egeeggacae 2460 cacatctccg ggattactgg aaactccggt cacgagagac atgacaaaat tagacactgg 2520 aagacccgga gctgggcaga ataagaccca ggcattccgt gcttagctag ctagctgata 2580 getttatttg gtageegaac gaetgeegeg ttgettttte eeetgaegge ttaeaegtaa 2640 cacataacac gtagcacgaa gtcggcttac ggagggccgt tgtgcggtgt agcaccaaga 2700 aggateggta cagagtaega tegtategag getgattget tgaagggagt etgaeaggte 2760 tgacaccgct ggactgggtg cgagttacac tgccggttcg gttctttagt gtggagctta 2820 tcttgggcag gttgtctcct ttcccccttt cagtgtagtg attgggtgat cagtaaatag 2880 ataagtaggg ttgacagagg cagacgggca gattgaacgg cgggcgttgt ttcactatcc 2940 aaaattctqq taqtqtaccq qqqttaatqc ctqaqaqttq qqaqatqcqc acqqattqaq 3000 acggaaaaca tatctatttt gtagattata aattataaag tagccgccca gcagataccg 3060 aattetteat gtagaagaga gttgatatgg aagtegeaaa agaagcacaa ggggtataat 3120 gagagaatcg atctatagcc agggtatcca cgatctcact gcgtcaaatt ttacctgcgt 3180 cttccactgc aggtttgcaa acagtgggga gagaaggaac gtctcgtttc caaacccgga 3240 attatctagc gcgcagtacc tcctgtcaaa ttcctggatc aggacgccta gcttggcgag 3300 ctcggcacgg agagtgttgg cgttgctgat ttgctccttg cggtggtcga tgggcgacgt 3360 tgaggtcgct ctcgatgatg gggttggcgg aggttggaggc ggctgctgct gcccgctcgt 3420 atcgcctcgc ggaagaagct ggtcaaaggc agccgtcata tgatgcagga gagcaatcat 3480 ctgcgtaaga agaatcatgc cgtgagtacg gtggggatct gggcagttca ggacgttggt 3540 gcagagggcc atattggcgc ggtgctcggt taggaagtcg tcgaggatga aggtgcttga 3600 tggtggtttt ggcatgctga gctcggtcaa cttgaagcta atgctttgct ggcaccagca 3660 ggtgactgag gctgggactg gtgagttcag gccggatgtc gtggtggtcg tcgggcctgt 3720 ggctccataa tggctgtggc cgtcccggga gcttggcggc gaaatggggc tgagagggat 3780 cgtcatcgaa tgcgggacca tctgtggtgc aaccgcaggc tgagtcgaag gaacaagacg 3840

cgagtctgga acatccagtg aaaaggggaa cgctgttgga tcggagagcg gagtatcgaa 3900 ggggttcagc gagaggaggc cggcgagatc atcatctaca aatccttcag agtagatatc 3960 actatttccg aaattgggcg gacacgctgg ttgcactgtg atatcgacag tcgtggtggg 4020 caqcqtttcc qaagagacgg gagatgggat ggagaggact ctcttctttt cctttggtgg 4080 gcaggtetgg tetgettett ggcgaggeeg tggeettttg atteegegea gcgagatget 4140 gtaaacgcag ggtgtattcc gtgtagcaca gcgccggcag gtcggtctat ccttagagca 4200 ettaacettt gettggttge actggecaca tgagettete agaggteggt egtegegatg 4260 cggtggcact atagcggtgg tggcagccgt aggcgagaag attggtgccg gcatctcggc 4320 cattteggge atggggaagg egecaggete agagtgatet gggeaegeea tetgegttat 4380 gcaatcgtgt cgttgacggc cgaacctgta ggaaatttct tcagaaatgg tggaaaatat 4440 gtgcaaacaa gatggttagc cggcgagaca gctcgccctc ttataagctt gttaccaccg 4500 ccctacaccc aatcgtcggc agtgctcaat cacatattcc tcattggtac agtagccagc 4560 cactatettg geaceatgat etgeagtggg agagateatg ggttegateg acegegaetg 4620 atttactetg etectgetet egattgtttg eetgateegg eteagttett gggetgetgt 4680 ttccttcttg ggctaacgga tctgaccgag gtgggtcacg gctcgtgtga agaggatcca 4740 agagteetga etecatgggt tteageeage etegagtgeg tacatgtteg tgeagaeaga 4800 tacagecaag aggateatta teaegtagat egtgaeceae caatggeeeg tetegettee 4860 gtcagagcgg cgggatgagc tcgggagcgt cacaaccgac tcccaaggta tgcatttttg 4920 ctgggcatgc ttccataaca acaatggcct gtcttacgta acgggccctg acatatactg 4980 gattttgact gcaagcgcta cctgcagcca gccttatctt gcatcaggaa tggttcgccc 5040 tctgcaacct cgtcacagta atacaagttg cgacagggga atccagttgg ccttcgagct 5100 gaggtctcga gagaggagca cgtcaagtgg cgacaatgcg cctgagtatt gtattgcagg 5160 aaccaatggc aacaataagc agtatgggct accgtcctcc ggtgcgcaat ccggattgtt 5220 cacattegag eggeatgaet egetegatat gateagegat eettgaattg gegteagaac 5280 agtaaaagat cgcggggcgt ttatttattg caatagtcct cattgtgtgg ttcaactgga 5340 teetteacet caaggittig acaatgacea ageittatic gicatgatae teacigegat 5400 ccgtgcagca tgcggcgtga ctggagtcaa attccaaaaa aaggcgatct gagacccata 5460

atcatggcag cagcgattgt gctgggcgag atcggaataa gtatcttgaa gcagcggatc 5520 ctggagatag tagacagcat ggtcaaggag gctgacgtgc agtcggcttt cgccgtgttg 5580 tgattttgaa gttccaggga agcactcttt gagtctagac aacggcacgt gtcgctgact 5640 categoeqta ateggegeac aaacaetgge tgagteagee aeggeeteeg aatategeta 5700 gttcatctct tggggtctcc acggtctaca ccgagtcgca cactacaacc acgagagaaa 5760 gacaccacca cgattagttt gcgagtgcat aatgtccttc acggcccgat cattacggca 5820 ggtgcttaca tctacttcac gtaatttcca ttgttcacgg accatggcgg catccgactg 5880 gagtgccaga caatacctta agtttgaggc tgaacgcaca cgacctgctc gtgatctgct 5940 egeceaggtt ceactegatt caccacateg egtegtggat etaggetgeg gaeetggeaa 6000 ctcaacagee gteettgtat eeeggtatee agatgeeega gtgacaggaa tggactegte 6060 tccagatatg attggaaagg ctcgcgaaac cctcccggga atcgagttta cagtcgatgg 6120 cctcagtacg tatacaccta gagaaccggt agacctattc ttctccaacg ccgtcttcca 6180 gtggctaccg cgggaccaac gtctggaaat catcaaacgc cttattcagt cgcagccttc 6240 aggeggegte tttgeettee aggtgeegga taatttgget gageeatege aegteacaat 6300 gcgtgaaatt gccgccaatg gtccgtggtc gagcacgcta caatccgttg ctcgcgaaag 6360 ctttcaatcq ccacatqaac tgtacgatga actgaagccg ctctgtgctg aggtgaatat 6420 ctggcatacc tactataacc attcgctgga gaaccataag gctgtcgtag aatgggtcaa 6480 ggggacgggc ctgcggccgt tcattgaccc tttgtcgcag ccggatcggg agtctttctt 6540 aaggettaet gggtegtegg ageaattata tetgagagea ea 6582

<210> 1795 <211> 1065 <212> DNA

<213> Aspergillus nidulans

<400> 1795

gagettggtg etttegeea gettgagee gagtteactg etegtggegt eaageatgat 60 eggtetegtg egtggacaee gttgtgeee teatactagg teeettacta acteeteata 120 gagegeeaae ggaetgaate eeacaaggee tggateaagg acattgaega ggteacegge 180 teaaagetga eetteeeat eateteegat eeegagegea agategeeea eeagtaegae 240

atggttgact accaggacac caccaacgtt gactccaagg gtatgtggga tctaggaata tgctgaactt gagcttctct ctaaccactt tcccgcaggt atggctctta ccatccgttc eqtetteate ategaceetg ccaagaagat cegeeteate atgacetace cegeeteeae 480 cggccgcaac acggctgagg tcctccgtgt cgttgatgcc ctccagacca ccgagaagca 540 eggtgttace accecatea actggettee tggtgaegae gttgteatee etecteeegt ctccaccgaq qatqctcaga agaagttcgg cgacgtccgt gttgtcaagc cgtaagttca 600 eccgageetg gageatteat cagttgtttg gageagttga geagttgeta accatetete 660 qtqcaqttac ctqcqtttca ccaacctcaa gaaggaataa attggaaaat gatacctcat 720 aacctatcta cgactaccga tctcaagggt agggagtgaa cggtggctat ggaaatttgc 780 ctggataact tcctggtcgc agcaaaaaga aataaaatct caggcgtgga tttgtttatt 840 tcgataccta atgatacaat gatcaaagat atcacgttat atgaacagtt tgtggtctta 900 qttaccctcc qtaggatatg caaacgcaca tttaacccag agtgcagctt tgaccctaaa 960 attggtggtt atatatattg tggcgtagca acgaaccgaa ccgcgcaggc agacaggaat 1020 1065 catactcgtc accttgcata cgaccgtgga aattaatgca cctac

<210> 1796 <211> 3275 <212> DNA

<213> Aspergillus nidulans

<400> 1796

gatggagatg ttattatggc tgaggccgga gacactgatg ggaccggccc tgccgagtga 60 qaqcttcaqa atcaqatctg ctcgccggca gtctatgcca ctgttaacac tcacggaaac 120 agagttggac agcactcaaa ggtcgccaaa cggcttagat gagcacactg tattacgacc 180 atcggatcca gacccttttc tcaacgtggg cttagataat gttcggctcc gcagccgacg 240 300 agggtctgtc gctccgttaa ccccggagga ggtatctcga gatcaacagc ggccatcctc 360 tacggaacct ccatcaagta gttcatcgtt tcgcagtctt ccggacactc ccactacccc agtagcgcaa aaggcacggc gcgaaccaag caaccaaaat cggggaatct ttcccgacac 420 tatacttgtg cggatcttcc aaaacctcga attgcatgat cttcttcgtt tgcgcgccgt 480 gtotototac tggtotgaga tactoaatto atocooggat ttgottogot acttggattt

gagegtgtat aategetgee teacegatga egtactggeg aaaategtet gteeettegt 600 660 cggcaataga cctcgctaca ttgatatcag caactgcttt catatcacgg acgaagggtt 720 taatactttg gcgaacacct gtggatctaa cgttgtaacc tggaagatga agagtgtttg ggacgtgact gcatccgcca tcctggaaat ggctcaaaag gcgaacggcc tgcaagaagt 780 840 ggatctgagc aactgtcgaa aagttagcga tacgctctta gctcgaattc ttggatgggt 900 tactcctggt ccatataaac ctccagatga aactacaaag tctggtaaat ccgttatcaa acceacgatt cttaccccga ccggaacggc agtctttgga tgcccagagc tgaagaagtt gactetgtee tattgeaage atgtaactga caggtetatg cateacattg cateteatge 1020 cgcttcaagg attgaagaaa tgaacctgac acggtgcaca accatcactg atcacggatt 1080 tcagttctgg ggaaacgttc agtttactaa cctccgaaag ctctgcctgg cggattgcac 1140 gtatttaacc gataatgcga ttgtatatct taccaatgct gcaaaacaat tgcaggaatt 1200 ggatttggta cgcatatett tgtetettat tgtgatgtge tegetaatge atgttettag 1260 tcattctgct gcgctttatc agacacagca acggaagtcc ttgctctgca atgttctcaa 1320 ttgagatacc taaacatgtc attctgtggt tctgccatat ctgatccgtc attacgcagt 1380 attggactgc atcttctgca tcttaatcgg ctctcggtgc gcggttgcgt tcgcgtgacc 1440 qgggctggcq tggaatcggt agcggatggc tgcacccaqc tgaaagcttt cqacgtcaqc 1500 cagtgtaaga atttggtacc ctggcttgaa tcaggaggaa cccagaaata caatggtaaa 1560 atatcattcg acactgttgc tgtgaatggg aggetttacc gatagccaat gettteegca 1620 gtactatcca ccttggcact tttgtcgcat cctcccctat accaaatttt attgcttaat 1680 acagetttea teaegatatg etettattee teceateteg acttgattae gaettettgt 1740 tttggtactt tcgtttgggt atccctgctg gatccccgcc ggagttatgg tacttgtctt 1800 cactggtcct tcaaggtttt ggtcgatggc gattacgaag cttactgcat tgccttcatt 1860 teettggege gttggtettg gaatgettat ateaeggeet tattegatet tegtteagtg 1920 cgtaccgtcc ttctatcctt ttttttttg ctacttttgt tcaggtgctg ggggggacag 1980 gcatgggagg agtttgagtc tgacacggtt ataacagtat ctcctattca tattgcatgt 2040 tggagctggc caatttctga agattctacg tgtatcttag atttcttttc tttccattga 2100 atatgtggag tagggagttc agcgccgagg gctttttctc tgtctgcatt ctattttaga 2160

attcattgaa gctcaaagcg tgtagatgaa ccatttatct ttgttgtagt aaaacaggat 2220 ctttcgcatt cactccaggc ctcgttggtt gttccagcag ccgcttttgc gaccactggt 2280 tettategeg gaateetggt etattaatat ttgataagga acaggetgtg aacggttegt 2340 qcccqttaaq acattqtqaq cctcaaatqc ctttagtatg ctatttttga agcggtcagg 2400 ccaacgcaga ctcgactaag tattcagaag tttatctcaa catccaacat cgttatcttt 2460 atattttaat cgcagttttg agcatttgta tcagttcctt actgctttaa gccttaatgg 2520 cccttacctt ccatcggctt caacaccaga aacacgccac cgattctcca ggatgtcacc 2580 gaagaggcaa cgcaatgtct acgacgagga tgacgaccac gattcatccg ctgattcgta 2640 tctaagtaca gagtatctta cggtcgtcac tattgatgct cctacctata ctcttaccga 2700 aacteteacg gaggetacaa caaatactga tacacetgee tetecaacag aggetatgge 2760 aaaagttcgc aagccataca tgcaaaaggc tggacctaaa aacgctgcta aaacactggc 2820 tagaccaaga gagatagcag gcagggagga gaggagactt ctccctgagg tcacaagcag 2880 gqtcacgaca gatgatactg agtcctggca gtccgcatac atcccggggc catccgaata 2940 cacgggagtg ctagacacac aaagcccaaa tagcccttcc atgcaaacgc cagttaacaa 3000 ggacgacccc caacctgcta atactaacgg caggctgtca gaatgcagcg cettgccact 3060 tgcgtacctc gtttcgcctg atgtacgaag ccctggaacc ccttctgcgc ggatgactgc 3120 ccctgcccaa cataggtagg aatggtgtct gctcctaacc aagcaacttt tattggtatt 3180 cetttecece aageceettt cettttacee accaacacee ttggttttaa cecattggge 3240 3275 ttgaaccttt ccggagtttg ttggacagat acctt

<210> 1797 <211> 1459 <212> DNA

ZIZ/ DIVA

<213> Aspergillus nidulans

<400> 1797

ttcccggtcg ataatacgac tcactatagg gatcgaccga gtatactagc ttttactaac 60
tgaatatatc cacaattgtt cgtcgaggat aggaacagtt cgaaatggaa gattagtatc 120
aacaagcttc tggaagtgga ggagcacgtc tggtcaccaa tgtatggcct caaaggcaac 180
attgattgca acagttcaag ttgcgtgcaa tgaaggggaa tgtgacaaaa acctagacgt 240

accccttgag cttaagaccg gctataagga gacgaattat gcccatcggg cccaaaccgc 300 actctatacc ttgctacttt atgatcgaga cggacagcat aaactgggct ttacttgtta 360 420 aacqqcatct agctaactgt gctttcttta taagqggaag taacatttgg gcttctatat 480 tacctcgaga cgtcaaaaat catgcgaatc cggggcatac ggcacgagct tttgcacatg atacaggagc gtaatcgggt tgcgggatat gtgcgggaga gaacatattt accgccaatg 540 600 cttaggaagc cgtcgatgtg caatcgatgt tactctaaga cagcctgctt tatctaccac 660 aaacttgctg atgacggaaa tggcgaaacc agcggccttg gtgaagagtt cgataaagca atggageacc tgaateette acategtgae ttttteegga aatgggaega eetteteacc 720 aaggaagaaa cgagcatgat gagatttaag agagaactat ggactttgct cagccatgag 780 cgagaagcgc ttggacgttg tttcggtaac atcgttattg agcctggaac agcctgcgag 840 gacaaagatg ggactaagat caatcggtac cgctatacct ttgttaagaa acaacagtcg 900 cccacatttt cattegetga atcccagate accgteggag agectattgt aattteagae qaqaaqqqcc attttqctct qgccaatgga tatgttgtgc aaataagccc taagcgtgtt 1020 actgtcgcgg ttgatcgaag acttcacaac tccagaacaa aggcaagtgg atttgactct 1080 attctgaacc aatctttcag gggtattatg gagatagagg gtgacacccc tccatctgag 1140 tctgcggaag agacccttta tcggctggac aaagacgagt tcagcaatgg aatggctata 1200 gtacgaagca acctaattgc gatgatggag aaagatctgt tccaggctgg gcagttgagg 1260 aaactgattg ttgaaggaaa geeteetgeg tttaageega aegtteetga getgteegga 1320 ttaggcatgg ccggcctaaa catcgatcag aaacaagcga tcaagaaggt tatgagtgcg 1380 caagattata cacaggtget gggaatgeeg ggaacaggaa aaaccacgac cactggtcat 1440 attcttcgag cccatgttc 1459

<210> 1798 <211> 1967

2117 1307

<212> DNA

<213> Aspergillus nidulans

<400> 1798

ccattgactt gcatcactac ataccgcgcg ttgagcacaa agcttgacaa cgacgacttc 60 ttcaagctgc ctctgttcaa cgttaggtgc aactgctgta gctgaaatcc ccgttctcgt 120

gcgctcagcc ttgctgggcg aagggaatgg ggatgggcgc acattgcaag gagtactgga atgctggagg gaggcgacaa gataagacat ccggtttgcg tggaagaaat tcaggctcca 240 300 gttacaccta gcatcatggg acgactaatg gccggggaaa gataaatgtc gcttttcagt 360 tcatgctaga aatgcgaggt ctgccgtgag agaacgggct gggcaatcag accttggcgt cgtggtgccc tgacaaactc ccagtcccgg acacatccag agctctgctt tataatacgt 420 480 caaaaagccc ggctcagata tcaaggcagc ctcgcagtct cctcaacggc gcaacctcct 540 gagaccggtc aagtaacatg tcagccctga aagcggtctg gagtcattgc gtctctttat actgccgctc gtaaagggaa tcttggctgc agtggcgcct gactcatcca agtgccccaa 600 agccggccag tcgtctaagc tcagggcgtt atcggcatgt ttaggactgc ctcagataac 660 720 taacaacgtg gcggtatccc aaatcccctt gcagacggag tcgcagctcc gggcccatcg gccacagaga caacaaactt aaaaagttct agatgcctca ttccaatgct tgtcggcgct 780 cgaatctaga gatcatcctg atcttagcga cagcgacaat agatccgtca gtcgcggaaa 900 actattcaaa cgagaataaa acacctggga gcgactttag tggttctcga gacaagacga acggccttga acacgaagta atcggccgag actgaggcgc aacagcatag ttgtgcgacg 960 cgtggcaatg gagactatca ttgccatgcc cgcagaatct cacgctgaca agatggggga 1020 tgatgcatca ttgcaaagtt tccgccagcg acccctctgc gtcatcatat ggagagcagc 1080 agcaacaagc ccgaagacaa cgcagatgat tcaacaaagc gtgcgacatc acctcagcct 1140 attetteaga caetettgeg acgeegetet ggagtgeaag tgeeaagteg geeategeea 1200 gctgcattct gtagcattct ggccgtgcca agcagcctca tgccacccgg gactcgggag 1260 acattgetee tggaacegga agatettegt ggatgttaet etgtgeggta teeagageae 1320 gtateggete ggeegeeate geeattgtat gaeatggttg atgeeegaea gaegeettge 1380 cccttgcgtc gccgtggtcg ccgtggtctc tggtggtgac attagctgca agtcatacat 1440 cttcattact gatctcgttc atgaatacgc agaccaggac gaagaagagt ctttggcgag 1560 caataatatg aaataattta gtgtgtccct caagcgacga ccaggcgctg aggcgcgaaa 1620 ctgagctgac aaggataaac catgtccctc gcataataga cggctaggat atggattgtg 1680 aggeacacte accegggata gecaattaca gtaateegag eteaettgee egteegaete 1740 aaatcggctc ggacgggcac agccgcagtg aggaatgtgg tcagattcga acgccgtggc 1800 ggtcggcggc aatctgccga cgaagcgaag agcgccgaaa aagagcacta cgattcgaca 1860 acgagcaacc gatccaatgc ggcgtcgaaa gccttacttg agacggttag aggtcccgcc 1920 ggctaaaatg ttttgcgcaa atgggggaag atggggagg tgtaaca 1967

<210> 1799 <211> 4479 <212> DNA

<213> Aspergillus nidulans

<400> 1799

60 tagacctgcg gccttgaacc ccgacgccac ggagtcgtta gaactatctg agccttcaga gcttccagaa cccgatgccc caccacgtcc catcgtcccc ataattgcag catttgacca 120 180 catgcgcgtc cgcgtccgcg atatgtacac actggaacaa tatgcacctg ccgttgagcg cctcttcgat atcatcgagc gcgcctccaa actcgaacag aaccaagcgc gagaaaagcg 240 acggcgtgag gtcgaggaaa acgagaaacg gaaggagttt aggcgggaga acaagtttaa 300 360 aacaaagcag gagcagatga gccaggagca aagggaaatg gcaaaggcgg agaaggaagc 420 ccgcgtqtct gataggtctt cttctcagtc tcggcctcaa tctcctgatg ccaaggtctc catctgggat gccccggaga gtgagagtgg gtggagttcg gatgagtctg gaaaggatgc 480 540 ataagtttta acgcttgttg aggatctaca gcagaagcag gaaggagcag gggcgggcca 600 gttgggattt ttagcggatc ggagatcaag aaggttgggt aaacgtgcca ctcttttggg ccaggccatt tgccatatat atagtattic tictticctt tcactctcat actctctgtt 660 tttgtgagtt gagggattga agtacatttt agatgcatga taaaactcag acggtgtaca 720 tagacgtatc cgggctcttc ttggtaacca tgcactttat aatcctcggt attatagaag 780 ccaggttttc ctgagcaata caatgtaatg ccttagcctg attaatatgg accatactgt 840 tagccattag taattatgga accaatcaaa gttgcaatca ctataatata tacattctca 900 gattagactg tgcatgttag agaaattgta tgtacacacc ctgtaacccg cgaccttcta tcacctgaac gatactcaga ctagaaaccg gaaatagcct tctctttctc atccttgcca 1020 tacaacccct cacccagatt ttgaacgcat tcgtttttcc aattcttcgg cgtaaattta 1080 tcaacgattt ccttaaacgc ctccaatgtg cagaacgtgt cgtcgccagg taagtgattc 1140 tctggcttca cagcacagcc agggatgcgc acgactcggt cattgtagcg aatacggacg 1200 taattetttt ggagggettg gegegetgae teggggagag atteaagagg egtgegggeg 1260 gtcgaagagg gagggagatg agtcttgcgt gagtttgcag aagatgagcc ggacaagaag 1320 gagaagaggc cactgccttg cttgggcgcc ggaagtgcgg tatctgtgct ttcagacgtt 1380 gagtctgcgc gagagaagag ttctatggca atggaggaag taaaaggagg ccatctgtta 1440 tccagggtac ccagactgcc tagaatggcg gcgagagtgg tgtcatggca tccgctcatg 1500 gcgaacttga ttgccttgcc cttctccaca gaggaaccag aagcggcggt ttggctgcgc 1560 cagccgccat ctacggcagt ggcaaccatg cggtcgacga tatcgcccat cagagctccg 1620 atgccaagtt tacggtactc cgtgctttcg ttataaccgg tgaaccactc atcgacggct 1680 atgtgctcca tataagctcg ggccttgtta ttgtagaatt ccgaggggag tcttgtggcg 1740 gggccatgag cgtctgtggc attaattgtg tcctgtatac cagatagtcg tgggtgagaa 1800 tcaacagcca ctcggggtga attctcaggc atccatttgc cataaacact gttgatatag 1860 tccatttctt cggaattgtt ccctgtcacg gaatatacgt gagtatatgg tcagcgtccg 1920 agcttgcgta cgcacatttt ttggctgctt tatcggcgaa aagtctagca agctgtctga 1980 ategaeggea getgeteteg ttgggaaaga gegteteete tgaeacagae egegetataa 2040 tcactggcgg ttgaaagtcc tctgtacgtg cactagcggg atacatcccc cagaatgcct 2100 gttgcagaga ttccagagct cttggaatgg tcgtagcacg gagatacatg tcctctgtgt 2160 cggacttgat tttgggcatg aatccgagct ggttcacata cagatgtcgc agacgttggc 2220 cgagctggta ggtcgtctca cgtcctttat ccgttaattc gccgtgctga ctgtttggat 2280 cgcaattaga ataggctagg atccacgtag actgccccta ggcataactt gccatattcc 2340 ctcaatgtca ccacctgcac cgacagtcac tattgtttgg tccctatcgc cgaatgtctc 2400 gaactteete egecaettga aggegtteea tgaegaaagg teeteattge tegeggeeat 2460 ctggaccatg cggcgggcaa cattgcagta aggccagtct tgggaggaaa agagtggtca 2520 gcgggggaaa gcgaagacga gaatcgggat tatcgtatca attacatggt gqcaqtcctq 2580 cctagaagaa tagattagct caagtaccgc ccacacgcaa ttgaattaag ctgtacattc 2640 tcaaagcgcg aagataccgg cgtgcgctcg cctgagggtt ggagttagtg aatcgacttg 2700 tgtagattgg ccgtggaaag ctctatctgt accatgtcgt aggaactggg aggggaagtt 2760

agcagcgaga cctcgattgg gccatttcca aaaagacaga tcggcacgta caacttgaac 2820 tagctggagt ttcaattcct tcgggtagag cttttcaact tcatcttggg tgtatggtcc 2880 gcgaggtatg agggtcgtca ttttgaagga acaatagcac ccggagtgcc cagtacaaca 2940 ggaggtgaag gagagaaagt tcccagcgat cggagacgga cagaagacca gcggtgatga 3000 cgcagaagca gcagcagcaa tagccaatca gctgacccgc accggttacc tgcccacgct 3060 ggataaacag cgtactccat cgagggtcag taatctctgt gctgttcgtc gcttgcctac 3120 aagetttaat tgeeccaagt ceacatgatg ettgtatetg gttataaete aaaaaagetg 3180 gagagttatg tacataaccc ggagcggaca gcattagacg ccaagcctta tttatccccg 3240 gettategee agageaeaac eteaactaet aetgteeact geageettet teaagtttet 3300 ctctcaacgt ttccacttga cctgccagtc gatctgaacc ctgcgaaagg aaccatttga 3360 acatacacct ccatcttaaa gaattagctc ttcgaaagac aactcctatc ggccaggatt 3420 cctctctatc ttctccgcac accaactcca catagcacag cccaggacct tttatgtgtg 3480 cctagccaac gggcataaga tatatatata cactcagaaa ctacctttgt gttgactgaa 3540 agcgagactc tgaagtcggg agtgcgggcc atctcattac ggagacatta aactgcctaa 3660 atgggctttg ggaggccctt acaattacac tagacgcttc gaattatcag accttaactt 3720 ttattctatt ggtgccgccg cccgctcagt accttgcaat cctgagcaag acactgattc 3780 ttcccttcat cttcggccca tctcaaggtt cttcctggaa tacaacattt ctggtaagta 3840 cttattctga tatactgtat tctctattcg aggattgacg ctcgataagt gaacctgaat 3900 agccattgag atcaccggct ccggtgataa agtggacatc atggaggtaa gaagacgtga 3960 tttccttgtg ttatttgtgc caacgcatga tatctggcat tgctctgagc ggtgtgggcg 4020 ccatccatta tectetteeg aaacaccage ttggtageca caacggcaac ttaaacttgg 4080 gaatgcgtta ctggtttcct ctcggcttac gggatggtgt ctgctgctag aggtcgtacc 4140 ggcaatgtac geteggatgt tettetette eataggggtt teagattgga caettateca 4200 atggaacccc gttgcgcgta atgccacggc gagaatctta cactgtatct ttcactggta 4260 eceggteteg atagatatte atteteaaae egeatgattt tgeaagaggg aettgeeagt 4320 tacagaacca gtacctagct aagatttgag aattcctgca ggtcgcaacc acagcttcag 4380

ggcaggccac gagggtcaaa tcccccaagc ctcatgattt caagcctcgt cttctaataa 4440 taaaacttcg tcggtatgat cctagttgaa agaccatat . . 4479

<210> 1800 <211> 3064 <212> DNA <213> Aspergillus nidulans

<400> 1800

tgtaggctga gccgattacc cgcggagtat gcactggaac tgctcaagtt acagtggaga 60 aagattattt gcttactggt gggcctgatg ctaggcatca ccatttcatg taccattcac ccatctctcg cctggaaatc ctagtacacg caaacgcccc attggcctct cagtatgcca 180 ctgctccctt gcaaggtaat ggcctagagc aaccgacccc ttgctcttcc acgcgtgtcc 240 gctggctttt actatgcgtc ctgagaccaa ttgggcctga gtatctataa ctctagaatg 300 actatgcact atttagagcc ttctttggag ttttttcgta ttggggcaga taatagttga 360 gatagcgtag ggttcgaatg tcatagcacg aacggatggg atgcgggaat agggcgctga 420 cgcaggagcc tgcatttcca atagtataaa tcaacgaaac agaactgacg aagtataata 480 tgttccatca gcgaccagca agccctggtt cattgcgacg gcatagtcta gtgtggatcg 540 gccagcagaa attttttgcc ctcacttctt ctgcttcttc tagaaggtgt gttccggtga 600 tgaagctcgc aacgcggctt ccaggatctt cacggcatgg ccgtttccca acagtctggg 660 ccttgcgacc gggtcctgtg taatagcgat gtgcggatct gaatcggccc ggcaaggtcg 720 tgggcccgct ggtgcagaca taaggcccca aatatatgga gttgcccctt ggcctagccc 780 ccctgattcg ccttatattt tagcaacgtc ttttgtggtg cgatactgtt atcacaagat 840 tggctcggta tatgccgtaa gatcctgcta cggagcgttt gcgcgaatct qqacatqtqa 900 caagetetge tgtggeegea gteggaagat aetteaacet gaeaacaaag gtetggegeg ctcgccgatc acagtatggg ctatgacacc ggcggttgaa ggagtgaggt tcctacattg 1020 ctggacgagg gcctctaata gaagggaccc tcactcacgg tcaatcgcag ctgacattga 1080 ggggatatcg atctcagaaa gagatcagcg gtttggggat atcacgcgaa tggtttcaag 1140 etgegetget gagaggeatt ceacatatae eegaceetee teacatatat tgeeeggege 1200 ctgggggagt gcggcaacgg aaacgcttac ggatgtcggt caggatgcgc cqacatgctq 1260

accetegete gtggacagta gaacaaegtt atgaaattge gaetgagaae ggecagetag 1320 caccagcaaa atatactctt agtcggcgca taatagcgac acacataaac cacgtcctat 1380 gacgaaaggc gtgggtttag aggtggcggc tggcggagtt tagatagatg ctgacagata 1440 cgcgcatagg tgtcccttta tttaggcaag agggctctca ccggggctag tgtcgtggtt 1500 tgagcqtctg gaaagcaggt tcggacactc tttccataag gctgatgttg cggaatcccg 1560 ggcctagaga aattccctcc agagaaacta ccttataggg cgtttgtcgt gatcaatgta 1620 caacgatgaa cataaggagc gcggtatttg aacctgactc ttcaaattac gatggatttg 1680 tagcactatt taccgagctg tggctatgta atgatgaacc acgcgaggag atagtcgcca 1740 atcaccataa aaccatccac cagcatcaag aagttagcag atggaacgat ctgccttctc 1800 ctegagetee acaaggitti tgitteeatt getegeagee gateteacaa tggcacaigg 1860 cgtttgccgc acatggcacg aggtcatctc gcgcagccgg gtcctccagc ggagaatctt 1920 cttccaaaca ggtataccct gtctactgtc tgagtgaatg atacctgtcg acttcagcta 1980 cctcctgtga gtgatgtccc gggccttcta gccccacgac gaaacactcg atcggagaac 2040 gettgeateg gaacaageeg egagteetge eegeeeggee agacatgetg caattgaaaa 2100 tecagaceag tageeggaca gtttgegtea ggaggettee tggegeegea ttteeettgt 2160 ggcccagcgc cgcagctggc gaggatggat atctggcgtg ctgcgcgggc gacatgatat 2220 ccgcgaccgt tgcaccccag caacggtcag gtaattagag catggggtca cagacgggac 2280 tgctcttgaa cgacattatt ttcgttattg caataattta tatggctggt tcatcgccgc 2340 gtggtagagg aacggaatcg acatggagtc gaaggcgaac aagaaaaaaa gcgttctctg 2400 gagtggcgcg tcaagaccga gtaccagtgg gagtatatct tagtgtgagg aagtataccc 2460 tacagcggga ttgaaggtgg ttgattataa ggatgttgtg gtgtacgttg aggacgacaa 2520 gteteteatg gatatggaeg atgtgegget gggegtgege aggaggaaet eggeeaggaa 2580 aagagtatat gcgccgggga caacaatgaa taaaggaccg agaaatcccg agatccattg 2640 ttetggetgt geaeggeget ttagaacaag aettgggate teetegaetg atattetgea 2700 ttgctcattc gttttgaggg aaaggtacca agtcatgcct aacaacccga caagtcctgt 2760 tgtggcaggg tacagageet eecaatggea ttgaateagt eageeactag aagaeeeeat 2820 ttattgggtc cccaagaacc tctctgtgtc aatgagccgg ccagcgttat cttactggat 2880 ctgggcaggc tgggcttgct gggcgccatg ccaatctcct accaaaacac gagcgaggtc 2940
ttgcactgcc ctgacgatga caataacaaa aaaaaaaaa aaaccaactc tattcagcat 3000
ctatagatag taaatctact cttagccaat tgcaacaacc acctcttgtc ataagtccga 3060
gtgt 3064

<210> 1801 <211> 3781 <212> DNA <213> Aspergillus nidulans

<400> 1801

gtttataaaa aaagatgaat ttaaatattg aaagattaat tgtatatgaa agtaaaagag 60 aaaaatggaa ttaagaaaaa taattaatag aatagaattg ttaaaggttc ataattttat tatagtgtta atactaggga attattcaaa gggagagaag gaaaaagatt ccgatgtggt 180 gagaaaaggt taagttttca atataaggca ggaaacgttt taaagtatat atatgccttg 240 gaggtttacc cctattggtt aaagggtaaa aaaattctta ataggaggaa aaatttttgg 300 acatggtttt tggggaagtt gacccctttt aaccattttg aggtccccgt cttttcgagg 360 gggttaagtt ccccttttac ataaagcttc caagaagtgt gccaacgcag gggttcttac 420 ccttgccagc caagaagagc ttaacagtgg gttcactcag caaatcgtca agaatctgca 480 cgttgtgttc accatgaacc cgcctgaaga aggcctatcc tccaaagctg caaccagtcc 540 ggccttgttc aatcgttgtg ttctcaattg gatgggagac tggtccgacc aggctctttt 600 ccaggttggc tctgaactta ctcagtctgt cgacctagat aagcctggct ttgttgctcc 660 tgatagcata ccagtggcat accgtgagct gagcctacct gcgtcacacc gtgatacagt 720 780 tattaatgcg atggtttaca ttcatcactc gcttcaacgg ttcaatcaac gtctgcagaa gcaacaagga aagacaactt atctcactcc gcgtcactat ctggatttcg ttgcacagta 840 tgtgaaactc ttcaatgaga agcgcgaaga ccttgaggaa caacagcgac acttgaacgt 900 cggtctagag aagttaaggg acactgtcga gaaggtcagc gatctacgtg gcagtcttgc tcagaagaag atgcagctgg agaagaagga tgcggaagcc aatgaaaagc tgcagcgcat 1020 ggttgctgac caacgcgagg ctgaacaacg taaggcagtt tcgcttgaag ttcaagctgc 1080 tctggaaaag caggaaaaag aagtcgccct tcgcaaagac gtcgtgcttc acgaccttgc 1140

cagggccgaa cctgcagtct tggaagccca gaagagtgtc agtaacatta agcgtcaaca 1200 tctcactgaa gttcgttcca tgggcaatcc acctgctggt gtgcggctcg ctttagaagc 1260 cqtttqtact ctgctcgggc acaaggtcga tagctggaag accattcaag gaatcgtacg 1320 cagggatgat tttattgcca gcattgtcaa ttacgacaat gagaagcaga tgacgaagaa 1380 ccaccggttg aaaatgcaga acgagttett etceaaggag gaetttacat acgaacgagt 1440 taaccgtgct agcaaagctt gtggtcctct ggtgcagtgg gtcgaagcgc aggtcaacta 1500 ctctgccatc ctggaccgcg ttgggcctct gcgcgatgag gtcggacagc tcgaggaaca 1560 ggcactgcaa accaaagcag aagcacaggc tatcgagaac acaatcaatg atcttgagag 1620 cagtattgcg acatacaagt ctgagtatgc tgcgcttatt agtgaaacac aggcaatcaa 1680 ggccgagatg gagcgagtgc agttcaaggt cgacagaagt gtacggctgc tggatagcct 1740 gtcgtcggaa cgtactcgat gggaggaggg aagtaaatct tttgagactc agattagcac 1800 acttategge gatgitetea tegeagegge titeetigee taigetggit tetaegaeea 1860 gcagttccgt aaggcgatga ctgaggattg ggttcagcac ctggttcagt ccggcattag 1920 cctgaaaccg cataatccta tcacagaata tctgtccaac gcggatgaac gtctcgcctg 1980 gcaagcgcat tcattgccgg tcgatgatct tagcacagag aacgccatct tcctgaagcg 2040 ttacaacaga tacccgctca tcattgatcc ctcaggccga gtcactgagt tcttgcagaa 2100 ggagagetea gataggaaac teaeggtgae eagetteetg gacgattett ttgteaaaca 2160 gctagaaagc gcgctgcgtt tcggaaaccc gatccttatc caagatgctg agcatttgga 2220 tecgateett aaccaegtee teaacaagga gtaccagaag aceggaggte gtgtteteat 2280 ccaqctcggc aagcaggaga tcgatttctc gccctcattc aagctcttcc tttcgacgag 2340 agatecetet gecaettttg egeeggatgt etgeagtaga accaeatttg teaattteae 2400 catcacgcag agcagtttgc aaatccagtc gctgaacgag gtcctcaagt ccgagcgtga 2460 tgatgtcgac cgtcgccgtt ctgatcttgt caaagcccag ggagaattca atgttcatct 2520 tegecagett gagaageget tgetgeagge eetaaaegag teeeatggea atattttgga 2580 tgatgataat gtcatcgaaa cactcgagac tttgaagaag gaggctgctg aaatctccag 2640 gaagatggct gagactgaag gtgtcatgac ggaagtcgaa gagatcactc agcgctacag 2700 tatcategeg egetegtgea gtgetgtgtt egeggtgett gaacagetae accatateaa 2760

ccacttctac caattctctc tccagtactt taccgatatc ttcgagtcag ttctgcacgg 2820 caacccacac ctcgaaaatt caggtttacg gaagatggaa gattatcaac agcgcattca 2880 gatcattett egegatetgt tegteactae etaceagega acetetttgg gagteattea 2940 gaaggaccgt atcactttgg cgatgctttt ggcgcaggcg gctccttacc ccatggacaa 3000 aagcattatc gacaccatcc tcgatgaatc cgttgaaggt acggatttgt cggccaatcc 3060 cgaggcgaag gtccaggtga tgagcgcgtt tgggaacatg tcgctattta aagcgcatct 3120 tccttctgtg actgctgagc aatgggatca gttcctgggc gaagaattgg cagagaattt 3180 cgttcccaag gtctgggatg agaacacgtc agagcttgac aaactacttc ggtcgctgct 3240 qctcqtcaaa ctttgcagaa tggatagatt cgttccggcc gctgagcgat tcatcgtggc 3300 cgtctttggt cgcgaacttt atgagggaag caccgatctc aaagacatcg tgggccaagt 3360 taccgcaact gcaccaatat cccttagctc cagccctggc ttcgacgcaa gctacaaggt 3420 cgatgctctc gtcgagcgca cgcacgcgac atgcgcaaac attgctatgg gttccaacga 3480 aggtetegag agegeegaca agegateage aaegeegeet eegeaggaae ttgggteeta 3540 gttaagaacg tgcaccttgc cccctcctgg ctgcagagtc tcgagaaacg cctcgcctcc 3600 ctcaaacccc acaaggattt ccgcctgttt ctctccatgg aatccagccc caagatcccc 3660 qttaacctca teegegeete tegegteett atgtaegage ageeggetgg tgtaegegea 3720 aacatgaaag actegetete gteeetetea actegtgeea geaaagetee egttgagaag 3780 3781 g

<210> 1802 <211> 4400 <212> DNA

<213> Aspergillus nidulans

<400> 1802

atgcattatg cggtgccgaa agctgagcaa aagtggctgt ccttttttt tataaaaaaac 60
atttctatcc ctatatcaga tccatggggg atcattacag atcaaacgac ttgtttatac 120
aaggtcaggg ttacgaattc aaggttgaga aataacccta agtatgaacc caaactcaaa 180
agtaggtaac cttaacctta cccaacctct tcagcctctg taaaatctct aacttcctca 240
actccagaaa caagtcctga tcatcagcat cctccaaatc ccccgagata ttaatccacg 300

gcgtgccctt tgatagcacc aaatccccat tcattttcgc cgacaacaat ggtgacacaa tgttgctagg ggcagtggca gaagccgcgt caacaacccc cttatgaccg ttactcagat ccaccttctg agtaggette ccctcagtgt ctctgtgete cgttgcgtge gatttatege 480 caacccaccc totacacatg ctcactgcct tttcccagag ggaaaattgc tcgcggctta 540 tgtcctgact cgtctgcggg cggaagactg tacccccggc acggttgatg tcgcggagct 600 cggcgaagtt gcgccagaga ccgacagcta ggcctgcggc aatggcggcg ccgagggcgg 720 ttgtttcgcg catcttgggg cggtaaacgg ggatggagat gaggtcggct tggatcttct 780 qcattqqaaa qaaqqatata tcagtatgga gtctctgtat ttaggcaggg gtagagagtt 840 atccqttctq tacctqcata gcgagatccg agttgctcat tcctccatca acagcgagct cgaataggcg gtgtccgctg tctttctcca tggcattcag aattgccttg gtttggaagc 900 960 aggtcgcttc cagtgttgct cgggcaatgt ggcccttctg ggtatattgg gtgatcccaa ctattttqta ttagtattag catatgaggg taaatttgag aagttccagc ttacatatag 1020 ttccctttgc atcatcgatc caatacggag cgtaaagtcc gctaaacgcg gtaacgaaaa 1080 cacacccgcc gttgtcttcc acagttaaag ccaagtcgtt aacttcctta gactccctga 1140 agaactctaa attattctga aggaatttga ttccagatcc accaaccgct atgcttcctt 1200 cgagcgcata tactggtcgt ccatcgaaat tatacgctat agtcgccaga aggccgtgct 1260 tggagataac tggtttgtcc ccgacgttgt acagcaggaa gcatcctgtg ccatatgtat 1320 tettggeeat geegggggag aaccettttt geeetacaag ggetgaggae tgateteeea 1380 aqcatcccat gataggaacc cccgcaagcc tgccgttgga gagtgcaccg taggctgtga 1440 catctgaaga aggaacaatt ttgggcaggt gtactcggcc cttaatgcca aagaaatcca 1500 gcaagaagtc gtcgtatccc agtgtctcta ggttcatgaa cattgtacgt gaggcgttcg 1560 tacaatcaga gacgaaaaca ttggcagcgc ttccgccgtt cagtcggtaa accaaccagg 1620 catcaacagt tccgaaggcc aaggtgcctt tttcgtatgc ctctttgacc ttgggaacat 1680 ttqtaaqcat ccaqaqqaqc ttagaggaag aggaataggt tgagagcggc agaccgcaga 1740 tctgttgaag ttgcgatgct ccgggtttct ttttaagctc atcaacaaca gcttgcgagc 1800 gggtgtcggt ccagacaatc gcattataaa gtggctcccc ggtttcatgg tcccaaacaa 1860 ctgtagtctc tcgctgattg gtaattccca ccgccttaat agattgttgg tcgtacccgt 1920 tgatttcgaa ttgtttaaca gcttcttcga tgcaggtttc cacagaagat acaagctcta 1980 gcggatcgtg ctcgtgccat ctgccaactc cgttagcgct gtcataaagc atcaggaaca 2040 acagteetta eecegggtta ggatatatet gettgaatte gaettgatgt gatgegacag 2100 gatctccctc gcgattaaag attagaaatc gggtgctggt ggttccctga tcgatagaac 2160 caacaaaaat ctttgctggg tccattatcc tccggcctcg aactcagagt ctgaatgtga 2220 tgtttatcgc ggagaatatt ctgatttcac ctgccgactg gttgaggtaa acaggcagaa 2280 gggggagaaa aagtgaggat gcgtaagagg tgaaattgca ctcctctgga tgagataccg 2340 gagggagtaa gtgcgtctcc agctttgttt aaatacttct ttgacaaagc atgagtacga 2400 cgagtggttt cacaattttt ccgtctcgcc atccaatatc tgcgggggag atgcccccga 2460 gcacggaggg gtgaatgccg agagtataat ctcacctata cccatgctag cgtcacgaaa 2520 atggaaagcc actgctatag gaccgtcttc gtaaaaaggg cgcgaaacag cgcctcgacc 2580 gataccgcct gagataaagg ccaacatgag cctaaaattg caaaccagtc gagatttcaa 2640 tccatgttct cgaacttctg taggtatcct gaacttagcc atgtgtttgt ctcccatgta 2700 gacaaagcca aatataaccc ttgtgacctc gtcagcccca acaggctggt tgcgttcgtg 2760 gggaaagatg ctcggtggag taattgacga tctgagctgt cggaagactc cagtcgccga 2820 tccggtagaa ccgtgtacaa gggcgaccat acggaccaca agctgttctc agtccttgtt 2880 atctggaagc caccatttgt cggctgtcta atgttactac tgaggagcgc ccggcagaca 2940 tgggccgaag cgtacggcag catggattct ggtggtccaa catcgaacaa atcgctgcca 3000 agetecaace etgetegtta eccaceteca caactecaca tgacageaac aagatggacg 3060 aatggcgatt gaaacatatt gacccatgcg atgcagctgc cagcgctacc attctcagtc 3120 tccacccaaa cattccagaa catcatgaac gagaccacag aacggcgatt gatgtcacag 3180 agecgcactg ttccctgggc actactatat gagtgatggc gtccggatag aggcgtgtca 3240 attctcgtcc ctgcggaagg taacagcggc tgaaccctgg atggagttgt cagaaatatc 3300 gtacacaacc agttgcaatg ccaatgaaag agaccaggct tggggggact aattaccttg 3360 aatggaaacg ctctcatcct ggcgatgctt atgtctgcaa gtcgcacaaa cacagtttgc 3420 qcaccqaqqa ctggtgtgag atccgacgcc cgagatgcga atgtgacacg acgctcatca 3480 ggctttctct gagagtttca acgcccttca tgtgttgaat gacagctggg ttgcattctg 3540 gtgtagtgat ggagtattgt caggcaaatg ttcacaaatc tatatcccag gacaagctag 3600 atgatattca aacgaggatg tagatgacaa agtcttgctc tagaataaac aaagaatcgg 3660 ggatacagag ttaaggtaat gatgtgtgga aagcgagttg aagaagtaga ggcgtcaagg 3720 gtaaacagag cagaagaagt gaatggttgc cggccagtgg aggcctgcca gtctgtttgc 3780 acacccccc tectattetg gtectaaaac ateteteeta tttteaccet tettetetee 3840 ctctcgcttc ccagctctca atcttacgag tcttccctga tctctcattt gctccagtct 3900 cctttcccag gcttggacct cttcactgcg ttccgtctct ccctaatcag aaccatcgtg 3960 ctccatatgg ccagagcatt tgactaggac ctcctgcata tctacagcta gacagtgctt 4020 ttcatggtat ggttccagta ccataattta gagaaggtga caccatgtat gctgatgatg 4080 tttagatgta ggatatgttg cacaccttgc acgaagaccc cgaggcacaa cccacggcgt 4140 tcccttccta tttgaacacc tcgcccagca cttctgagca tatcccttct ggtaaagaca 4200 gaagagactc atcatatcct atatactctt ctattttact aaatggttac agttatgtcc 4260 gctgttaacg gaatcgatat cccaagaaca tgcaggtttc tttgcaaacg agcaataagc 4320 gagacgccgt cctcggagtg agtacggcgt ctgaaacaac cgaagcagag cctacagcaa 4380 4400 tcgatgctca tccatcacca

<210> 1803 <211> 4046 <212> DNA

<213> Aspergillus nidulans

<400> 1803

60 aaatataaat tqqatttttt gttttaaggt tttttgggtg tacaataagg gtttttgatt taagggattt cccttaatcg acattgggtt caactgtctc ttctcacggg cagaggaatc 120 180 tcctcccgtg gaggttcacc cgccaatcgg gcgtttttag actctgcgtc cggccggtag 240 gtcctcgtag ggtccggatt ggttgaaaga ccgcaaaagg ttgccctccc cttttgtgaa 300 accccaattt aggcccattg gaaatgaggc tggtcaggac tgctggttaa acgggtccaa tgaagcgtaa cttccaaaca ggttcggcca aaccttggca ggtgggcctt tacccggggt 360 ggtccaaaag gttggttggt gcatccatcg ttctcatttc cggggcggtt gtcaggggat 420 480 gccaaagatg gccacagctc ctacagttcg atcatgggtt ttattgcccc atctttggaa

ggctttatgt agggtcacca cccagaaatc gtgctttttc tcagattggt attggggttt 540 ggccgcatcg cgtggaagcc catgcaacgt ttacctctca taagcgtctg agcgcgtgag 600 660 ctaaggcagc ctccgtagag agttggtcag cacgtataat cgtcatgggc cgatcattgg 720 atggcgctcg ctgaccccag cggcagaatt cggtgatccg cagtacattt gctggtgagt 780 qctaqtaaca gatcaacgag tcgacgtcat tatccagccc taccactcat tcgcagccag caatgtgcat agtacgtcgt tttacgaagt atacaggggg cttgggctct tgactggctg 840 acgggagaac gacggagatc aaccggctga caggagttca gatacaagtt gtaaatcaat 900 cacagccaca gcgtgggtac agggattcga tcattcaagc attgcagagt gctccacgac caggagcatg accatgcagg ttatcgtttt gactggctga aatgcatttg cgggctgttg 1020 tttggctatc acagcgcaaa tcaaagcttc tctgcacctc gcaggatttc agcagagaaa 1080 gtccattcat ggagccgtag attgtgtcac ggttggctgt ccaatctacc tgacggtccg 1140 gtggggtgct ctaagaagtt ccgcagagct tcgaatagcc ttcgatcctt cgaaagggcg 1200 ggcaaaaatt gcatacaaca tgccaaataa tccctcctgt ccgtcaggat cgctgacctc 1260 caccagcacc atctgcggga gcctggaggg agaatatgga gtggatgggg aacttgtttt 1320 gcatagtttc gaccctgaaa tggagaccgg aggaggccgg agggagggcc taaaagaccc 1380 aaaggggtaa aaaggcctga tccaagtctc caactctagt tagatagggc ccagatagaa 1440 gaaaaacgag aggacggcgg cgtttcagga tcgcacctgg gcagtgggca catgggcaag 1500 ccggcagctt gcccaaacag gatccagaca ggacatacta gtggggaact aagaataaaa 1560 tcctacgatc acaaagctgc cagacccgtc ccgaggttcg acttcccatc agggtgggca 1620 tatcattcaa tttttctctt tgccggcttc cggtacatgc taagaattat tacttaagaa 1680 gtgccaaatc caattcgggg ctcagtcctc tttgagtaag gctttgttca tcttttgaca 1740 tcgccgctgg tcgcattggt agcgaagatg gaccgcaaca agaccctccg ctgtccgcgg 1800 ggaccgccac ggtaatgata tcatatcgcc attagaggcg gctaggtaga gaagaaaagg 1860 aaaaggtcga aactcggatt tggaggctcg tttactcgac tcttctgggg aaactaaagg 1920 gtaagtggca ggggtccttg aaggggttag ctccttacag actcgttaca tcttaaaata 1980 cggggtaaac agtacagagc gcagagtcac cagcagcaat tggatttcta aagtcgcagc 2040 ccctaaaact cagtgactat ggatgcccaa gaaaacattc agacattcag acattcagtc 2100 atgatctggc attgccagta ataatagata tcgcgacttt ttcggtgctg agtggttttt 2160 tgctggctgc tgctcttcag agggcccact gtagggcggc gtgggccgcc gaaaggcgag 2220 tgaactagat gagaggccga actgccagct attcggccct agtctctttt gagcacaagt 2280 ccctgtctaa taataaacct gactgttttg tagggtaatg ctgatattat tatccgagtc 2340 cqactcqctq caaqcccaac geccatecte cacccgtgac etcaccaccg tttatggate 2400 cgagatggag aatgaccgag tcgtagtagt gggattgtgg gaaaaaagca gaggtttgat 2460 cateceggte eetgggtaga ggetgatgeg gatgegetge catgggttga etgetgetgg 2520 ttcgaggtgg ctgctgtcat tcgtccagat cagaataata taatataatc cagtcgcagt 2580 aaataqctqa tqaaatacta gagttataat aaggcagaat atatggtccg tttctgatgc 2640 atctgtcgag tgccagtcag ttgcgaatcc tcgagtcacg gtctcccatc ctggagcccc 2700 cgccacactc cgcccagtgc tgctgctgct gctctctgac cacgcttagt gcgaaaaagg 2760 gatettaage cattactatt atattetete tegteeteet ettttettt eegttteet 2820 aatttatcca tcagtcttct gaggtacctc actcgctttg gtcaccttaa atccttccac 2880 teegecaact ctaceettet acetegeete atetgeetee eeeteecaca acaetacetg 2940 ttatggcatt ataaggatac actcaagatc cttcgtcgtt tttattcact cgcttacatt 3000 egetegetat tacacteget tggtttggca eegaagtaat eetaegtteg etaegttggt 3060 gttgtgttgt tgatctaaga cgcttagaga gacaaccttg aaccaagatt ctgggatcga 3120 attctcattt tgttgtaacc cagaaaaact actgaaagaa ggagattacg ctgaaaactc 3180 taatatctaa ttacgcatat caacgctctc gctcatcgtt gattcgttcg ctattgcttt 3240 tgctcgcggc ttgcccgtga ctctccacgc ttccccgact tatccaagac gaccaagaca 3300 aaacatctcg agagcccgct tctcggatca gcaccgcagt tggtatctcc tgtttggtgt 3360 ggtccactga cagctgcgcg tttgttgtca tttcaagtct ccggctgtag agcaacaccg 3420 tttgttccgt ggacggcgca actgaaacaa tcgccagagc gcgcttcttg cgaccttcag 3480 catcttqtcq tcatcaqqqt tqaqcatctc attatcccaa cctgctctcc aaaggtggat 3540 ctcagcttgg teegtettee aatategeae etgttgtege cagecettgg aaaggttega 3600 gctggaccca actggcgtgg agccttgtct tcgttgagga cacctccttt tgacagaaag 3660 agcaaagatc tttgactgcc tttttggttg ccaagttagt agcagagacc tttcctcgcc 3720

actgaggetg agtgcettga teegeeetet tegaactett cattacece tgetggeaga 3780
cgggettgaa gaaggeeegg cagattgeaa acgtggeetg ggaattaatt eeetggaege 3840
aattagggga ggtgtggegt tteettaace gttgeegeet tetgtegagt teataaactt 3900
gaaceeggeg atgtttaaac ettggagett ggageaacea tatgegggtg gggeeeeac 3960
gtgatttee etttaataet taageeggea gggaatttt tttaggaaga gaateteatt 4020
ttteetgtet aatattttt agaeee 4046

<210> 1804 <211> 4664 <212> DNA

<213> Aspergillus nidulans

<400> 1804

acagtggtgg ttgcaagtgt cctaccgcta ccggtgactg cacattacca ggcattagta 60 tatgccatcg ccgacaaggc ggctgatctc atacttagct aattgatcgt ctgcactctg 120 cttgacatga tttgttgtat agcttgtaca caaggccaac gtttcgtaca cctcgttgat 180 cgtagagcat catttagaga gtagttcgat cccatacccg gccaacggcc cattgtccga 240 tctagagagt ggcacagtta ataaatcata ccattcaact cgggctgggc ccggaactca 300 gctttgatcc gctccagagt tataaaggta agccagtagg aatcaaacga gcccttgtgg 360 tgcggccagg accggagggc ggcaatcgca cgacttcgga ttcgatcgtc tcggcaaccc 420 atggccacat agtacagata tggcaggatg ccggtgtcca atatgacagt cggcagtccg 480 gggtgtctgt tcataaagtc tcaacggcgg aaaggtgggc ttcatactcc ggaatgtagt 540 agtctagagt aggatcctcc cttttcagga ccgtcctaat cggaagactc agactttgat 600 acactaagcg tagtagatct gccccgtgtc gttccttttg actgagccgg ctgcccaagc 660 agaaccgctc cagccggtta ccaaaaacag ccacacgcga aaggagccac agttgtctga 720 tgcatggagc cataatccag gaaaatctcc tcttctgata gctcttcaca ctgcccaagg 780 840 aagcgaaatg ttgcccccag gagaaggtca agcgcttggc gtgcctcctg aagactggga tatcctccgt gaacagccat gcggtccgtc agctgctcag cctcatagcc tatggtcaac 900 gttccatgga ctctaaattg caaagactgg acttccagac tgagaaatgc tgcaaccaca 960 caaggatgga caaaacgctc gcatccctcg atctttcgcc tcgtgcagaa ttcttagccc 1020 gctctctaga tgttggaagg catcatcata ttgaacgcgc agcagctgct tgagaacaaa 1080 tagcaaacag cacaggagca taacttcacg gaactgtggg tcctgcggtg aacagcgccg 1140 actgagcagc gtaaatgacc gtccacactg ctcgagcgca aatctatgcc aataattttg 1200 cagattctgt ccaggtaatg gtagaccgtg aatatcggag tccttatgga tggcgctcag 1260 agcgactaca gcatggtata ccgcagcctc cgagtggctc atctggggca ccaggacctg 1320 cgagggcgat gagtcgaaga acagggagag tgtagggacc atatggttcc ggaaatgtgc 1380 gaagcaccgc tgctcatccg tcgttacagc cagggaagcc cgcttgggac cgccgggtga 1440 aatgtctgac ggacatcaac tgggacaagg gatcgatgtc gacaaagagc gattgcccta 1500 cataccatga atctgactgc attttcacga agcagtgagt ggtagatgca aggtagactg 1560 cttgaccagg taatgagtcg aatttgtgga cggcgacgag gttaagacgc agcagtaact 1620 aaacgccgga aataagcatc atggcgaaga caagtctgga atcgaaaaca tgtcgggaca 1680 gaagccgagc gtggttctgg caccttaaac tttccggcgc tagggccaga agcacaatgc 1740 tcgtacctag cgcctaatgg gaaatacgac tctggagttg gcaaggtcat tgcaattgga 1800 tgacgggtgt cccaggagag ctacgtccta ttgaacttct cgctcacagg acgaccatat 1860 cttcatcctc ttcgaaaaga gggtattagt tgtctccgaa atcctatcgc ctttggaaaa 1920 cattaaaagc ttaactgaca acataaggaa ctgcagtacc atcaacgcgc ggtctagtgg 1980 gcgatttacc agacaacatt gagattgcac gcctatttct tgagaacggt gtgcacctga 2040 gcccgatgct gatgtggacc agcttacctg agggcggccc ttcctgggta tgctgaaatg 2100 gcgctcatac tcgaggtgag ggagatacat gaagatgcta gtgagacagt acacttgcac 2160 acgagattca gatcctggga atcagaggta tagtaatata ttcctaagga gcagtcctgg 2220 aaatcaggag tgcctacgta acttttttga ccacagtaga atccttcctg tccttacaga 2280 agatattgtt gcacggaagg aaaccgaaag atctgatacc tgagaaacct agctgggaag 2340 cagcagttgt tgaagactgc tacaaccgcg gatctgactc aggaccaaaa cgagaataaa 2400 acagaacaaa gcaaaaagag tgactgacta gattccaaag acaaatgcca cgataggacg 2460 egagagtett actitigeega gieettiteee tieeetetat etteetigee teeettaeea 2520 aacttatcga acgcctgacg aagcacattc ccactctccc ttcgacccga caacttcgaa 2580 gtctccctct ccagcacacc acgactctcc cgtcgtggag ctggcgtaga cgccgcactc 2640 gaagtgctcg aggtcgtact gcccgttgtc tgggccgccg cgccaccggg ttcaaagtaa 2700 tggctcggga cacgtagggg atccggtgaa cgtcgaacta cgcccatggt gggtggcgga 2760 cgttcgtaca tcagcctact ggtagccgag aggggaacgg gaggggaacg ggagcggttg 2820 gccctatccc cccagcgctg gcctgagtag gtgtagttag accatggccg gctattacct 2880 gtattggtga ctgtggggct ccgggcctgt tggcttgcgg ggctctggtt tgagccctgg 2940 cggttagaat attgcctatt gttgtttcct gacatcttta tggtagaggg cgaggttgag 3000 aaacttggtg cagattggat agcagtgaat ttctgtttga tggtggaaag cgagattgtt 3060 aaggtgattc tgtgaatata ggtgccttgg aagggttagc ctggagagaa aaagtatgat 3120 gagcacaagt atatatcctt gcaatcggga ggatttatag tgtgaacaca ctttgtcttt 3180 agtatagaaa gcaattatac ataaaggaat gtcagaaagt tctgctccgt gacgagggca 3240 tagaccttgc tttattatat ccaatgaaca ccataaatag actgctgggt gccaaaggat 3300 acactagtaa agccatggca gaaagagaag tcaaagacag gctcaaggcc ggttgtttga 3360 gtctaccgta aagcagtgag ccttgtgtct attctcgtca actgactgtg tcttggaagg 3420 gaatatctgg gtataggcgg aaaacctata tcgactgcct agatgcgatt atcgattgct 3480 gccgcttatg gctaatataa atctgtactt gcgtatatcc agagcatttc ggtctggcca 3540 cgcacaaatg gtattcataa cgagagctta catatattcc cactgagaaa gaccggcttg 3600 tcacttgcac catcctgcta atgcacatac aatttcaccg gatcccatat cgacaaagag 3660 aagtcgaggt caaaggtcga ctccctttct ggcggaactc tggctgccaa ggtctccgcg 3720 cttggtcttt gtagccgcat gcttgtgtat tcgccttcat gatggccttg gctgcaacat 3780 ctgcggcaga aatattcacc atgaatgatt cggctttgct aaggaagccg tttctcggtc 3840 ccggtattcc tgtcaattat atgcacagca atcctgcaaa atcgcacgta ttgttctgtc 3900 ggttattggc tgtctgtgac atctttctca ttatggaatc tgtctgatag atgattttga 3960 ttcttgtctc gtcaatacac tccctgagtg ccgtcctgag aacacgtaat aggtcgaaga 4020 ctgcgtagct ggcagagcga acacatgaga tgttcctttg tgcggttcct caggaagtat 4080 aacgagcact gttaggagct gtcttgcatt gaggctaccc tagatattga gttggttcac 4140 cgctggacga aactttttga gggctcggtt gttcttcagg gcactctgaa cgagacataa 4200 gagtacagcc tggactgtgg ctggaaatcg agacttcacc agctggcgat aatgcgcagt 4260 ccaaacaaaa gcgcagagtg caaaagtaca aggatgattt accttgcggc ctggatggtg 4320
gagggtacta ttagcagccc caggaggata aggatgagga accaacatgc aaggtcagga 4380
gtcaagttta gaaaaacaag aaggggcgtt taatagagtg cgttaagtaa agagcaacta 4440
gaatgcagta tatagtgtag atttcgcggt gggggcagag gtcaaggata tgattgtgaa 4500
cataccataa tccatttgca atgtctataa gctctgataa accgcttcct aaatgtctga 4560
ttcctatgct atgtctgaac cttgaaggtc gcaagtaaac aacataatca gcatctgact 4620
gtaatgggaa aatgcagtct aggctgctga cagtttggtt agaa 4664

<210>	1805	
<211>	2667	
<212>	DNA	
<213>	Aspergillus	nidulans

<400> 1805

tccagcgccc gcctacacac ctcacgacaa ctccgcactt cctccccgcg ccattcccat 60 aacccgagat atcctaacgc atcccgtttc ggaacgtgac agagttgaga cgcgccgtcg tcgctacgag cgcgaagatg ctatatcccg cagagccggc ggtttatggc gcggccgcgg 180 ccctttcagc aacaaaggct gtttcggccg ccggggtcga gaaggtcgcc ttcggcgcag gtggtacgcc gctatctgtc tttttttcct cgccattgtc gtcggtgcga tcctcctcgc tacgttcttg acacgcaaag gagacggcac gcccgtgcaa tcggcatggc taaatttaac 420 gggctacccg cccatgccga caggcatatc aacaatcgcg ggccccgaaa acacggttca qqactcgggg tgtatcacgc cgaattcgat gtggagttgt gcgctgccga aggagcagca ggacgctaat gaaccttatg caaccaatca gccgaatttc cgtgttgaga tccggtttca 600 gaatgggacg tacgatcata gtacgacatt ggcatcacgg tcgatccatc gcagaagcgc gtaccagctg tttaacccta acccggatcc accaagtgta gaagaacaag cgttcctggg 660 720 ccagtatacg gataagacgt ctagcccgta tgcaggcgaa gagacgccct tctacatcac tgttctttcg gcggaatatc tatcctcttc gtcatcttcc caatatagca aacgcgacaa 780 840 cgacacatca acaacgaaca acacatccac cttcccagac gtaacctcgc taatcccttc tecateaaaa gecagegaeg gtacegetge eecegeaace etetaceege ttecetette 900 gcaaccagtc cgtctctata accgcggcaa gaaagacgag cactacggct tctacacata 960 ctttgacaga tccatctttc tgtcctcctc agccgctctc acaggaataa aagagaataa 1020 caataacgac acagatggcg gatccaccaa ggaagatgct tccgtgcgct gtacatgggc 1080 acaaacgcgt tttctcgttc agatctggac aaagggtgac gaattagggc gaagtgtgtt 1140 tgcacgctct gtcaacagca ccaccagtac aagcgccaac tcaacgtctt catctccatc 1200 aaccgcggtc tcctccgcga cagacttcac ccgccccggc tccttcccct acccaataag 1260 cataacactc gatcgacacg gcgggaatgt cgaaaagaag aatctctact gctacggtct 1320 ggaagaaaat gcacggtata acgcctcggc agtcaaactg caactggagg accgtgcgtg 1380 gaacgggaaa attgtgaatc gagcgcctgg gatctttaat ttagggtcgg cgaattcaac 1440 taagtgtcag tgggttaatt gggttggggc tgtttaatag ggttcagctc ttatccgcta 1560 gaaatggatt gagaagatta tatatgtatc cgacggtatc ttgatcatct ctttccataa 1620 attcggcgga gcgcatgcga gttcaagtga attcgggatc tctgaccgac cagccttatg 1680 acgattaata tggtagtggt agactaccgg agtacacagt actgttattt taatacaaaa 1740 attaatacta atttaggttt atacattcat gatgcgttca atggtcccgt ttttccagtt 1800 teggeatgta ceaaacgtag ecceggette aacgetaagg atagatgaca gaggetgeet 1860 acagtagata gacaaaatgt accaggaatg ctgagggtct tcatcaagcg atagtcaaaa 1920 agagagcatt tgtattcttt taggtttgga attatagatc cagcgggtca taagcagcaa 1980 agtcagagcc agtttcagat tatattatgt ggtgaaagac taaatgacca aacgataagc 2040 aaagcaccat tctgactcga cccatacaga acagaaagta agcaagtaga gaagcacagt 2100 ttaagttttg caaaccgacg gcaatcccct gataccttaa aacccaaatt aagccaaata 2160 gaacaaccca aacgcaacac cagccagact agcaaggctg gggataatca gcttagaacc 2220 tgggttaaca ggggtttctg tgggttcggg tccagagtga acaccatctt cgcctccgtt 2280 gtccccatgt gggcttgtcg aggtgggttt gtgctgagcg gaagtcttgg tcttgtgcgc 2340 agaagagett ggggttggtg atggggtagt etttgaegge geeggggtta gagtggggeg 2400 gattagaggc gtgcttgatg cggagggggc gctggctgag atgatggggg cacttgccgc 2460 ggggctggac acacgagcac tggattcagg gagatggacg cttgacggga taggtgcgtt 2520 gctactggaa ggagcggaag cgctgtggtg ctcggcaatg acgctgggct gagagctggg 2580

ctgagcagtc	ggttgacgac	ttggctgggc	tagtagtagg	ttgaatacta	ggctgagttg	2640
taggttgacg	acttgactgg	gtagtcg				2667
<210> <211> <212> <213>	1806 1205 DNA Aspergillus	s nidulans				
<400>	1806					
tcatggcttg	tegggeetga	aactcgcgtt	gatgggccgc	tcgggcgctc	gtacgtctcg	60
ccctaggata	aaagaatatg	tgttgcagta	aaaatgcccg	tcgtcgaatt	cgagtttggc	120
gaatgcttgg	atccgcggct	cggatcctgc	tactgatccg	ctcccgttat	gcgtgccacc	180
ctcagtgtaa	cccagagccg	acaagttcgc	gttctgagaa	taataagcag	agttcaccat	240
atcattctgt	tgtaaaccct	ccattggcgt	ccctggggcc	gtaaagtcga	ttggagggaa	300
aaggtcgcta	tgatctaggt	tcggttttgc	gaacagtaag	ggatccgtta	aattgtcaat	360
ggggtcagtt	ctggctagaa	cgttatcgtt	ttgctcggtt	gtcgaaaatg	gcagccctga	420
ttgttgaaat	gccatgtctt	ctgtttgatg	ttgaggttcc	gccggctgac	tttgatctcc	480
gttcttcggc	teegeteegg	acggcggaac	atctacccct	tgttttgttt	cccaattccc	540
gttggattca	tctccaaatt	gctgcttctg	ctcagtatcc	tgcttatctg	agacctccaa	600
gccttccata	gcctgatctg	agtctgtatt	gggagcctgc	tggccgccaa	gcaactgggc	660
caacaaagca	ctggcggcgg	actgacggcg	gagateegae	tggaactcct	ggccggttga	720
aagggcatgc	gaagcctgat	cctcagcctt	ggacttgact	gctaccatgt	cggacagggt	780
ggacaagcca	ttggaagacg	atgagtggtc	gggggcagaa	tegttgeggg	ttgtcgattg	840
cggggacgga	aggtgatggt	cgttctctgg	cgagtgctgc	gaccgggtgt	aatcgtacaa	900
ggacgacaca	cccggaccag	cctctgaagg	atgatggccc	accgctggcg	ctgtcatggt	960
ctgcgacgat	gacatgaccg	ggagtagggc	ggctgggatc	tggttggcct	gtaaaagaag	1020
ttctcgagcg	gacggctaaa	gagaggagaa	cgcaagggcg	gtgaaggggg	aaatcaaatg	1080
catgggcggg	catagetege	caatgaaggt	tcgtgttggg	atttggcagt	tctcaatctc	1140
tcatcaatca	gactgagtac	gagacagaca	taagatctac	: acaaagatga	ctcatcacag	1200
tatac						1205

<210> 1807 <211> 2208 <212> DNA <213> Aspergillus nidulans

<400> 1807

tagtaacggc ggccgccagt gtgctcagat aagagcatct atgtcgtgga cgataagaac 60 gccccgttga cggtcgatcg ccgcttatgt gagtcaattt tgtttcggag ctttattgat 120 ggagtgctaa cgctggttga ttgctaggta ttataccttg tactttctcg agtcctatgc 180 cgacgctcga cgcgagcaga ctaatgtcct tttgcgcgat tttgaggctg gccggctccc tgtgcgaata ccgccggata ttcgcaagag aatgtatcag gaattgcaaa ggaaaatcat 300 gcaatctccg ccctttacgg atacaactac gctcatatca acccatcact gtttgcgcct 360 gctggtctct tggctacgtg ataccgtccc accagacgag caagacgtct cagacgacag 420 480 ctggataggc tcgctgctga cagtgtcacc cttccaacgg ctggtggaat atttctcagc agaaattggg gacggcggga accagcggat gcagcggaag gatttcatgt acaattttca 540 cagggacatc tcactgactg aaaacgatga gatgaactcc cgggtttttg agagcgccc 600 gaatgtgcat ctccatcgct cggtccagga tgtatggttc gatgctgcca ctgctgagat 660 cgcgaagaga agggctggca accataggaa agagaaagtt atgctctatg acggcgtgcc 720 tttcttattc ggctgccctt actgcaagcc cggtgctggt gatggatggt atactccgtt 780 aaggctacat tgactaacgc tatattattt gcttggttgc ggcgttttgg tttagaccgg 840 tacatgagca ggttgtttat gcattatgcc agcgattctg ttagagttcc ctttcataca 900 ctacttacat gcatcctgtc agactggtag tcgagcatat ataccttgca gtgggttctt agcacgtgtt tgtttgtatt gtttgcatcg gcgcgtctcg gcatcgaaca tctaggttaa 1020 ccatacaatt aagtattgtc ctaatccggg aattgactgg gtgttgagag taggtgtaga 1080 gtggctgtac agttccgaca tgtgatttta aattgaaagt cccttttttc tatccaggac 1140 gaaaagggct cactaccacc actacataca taataatcaa ctcgaccaat atggcaagcc 1200 cataccacct cctcaacaca tcatggacat cccaccgtct ctccccactc cactacgaaa 1260 tcaacaaaaa tgcggagtca tattccctcc tcacaaacag aaccgcccta gacacttacg 1320 ccgcgcgcct gagagactac ctgactaact ccctggctgt ggccggcgcg ccaactttgc 1380 aacatgaccc agcaacatcc gcaacctcg gcgcactcca atcatgtaca tgggaagcta 1440
tatcatccct tteettectg gacgegagca tgattteega gcatggggga catagtgcat 1500
ttgagcagaa cgaggaagaa ceggcaggce teetaataac eeteacetac gaaaacgeca 1560
catacaaagc egecettett agetetggtg etgtetetag gaaccagage caagaccaag 1620
aacaattgca gaagcagaga aagegcaaac gaggeegtee atceetgaag teateaataa 1680
egacagtate egeateaaca eaceteecee tteteettt aegeeteega aaacceetea 1740
gggagaggett attttegtte ettagetega aettegacae gtatgtget geettacgga 1800
teteaageca egggetttgt gaaattetge aaagttatet tagtggattg acceeagetg 1860
ggecagtgaa egegggtgeg gatgtaggag agattatgeg egaattacae ataacgatet 1920
eetttgeece geegatagca eeetegetga aggegetgae tgtttgtatt eegagggaga 1980
eetttgggge ttttatacga gtgecagggt etaettetta egeaggtaat geegggaga 1980
eegtetgggge teggaetgea gegaettat egaacatet tgetetgat tegagattg 2040
eegtegggaagga aggtgeagee getactate etagggetett geetgacaggg ggetatgtge 2100
eggtagtgga aggtgeagee getactactg etgggtettt getgacaggg ggetatgtge 2160
ggeteacgae gaattgegtg tgetggtttt gtggttacet etgagggg

<210> 1808 <211> 2135 <212> DNA

<213> Aspergillus nidulans

<400> 1808

gatagaggtc atgtgatagt agagtatcat ttgcagattc taaatcagga cagggtgagg 60 120 aqaqaqcaqt taaacgagat gataggataa gtgtgacggg gtcatggcat ataagtataa gatcaaggag gtgcagagga tgacgggaaa gagtcgagga agactccagc aagtatgaga 180 gacacgttat agcgaagaga caagggagcg aaggtaaaag ttggagcgag ataggaagaa 240 atgatgagca gggataagtc aacgagttac gcaaagacaa taagacagaa acaagtagag 300 tagaagccaa tgagggactg gtcagaacaa gaacaagcga gcaaggagat aagaggatca 360 aagaaaggag cgagcgtgga tatgcgtgca ccggaaagga agacgagaat aggagggaga 420 ggaagggaag agagcaggac ataagaggga gtggagatgc agagaaaggt gaaggtagga 480 gggatggatc aacactcacc atatattcag ctggtaccag tcaacacctc agccaaatcc

ttqqaqcqac tttgcaaccg ttctgagtat catcgatttc caggtaagtc ctcaagagct 660 caataaaqtt qcccctqttt ctaagtgtct ttctcgctta gtctgacgga gcattcgacc 720 atcetttagt ccetttacag etgtegtgat tgtattegeg getetegata caccetteca 780 cqttatttgc cattaattga ccaaatggac attgacccaa gccggaggaa caagaagcct 840 cqccctttqt tggaatccga gcgtgagcga ctggacgagt tcatcgactc tatccattat tcagcaaggt gcgtacatta cctcaaatta ccttcagctt ctaaaatgcg cagatactct 900 gatgatcaat ttgaatatcg ccatgtccag ctgccgaaga acatgctgaa aaaaatacct gccgactact ttgacagttc caaagggacc ctcaaattat tatgggaaga agagtggcga 1020 gctcttggta tcacacaggt acgcattatt attccccggc aaagaattgt ctaaccctat 1080 tatagagtct gggctgggaa cattacgaag ttcatgaacc agagccgcat attcttttgt 1140 tcaagtatgt tcctacagtc ggcctagcca gtctacgtgc tcacagttta cacagacggc 1200 ccttgaatta ccagccatca atcccacaat gaacggcgta ttccgagctg ccgactacgc 1260 gttcgcagcg tttacacggg cgtcgacagt ccagacaccg aggaagagcc atctcgacgt 1320 gccgctatcc aatgcacatt agaatgctcc cggcaattca aaactccgtg caatgagttc 1380 gataaatgga atatggtatg attcatataa gcaagatctc tcgtatgtcg gctaaagcgt 1440 gagggtcgtt aaaaatcatt ttgtccttct ccattgcctt tactttgggc ctgaggattt 1500 tcaatttacg ttcggccagc cattactccc accgagtagc ggtggaactg ctaatccctg 1560 gttcttcaat gtcctataac ctcaaagtca gtgctttacg aggcactcgg gacttttagg 1620 ccctgtgctc ggtgttagtt gcgactctca gaaaggacgc taagcacata ctttgaccat 1740 taactttaaa tcattcagtg atcttatttt ccggtgttca acttttcacc ctttacggac 1800 tettgggaat tateageagt etttgataga tettaeatat accaattatt eteggeteteg 1860 cgattgatcg gccgttttag tgcagttcgt gacacctttt tgccggactt tggcgtgtta 1920 aaaaggttac tgactccaaa ttgccggtat tttgggattg aaccccccc cgctaaattg 1980 ggcatagatt gttttcccgg ggaaatcccc gcttttttta caaaagcggg tgtggaaacc 2040 cctatctggg aagattttt ctcctcctaa tgcaggttgt atactctccc ccccatctt 2100 2135 tctctttttt tgggcgctcc acgagttttt ttttt

<210> 1809 <211> 3451 <212> DNA <213> Aspergillus nidulans

<400> 1809

60 aaaaaaagaa aaggaatgtt teetteeaag taeggeeaat taacetette gegtgagtge gcaaatcaaa aggccaagag tggtttcctt tggcctaacc ggggacattg gggtttcacc 120 180 accagtatta aagttgctag ttaattattg cccaaaacct gcggaaaaaa gcctcataac tgaaggcctg atcgatccca tttcgccaaa ggctttcctt ccgccatcgg acagatttct 240 ggccgcgtca ggtcaagacc aatatccggc cctctttgct cggcgaatgg tcttgatccg 300 aaaaatggtt tgcggatcgt ctcaagaaat tctcagcagg aagttgcaga gcggtaatgg 360 420 ccgctttcct tttgagccat cgatcataag ataaactcgg agacaaattc ctcccttcct tgagatctgt ttgctcggag gaatacaccc tgagcccatt ctccgtacaa gccgaagcag 480 540 acgttgactt ttgcgcaacg tttacctcca acttctcatt ttcactgaat tttgtctccg acgtcccggg tgccggcgcc gcggaaactt cttgctctgc aacctccgat tcggtcttcg 600 caatatcccc tagctcaaca ggtgacggag gagccgattg cgactcgata ttcttcgcaa 660 agattgttcg acgtaacgag tatccgcggt ttcgggatcg agagcggcca acggtatctg 720 gactctgcgg ggacgtagga gagagcgctg agcgcggtga aagagtcgaa ttcggcgcac 780 ggttggcatc aggagaggta gcagacgaaa ggctttgggt attcgcgata ctcgtattta 840 tcgagagtcc tctagacgac ggtcgccggt cctgctccca tgaagcctgt gtatttcctt 900 ccgcaattgg acgctccaaa tcagctgaaa aacggacatg ttgttgcgat aacctccttc ctgaatctga aagtgttcga gagggagaaa gcgaggtccg tcctggggcg gctatacgca 1020 gtgaatgact tctcgaaggc tggggtgggc gccgaggaat ctgtgacgtc gtatcggagg 1080 gactcgacgg ctggtctaga gagattcgcg gttgttgggg actccgattc tgggtcgaat 1140 ctggcactct gttcggttgt gacatggcaa tgtcacttgc tccctgtacc gaaaagtgaa 1200 aaatatgacc ctcctttccc tactatcctt caaattgaat cctttttcga ctccagcctg 1260 gtgtaataat caagtggtcg gtcgtacaag acggtgatcg gcggggcgtt atgacgttag 1320 gcaggcaacc gaactcatct ttcagagcga aagaggggat gctctgtgac gtgcaataga 1380 gaagagaagg tgtatgtaca gaaaatatac aagaccgtgc gaggggacga aaagcaaaga 1440 gcgagaagaa actgggtctc cgcaggaagc acgtttgcgg tcggtcaggc acagaacaaa 1500 aaagtccgga aacagcaacg ttgatcgacc tctgtccccg tggacgatat ggaagaaatc 1560 tcagcagcaa cgatcgtata tacgacaata aaaagagaga aaatttacag gagaacagaa 1620 gaggatgaaa agacgaggaa gaaggatagg ccaaagttga atagggattg ttgaaacacg 1680 actgaggcag ggccgggctg ggggcaacgt aaccccagtc ggggctggat cttggaagtt 1740 ggaagttgga tttggaccag atggcgcaac gccgccaatc ctctttggat ggcgaggtgg 1800 aggeeteetg egtgeetagg tacatacate aacggttetg acagggeaga acggaegeea 1860 ttttgcttta gctatactta aagcacagcc ctacagcact agtatcacta tctactccgt 1920 acgcagtagt agatccccag gaaaatacag actgcggata aaaatccgtc caagacagtt 1980 ttgcggtatg agagacagac ttcgcccgag accgtcgcaa ctcgcaaggc tgctataatt 2040 aagcagtatt cgagtggtcc accgggccag acgtctgcac agcctccagg gtctcgcccg 2100 catgctacca aatcattatt cgtccaccaa ccctcgctct tgctacgcgt cagctgttcg 2160 ctgccacctc aattcgatgg tgactagagt ttccgatccg tcgaatcttg aaatccgtgg 2220 aaggaagcta gaagtccgtg agccccaagt gagttcgcgc tcgtaagtgg caagcggagc 2280 acaaccgctt ggcgtcggag aaacttccgc tcaggtaagg attgccaccg gtgtttttcc 2340 gtttatctct tcggtcttgg acgacgaaga ttgccgtcca tatacttgtt tgttggttgg 2400 tgtagacggg acatattgga tgaacaaagt gaggatatat tccatgagac ggctttcgtt 2460 tcatctcttg aatttccaag accgggagac gattgcgatg ctgtcaacat ggtcaccgac 2520 gtgcgccttc taacgtatca gcgatatcga acgttcgttt cgtttacgag gtcatcgggc 2580 tggtcagaac caccatgagt ggattggtcg ccctctagcc gcgtcctttg cttccttcat 2640 tttctagtct ggccctgact ctttccatct gtcttcctgg ctggggtact gtttcgactt 2700 tgtccgagag ctcaggtaat acttctcgac cgttgtccaa aacacatcac atgcatccag 2760 cacacatatt cgatatatgc tccaattatc gaatgtggag ggctcgaatc gacgataggg 2820 cggagaaggc gactgtgaac tattggccga gcttgaacca ctatagtatt tattagcctt 2880 gcacttatcc ggcatgatga tatacggaca tacttccttc cctttttact ctgtacgcgt 2940 taaaatcaag ctcgatcgta gtcacggttc cctattgcca tgtgtgttcg tcctcactct 3000 ccgacagctc cggcacaaag tcttctgata gatcctcttt cttcgtaaaa cgacaatatc 3060 ttcactcagg ttgattcgga gaatgtacgt aatgagttct ggaggatatt ggtatgtgaa 3120 gttagtactg aactcgatgt agtagaccag caaccactgt gtatacctgg tttgaccgca 3180 tcacgatcaa gagtaggaac aacacgaaaa atgatatcta aagttgtgaa tggaaggagaa 3240 ggaggcagat ttaaagtgag aaagacaacg catgatagag aaaggttagg aggcaggttg 3300 aagtgtggaa tctcgtgcgg cgagaatggt ataacgctgc ccttcgccta ttcgagctgc 3360 tgacacttcc taaagtcagc tagacatggc actaattggg aatgaaaggt ataagcattc 3420 aatggatcag caccgtactt tgatgagtta t

<210> 1810 <211> 4514 <212> DNA

<213> Aspergillus nidulans

<400> 1810

agagaaacga tgcacaaata aagaagaaga tgtgaaggat ttgatttttt aggtgccaac 60 tggggaataa aaatgttttt tgtgcgtcta aggcccacgg aaaaaaatca tctcaaattg 120 180 tttaaggaaa ataaagtttt ccaaattaaa gagcttgctg taacgttcgt tcaaaagagg 240 tcacaatttt qqaatctccc gttgggccac cccaaattct gacaaataag tttccggcag aqacttatcg gaccttcaag tgggagcatt ggtgtccgat agtaacgctc tccagattct 300 360 ctgtaaagtc tcttcagctt tctcgttgat ccattctgct ccttacaaaa attctggtaa 420 qqtctttqat tccccatgat gaagccattc attgagcatt gtcatgtagg gcctgctcga ttcacgaaga agagtttcta caagcgcttt tgtcgtcgga tcgccggaga aagttgccag 480 tcgctcggtc agtaagcgta gtacattgcc tcctttacat atttttttgc tagacattgc 540 tccaggaata agatctcctc cttctctaag ctgttcgaga atgttatcaa cgtcgtcaaa 600 gtcgtcaatc gactcatcaa tatcctgatc caagagaccg tttcgtctca gcagctcctg 660 720 acctaaagag tacaattgag ctaaacattg gctggtgggc atggtatgaa gatggagtac atggagggtg aaattcgggt tgttgagaag ttgtgtctcg agctgggcaa cgaggatcaa 780 840 atagtccttt aataattttc gaatcgtagc gcatagggcg tggctcactg caccgtactc tgcacgactc tgaacctcaa cgaacgcctc cagcgcactg taatgtgttg ccatcttcaa 900 catggaccgt gtaaggtccc tcagagtagg atccagccca gacggcagtt ggaaagccgg tcccgtcaat ctgtccttct ctgcagtagg gtcatattga gcctggtatt gaatgtattg 1020 gccttcgaac cccatgaaaa caaacaatag gtcctccaga atcgccttct cctgcgcatc 1080 agtagacaaa tcgcgtagtg gtttaggttg aagcgattga ggtagagttg aggacaacgg 1140 aggtacggat acacgactag ccagcggcgc agtagtgtag ggcatcaggg aggcgtgcgg 1200 gttccatggt gctggtaaga gtcaaaattg tagatattca gtctggacga atgtcttacc 1260 atctggggtc tccttttcct tcttccgcaa attgggactg agaggcccgg cagtattagc 1320 cctccttgac cgcgacttat ctccctcccc tcggttccct gcgctgggcg actctctcac 1380 tggatttctc gttcggcctt gcatcttttc tttagtctga ataacgacgc gttcggtgcg 1440 tttttcagat gtgacatgct ccctaggaac tttgctcttc tgggttgacg tgctcccgcg 1500 atgatccata ttttctgctt gcaatggagc tgtgccgccg cgtagaccgg cttcctcagc 1560 atcggcgacg cgactggacg caacgcgggg tcgtggcggg ttcatgtggc tggtgcggcg 1620 gtcattgatg gacatgggcc gcatcaaata gaagaaattg acgacgttcg gcgctgggga 1680 caagaaattg tgctggtcct agccttgcgc agtcccgacg tttggttgga gcggtgggtg 1740 gtgttgtcgc cttgatgcct gagatctccg tcaggcactt gcgacttgcg tagccatcat 1800 cgtctcagag cttcatccag agcttcagct tcatgaaact tcctaccctt acgtcctcca 1860 ccctgactgc taattcgaga tactcctttg gagtcagcta ttatcctagt caatccggat 1920 ttcattgttc aaagatataa tctaaaatgt tcatcgcgcg atcggaatac ggtaagctcc 1980 atcagacctc ctcttaatac ctgcaatctg acctttcttc ttagaccgtg gaatcaagta 2040 ggatacette cetetataae eteegataeg ttattgeaae eagtetaaet gtgataaeea 2100 cagcaccttc tctccggaag gtcgtttgtt ccaagttgaa tactcgctcg aagctatcaa 2160 gcttggttca accgctatcg gtgtatgtta ttcattttta tactcatctt ccggcatgga 2220 cactgaagtg tegtaaacgg eggageactt tataagette ttegacaatg acegeaacga 2280 atccgctgac tgcttccaca ggtagcaaca tccgaaggtg tcatcttagg tgtcgagaag 2340 cgcgtcacat ccaccctgct cgaggcgtcc tcagttgaga agattgtgga aattgaccag 2400 cacatcggat gtgctatgtc tggcttgcag cagatgcccg gtctttagtt gagcatgccc 2460 gcgttgaaac ccagaatcat gccttccact acgcggaacc tctgcgtgtc gagagctgta 2520 cccaggcgat ctgtgacttg gccctacgat tcggagagac tggagatgat gaggagagtg 2580 tcatgagcag acctttcggc gtcgctcttc taattgctgg gattgacgag gatggtcctc 2640 agctgtacgt ctctctccct tctatccgag ccctgcttgc ctgtctttcg cctcgtttag 2700 cactacatac ctcttatact acgaaaatta tccactgact cttgtctcta ccagatatca 2760 cgctgaacct tccggtacgt tctaccgtta tgatgcgaag gccatcgggt ccggaagtga 2820 gggggcacag gcagaactgc aaaatgaata ccatcgctcg ttgacacttg ccgaggctga 2880 gacgctagtt ctgaaaacac ttaagcaagt catggaggag aagctagacg cgaagaacgt 2940 tcagctggcg agcgtcacca aggagaaggg tttccgtatc tacaacgacg aggagatggg 3000 acgcgctgtc gcgcagctag gtgggaatca atgaaggact actcagtcgg tttgtgatga 3060 ggccgtaatg aaattttgtg gatacattac agggttacct tgactcacat agaaaagaac 3120 gatgacctcg gctcatgacc atgaagcatt gcttctcctt tatgaaatgt agctcgctat 3180 aatcccgagg atttgaaacg gtggagcaga tacgacttct atatacacta atgctggtat 3240 catagaggat tactcaaaca tagttttcgt caaagtgaac attcatcacc gaatcttata 3300 gacgcagggc ttcagtacag ccgcttcctc ctccggagtc atcccattat ccgcagccac 3360 cgtcttctca ataaacttct tcttgccaga gccaggagcc ccagaagcag acacatgttt 3420 accettegte ggtgeacege eegeetttae aaacteeate tttaegaaca tettgttega 3480 tttatccaga gtctcagatt tcagaacaaa cccgcgtgtc ctgaagacct cgacaaaagc 3540 agagatatca gtctcatcat cctgtgcggg acgggcatct tcagcataga tctccgcatc 3600 gtcgacatcc gagccggcat cgtcatcacc cgcgcgcttc ttcttgagtt tcttcttttc 3660 ggctttcgtg agtgtccgtt tcgcgccgat ttgggctttc ttgcggtgca ctttgccaaa 3720 gcgacttttt acttcgctga cccagcattc acccttaccg tcgctgcgga gaacgcgcca 3780 cgcttcttcg acaaaggaaa cccagtttgt gcccatcagg ctgaggcaga agatcgcaat 3840 gtcagccgag ccatcttcca aaggtaggtc agaaatgtcg gctttagtaa tgggtgaatc 3900 tttgggagcg tgtaggtcga agctgtggag cttcaagttc agcttcttgg cggaagggag 3960 cagagegegg tggagttgtg egteaeegea gecaaggteg acaatggtge atgtaeegtt 4020 tggccggcgc ggtaaggcca gacctcggga tttttggtcc ggcttgcttc ccttctttgg 4080 ggcaggggag atggctcctc gagtacggat ggcattgatg tagccgtcaa cgggattgga 4140 aggccatgat teettgaett gaeggagaa aceggegtgg tatteetega atagtteeagg 4200 gtttgaagtg aacagetega gageetgegt tgaeggagta gtgtataggg ttteegtteea 4260 atgaeggaaa egggatgaga ttaactteetg eegeatggee tgeetgeagag gtgteaagae 4320 agetgttgta gttgggggtg eaaggggtat egatteeagea gtaggggett eattgggagt 4380 egettggttt teetteeeg eetgttgttg ggageeetta tteetgteet teeteeeg eetgttgteg ggageeetta teettgteet teeteeeg 4440 etttgeagee tgee

<210> 1811 <211> 3384 <212> DNA <213> Aspergillus nidulans

<400> 1811

tgaaaagggg aatcacttag aggttgtagc agagcattac ttcccaccag cgagaattaa 60 gggtggttaa ggtggttagg atgtttgaag tcagggctca aaatgagagt tgctcggggt 120 180 ttagaggctc atcagtgaga tttaagtggt gggagttaga cgcattcagc ggcttgtaaa taaagattgg atcattaatg tottagatgc tgcgttagta aacagtgtot tagaaccott 240 gtaatctatc aacacttcaa cgcctgcttt gctgcgtaac aaataaagtg cattgcacgc 300 cacatacgtc tcgtacgtcg accatacatt tagcagtaag cacctactaa ctatatcagc 360 tatagaacaa agctgcaggc tgccgagtga taataggatg ctctgagtga atagggtctt 420 gaggttcggc catgggttta attggggttt ccggggacaa atgaacttga atagaattgt 480 ggtaaatgtt cttggatgtg aagagtgacg tagacagtgg acttactaga catggttgca 540 actcctattc gagacagcca gtgtataggc acaaaacctc tgtgtacgta gtactcgcag 600 cagcaatgat tcacatcaaa attcttatag ggtatctgct gtcatctata cattaattat 660 aagacaagcg ctctccccga gcaggggccc aattctccag ccactctcgc gctttaccaa 720 780 ggtcactccc cgcggcttca accgcagcaa cgcaccaagc cagatcgtaa attttctcgc cagccgtccc atgattttcg gcggcaagca tttcggcaat attgcgccgt tgctgacctg 840 cctgatcagt gcagaagtaa aacggtgcga tgtgtggccc cttgccctga agatctacgg 900 960 cgttaatcag aggtcgcacg agactcaaaa tagcggcagc gctgcatcga tgcggccgag

tcagagagct ggtgacaatt ttgtttccca gttttgcagt actcgttctg gcaccatgat 1020 ttaccgcacc ccttcattag ctgagagaga taacggcgct ctatgcgtcg atggagcact 1080 ttcccctctg gatcgtaggt gtctacatat aagggcccga agcatatgct gcagagacct 1140 atcgtgtcgt tgcctggctt aattgtgctt tgcactccgc gcccatcgag tgtacgtccg 1200 cagttttggt tcaggcagat ttgaggcgcg ggccgggaga ggcggtcgag atcgtggtgg 1260 cggaggtgtg tcttcatatc gcgcagccga acaatcttgt tgcaaagatg gcattcgttt 1320 gttcgtccgc catctacaag ttcatgcggt gtaagaccgg agaccagcac ttccggatcg 1380 tgcatatctg gatcagactc gccttgctgg ggcacctcca ggtgacagaa tgagcaaagt 1440 atgggcttcg ctgggcagac agttgttcga tgttgagcaa ggtgctgaag tccttccgct 1500 tcaaacccac aagcgcggca tgatcgcctt gtatgaaaga tcaagtcatg tttatgctga 1560 ctcgccaggt catgcccgaa tgaagcgtca taaggacagt gccagtgatt ctgccattcg 1620 ggagaccgtt tctggaaaac ttcgtggcaa tgggtgcata atacattgtt ccgaaagcaa 1680 aaattctcgt gcaggacaaa cgttcttgaa gaaacccagc gctgacagtt cttgcatagg 1740 acatcatcgg cgtcatgcgc atctgactcg gagcttccgt ggtcgacagt tgaagttgca 1800 gataccaggc gcagttgata agatttagcg gaagcctgtt gttcatcagc tgtagcaaac 1860 gcgtggactg aaatatacaa cgcctcggca ttatccaatt cagcgttcgt tggcgcaatg 1920 ctaatctgct tctgtgtctg gcttgagagc tcaccaaaga catgctcgtc catccgcggt 1980 cgattectet gaegageaga aagaggaete gegageaaeg taacateege ategteetee 2040 cctacaaggt taatttctat ggtgcttcca gcctcccatt ttcgaagttc atagtccaca 2100 tactgacccg gaagcacctg gccagtcact tcggcaccca gctcaagtac tccgccagca 2160 gatgtgcctc catcggtttt agacgcgcgg gaagctctcg ccagccgttt atgtagtgtt 2220 tcgcgggcct gctcttcagt caaggcaaca atatccacct ccagatcagt atccacgaca 2280 catataccct ccccctgagg ctctaccttg tcgaccagaa atttgaagga ttcttcctga 2340 ccccggggca ctgtgagtgt ttccccggtc gtcaatgtgg tgtaattgct gcgtagatga 2400 cgctctaaca gagctttcca atcatcggtg tcgtaaccag cctctagcgg gcgcaatcgg 2460 acataagtac ccttaggcag ttgctcggcg tgaacggtta ctatgggggc gtcggcgtcc 2520 ccaccttctt gggaaatgtc aagggcttcc cgtaatgaag cactaagacc gatctcgttc 2580 tetetegegg agaactegeg gateceageg tatateacae gagaattttg ggtgttgaeg 2640
ageceggaatg teagtggatg aggtaattge tgetgteggt ggacacegtg etegegtgtg 2700
tgagacteag eegcaacegt aeggggacta aagaggeeaa aggagetggt gtatggaege 2760
agaggteget gtgacgatat etettgaage ggageggegg egagaagetg tteegagagea 2820
gattgeggaa gaatgateet gttttatga aaaataacat teageataca aatetggega 2880
taaaggeatt gacettaggg aacegaagag tgattaceta tetecagaga gtttetgtgt 2940
gtattgggga ggagteaegg taaactgega egaceagega agttggteet gtteeetage 3000
eataactttt tgeaaggtet aggtatette eaceagggeg ageaacacat eettaagega 3060
ttgttggeea etegagttga egtgaactga gtettgttge eatetteeag aagatacege 3120
eeggattgt eateeteaaa egetettaag eaggteeatg taetttatat eettaetgge 3180
etacatgtae ttettettaa tacaegaaca acaagaaaag eaaaaaagag agggetgget 3240
tgttteatta ttaateeaag geaaceeata eetgggtage tggtggteat teaaagageg 3300
gaatggeatg etatatgegg ggtataegat aatgetatea aaegeaacag atgaggteat 3360
aaattaegte tteaaaaaga atet 3384

<210> 1812 <211> 2169 <212> DNA

<213> Aspergillus nidulans

<400> 1812

agceggttet ggeggtgact atattgacca etgetteaag acatatgaaa eeaageggag 120
atggtgegaa eteeegtgee ttetacatte atgategeet etggteatat ttgeggegga 180
tgattgageg tetgttttgg ggeeaggaaa agtttggegg caaeggeatt gggateaaca 240
aacetegtte etttgattta geteeeteet eagegaaggt taateataag ggtaatetga 300
gatetttggg eacgattgaa gegttattga taettaegga etggeaeeeg eggaatetae 360
atttteetee tggagaegat gagaaegeat taettgatet ggatgeeeag getggeeggt 420
acgacaaaga attagataat gaeggtgaga eeacagegea gegaagetet agtggtgeg 480
etgagggeag actggeette eagaegtgge tagageeage etggeggteg gaeeggatgt 540

catqqatqtt actcagtact gctcaagcat tagcattcga gctcggtgtg tttgaccaaa 660 agaacqatac caaattatca gcagaaccgc cagctgagca aacgcgaaag cgtcgtctcc gtcgacttat ccttgtgtat attacgcaga gcagtggccg tttgggcata ccttctatgc 720 tcccactacc acagtggacc gatgatatcc agccgacgcc actaaccggc gtgaaaggca 780 atgaggttga caaaatgcat gattgttggc ttggaatatc caagatcatg tatcaaagca 840 accageteet gttegeatet aacgaacaga ettetgattt gataagaage ggeegttace 900 gcgaccagat tgatcgattc cagcctttcc tccgagaatg gcgacagaac attgattcga ctgagtgtag gtgcatattt gcctttcatt ggacaaatgc taaccatatc agtgcaccct 1020 gcaatgagac atatattgat gattgaatat gaatacacac gtacgtttcc ttctcgaaac 1080 ttatgaccac ctggcttact tctctcaagg tttatacgtc aactctttag cattgcaggc 1140 tgtggtcgat cggtggacga caatgtccaa cgaggccgct caggctcaga ataagccgtc 1200 agcatcaaat aacgcgtcgt tccatgtgct aatggaattg taccgcgtca atgagccttt 1260 tattcaagaa gtcgttgatg cgtcgcgaag gattctgacc acagtgctcg agggcttggt 1320 cccaggggac catttgaaac atgctcctgt ccggacgtgc tttcggattc tgtctggcat 1380 gatcttcatt cttaaggtaa gtctttttct gaatctgaat gttgcgactc cgcatctaaa 1440 catcttagac gttcaccctc ggtgcgaaag aagatgacgt gcgtgtctcc ctcgaccttc 1500 aggaccgcac cgttgaagca ctccgaacat gtgttgtcga cgacatccac ctcagccacg 1560 ccatcgcccg cctgctggag ctcctcacga ctaatatccg cacacgcttc ctccgtttcg 1620 ccccctgga ccgcagtggt gacaacgaca gcaccagcgc cggccaggat cgcgcctccg 1680 ccccaacgtc tcgagcccac tcgcctcgtt cacgagaagg cccgcttggc cgtcgagatg 1740 gcctgaacaa cagccacacc tggccgtctg cgcaatcaac acataacaat caaataggcg 1800 gctatgcaga cgcccatcct ccatcgtcga cacccctaac ctcggtccac gaccctctag 1860 ctggaattcc cgcccaaccc atcaactcct ccaacatcaa cgtcaatttt atgccacccc 1920 cgccatctgt ctattacaac ttctaccaac cccgctcccc gccgccctca ggcgagatga 1980 accettecaa tecaaattet ggtteagegt ettecaatet eeeetegeae tegatgaatg 2040 agcagecagg tgteteggat tggttegeee tteegetaga ecagttette aacteetega 2100 ctgcggtcgt ggatcaaggg cttggtggga caggcccgat ggtgggtgag ttcgatatgc 2160 tgaggtttc 2169

<210>	1813
<211>	4014
<212>	DNA
<213>	Aspergillus nidulan
<400>	1813

catggtttca tggacaacag ggtctaatgt atccacgacg tattcccaga tcgacttgcc gctgatgtct ttggcgttct tcatatcttt tgtgagacca ttgcgcttga aataatcctc 120 180 cacaatcatg tttcgctgat tccgaggaac gccgcgcttt ccaggcaaac cattcagtgc tcaccaccgc ccagtgaagg ggcttgctca acagaacggc cctgatccgc ggccagatct gacgctgttc agctagggtc tgggcctcgc agagcttttt cacctggccc tccagaccga 300 agactttgaa gatgtagegg atcatettga tggegtggeg agaacegeeg gteteataga 360 gtcctcggcc agaagatgag gtgaagacat gactgtgttc aagccaatac tggaaagcct 420 480 gacttgatag gtgagggctc agacgggaaa tcaaaaggtt ccggaactcg ggatgctttc cttcgccgaa gattttccaa acatcacggt gaccgagggc gatgaagctt gcaaccttga 600 gctcgatgag gtggttctgg ttggggttca agtcaacggc gtgcacgcgg cgcgggctct tctgcagata gtctaggatg ttgtcaccag cacttgtgat agccagtata acgtcgtcgc gctttatgtt gagtagtctg tggtcaaccc gagggtcctc ccagttgaag gcatagatgt 780 actcattctt gaattgagtg tgtttcggga ggagatcatt atagaagatg cggtaatggt ggttttgata gaaggcagca ggcaggggaa ggttggcgct caggttgacg acggccgact catacgcttt agagtgaatc tcttgtgtgc tctggatgat tgcgttattc atctcctcgc gatggtttgc tggagagaga taaggcgatt ctgtgaaaga agcgtccaac ttttctatgg cctcacggct ggcctgattc gggtagatgt ctttctggcg gccaatgaag atgtagtaag 1020 ggatgcctcc gagtaagtag ttacgctcac tagcagaaat gacagttcca aaccgatatt 1080 ccaaatagtc tcggcgagcg gcatcgaggt tcacacggtc tgcctcaaac caagcgcgcc 1140 agaacgcacg acccagccag ttaacatgtc ggttaaagac accgccaata tagttcctgg 1200 aggagacate gacaatgett tggaetttte gageattagt gtttettete attgetaget 1260 gcaaacctgg accctaccgt agaaatcaca aacacccaag agaccagacg gcttcaccaa 1320 tttgcttagt gagtccacca cgctgtaata atctattact gtcagtggct gttcgagaat 1380 tgcataaaac gagtccttac ctggaatcat tgacaggcta taactcattg tgaccagatc 1440 agcaccggct cctacgctct ttagaggatc aatatggtcc tctggcaatt ggaaggcgcg 1500 tgcgtcctgg caaacgacag tgacattctt ccatcctagt cgttcgaacc gctggcgagc 1560 tacctcaagc agagaaggag aaagatcgac aaggtagaca tgagagaaga attcgggaac 1620 gggcacgaac tcggccatag cctcgatatt gtatctagag ctgtcagaaa acgacagagg 1680 aacgctgtgc tcatcttgat gcttacccgg taccgccacc aatctgcacc attcgttagt 1740 ttttcggggc cagcgggaac acgagaacct tacatcgacc cagatcgcct tgcctttccg 1800 aagctccttg ttctcgacct tgtacttgag ctgagcggca acaagaccaa gcatatcctc 1860 ccgaccacgt agaaggcgct tccgggtagc gtcgtaaaca gtagcctggg gagcagtcaa 1920 ttgacatcct gaaagccagt gaacagaaga tgagctcata cttgagtaga atagaagctc 1980 tccaacgcat cttgttggcc gctcccacct ttatcatggg gtttcaggaa gctggcatag 2040 atgaacctga ggtagacgga aatcccgcta ttgttatcga ccttgttgcg cttctgcgac 2100 gccacgacga ggacaactgc gacaagcgcg cagacgaaga aagcagcgcc cgcaatggac 2160 gcatagtgac ggtcgaagcc gctcagaagg aacccggctg ggccactggc aagagagctc 2220 atggcgcaag tggaaggaca cgaccagaag gacagaagag aacagactgc cccgaattga 2280 gcattgagtc gggaggggcg ctttcttcag tgaaataccc ctccatcgcc ggccggccat 2340 cggggaagag gagctaagct tgcccctttt gacccaccag gactgtctgt cgacagcgtt 2400 ggttcctaat gtaagggaac gaggaagagt gcaaaggaca tgacgcccta tcaggagcac 2460 acatgggccc ggcgcgagtt gggaatatcg actgaaaacg gaactgggtc aacagcggca 2520 gaggtgcact gagtagttag atagacgatc ctagatccat tctcttgcaa ttggccccgt 2580 aacacaccg ggggtggagt gcctagtgtt agaaccagtc cgatgcagcg tgcacgaggc 2640 aaatggtcca ggactcgcga cttctgctgg aagcatctgc agctgttcag agggcctatt 2700 cagagtacag gccagcgcac gggctaggaa ccataaagcg gttggcaagt aggagagcag 2760 cgtggagaca tgtgtgggaa tccggcgagg agaagaggag gaatccaaac ggtcggcaga 2820 cgttcgggga gacactgaat agccagtata cttgggcggg tcggccaatc acagcactcc 2880 attccaccac actttggcct tcgcattccg tacggtcaac atcttcaatt cgccagatgg 2940

cgaatttcag aggatttaga cggcgtcatt cagaatgaat taaatgttat tgattgttga 3000 tagcaagcta caagaatgag cagaggatta gctgtgtţac taacgaagtt ggtgattata 3060 tatagtaagc tcatgcgaat atatcattaa actaggctag aatccacttt caaggtatct 3120 gaccgtagac tttgaatctt gaagtgtttc tgtctttcag cacggccata tgaatgcttt 3180 caggtagatg atgtcagcat atatccagcg acaccataac ctgcaatcaa ttgggaatcc 3240 gccaacacgt acctgccttt ctttccttga accactagca catcattatc gtcagtcatg 3300 gttggcgctc gttcttgatt tacttgctct ttttcttcac cttctcacta gcgtccatag 3360 ctaccccatc tctctgagat cgcatcgtga gtttacagaa aaagaggggt tctcagaagc 3420 tgcttggatg ttcatgagaa catcttgagg tgccagtacc actattctcc cactgctcca 3480 gccgttagat catctcaccg aactagtacg ggtcaatcac tgatcctgat gatatatgtc 3540 aacgtgaaca gaactgacag catactccgc agcatcgcac aaggagacgg tagccgcggc 3600 aatgtttcac cccgtcgctg atcaagtttc acgatatcct ggtccgcaga ggcctcgcgg 3660 agettgegea getatgteet tgttaaatgt etetgggtga egatteggtg tgaatgatge 3720 attcattcgt tgggctgttg cagaacacag ggaggctgga acgaaacgac gcccggttgt 3780 gtccagttct ccacgaagga tacttgaggc ggctagcttt ggtttgcaag cgtccgtcat 3840 atgcaacgat cgggtttgat acttcacacg agggagatgg tcaggtaagt aagtggtatt 3900 attctattag tctgggacaa caggcttttc gagctggctg agcgagtatt tggactgctt 3960 4014 aagcatagcc taagcctcct gcttgcaaga gagttttttc tcctaaaatc tccc

<210> 1814 <211> 3474

<212> DNA <213> Aspergillus nidulans

<400> 1814

cctatattat ctggctatag aagacagctt gccttgttga aatggggcga accattctga 60
cggaagattc gacaacctag ctggttggat tcatagcctc aacggatttt cggttcatgg 120
tccatcatat ggccttccgc tttacaggct gggtgcagag gggtccagga aaagggcttt 180
ctcattgacc gtcaaacaga tatgaatgaa tcatgcagta cggccacata gggcatcaaa 240
gcgctgtcca tggggtccgc tatgtatcaa tttgcaccaa ttccctgtcc ccgtcattac 300

ttgttacatg tcggtggtac catggtgaac cagtgaggct atttttatca tttcccttcc ctcatcgtga accacatgtc acgcatcctc ttaacctggg ccggcgtgaa gtgctcgtaa 420 cactcatcag aagaataatc cataaagttg tgtacagggt ccacacccgg gcttcctggg 480 catgagtett tgcgagcagg acatecateg gtcggaatag acteetgggg tgtgtettet 540 atataatcac cctcgttgtc aagggagcaa gactccccct cgaaagtgtg caggagtccg ttccagtgac caatttcgtg tatggcggtt ccgcctcggt tataatgcgt tagagacccc 660 cctggcatag tttttgcaag cacgttgcat ccgtccttca catagctgga acgcagacta 720 gtactgttaa tactcgggtc gggtaaagtg cagaagccga gaacgcttgc tgataactgt 780 tccgaagtac cgagcagacg accctgagat tcggagcctg agagaacttg gagatcggac 840 tggaagtaga cattgagggt tcggtagctg cctctacgga gggcatcttt catgctaagc 900 togtottoat tacgogocca titatogitg atatggogog tiaccocito gagaoggiag 960 cttattgaag cgttttgata tgcatcttgg aggtaagata acttattata gttagtccat 1020 taatcaacat tatgtgatgg aaaaataggt gggctggcac acgaataaag atccagaact 1080 aacctgagta gcaatcatac cgtccgaaac cacgtcgcca ctcgctttgc tgctcacgac 1140 atggaaccat acctctatct caatgggctc cagcgcctta cgacttcctt gctcgactat 1200 gccatcattt tcgagagcgc tcaattttct aaattccgcc ttcaacgatt catctgggcc 1260 tgcagtagca caatatcccc tgccccaacg aggaacagca agacaggttt gctgaaggaa 1320 ggccagcata agaaccaggt cctggagtcg acgaagttga agcatctcgt ctgagggaat 1380 gaacgtttct ggacttaccg agaagatggg caatattaaa aaagagtccc agcgttgcta 1440 acagttacgc ggcatggtat gcaatcattg tcaattgttg gcattggaaa gattgttgaa 1500 ccaggccggg aatgcgacag caagggatgc agaaaccacg gatggcggac ataggaaagg 1560 agttcatttg tcccaaataa atactccgtg tccaaaacca aagacgcaac acgctgcagc 1620 aattctaaca tataaggatt tgctgaaaat aaattggccc gtatgcgctt ttaccacctt 1680 tggactcctc aatcgtaaac acgctgctgc cctttaccaa attgagaaac tcgaaatgaa 1740 gccgggatac cactcgaatc agaatcaagg ggcatgtttg caagcattat tgatatacag 1800 tatgtgaaaa cgaaaaggga aatacatgga aattgaacgc caaacaaaat aaaacttaac 1860 gggaatgggc cccattccta tcatctcgcc cagtcgcgat agcggagcta tcctgttcgt 1920 tgttccaagt caaatatgca tggtctccca gtttcctgaa gatgtcagct catggtcggt 1980 tggaaaggaa aaaccttacc ttggacggac taggtgcgca attgtgaaca tagctccgag 2040 aagaacgcag acacctccga caacaacgta ggcaattccc atgaatggat ttcggcctcc 2100 aagaacactt cgggtggaaa ttagaataga tttggtaccg ccataatcag tgacgggaaa 2160 agctagcatg ctgtcagcac tctacgtatg ttattactcc cattactatg aactcacgat 2220 ctttgatgtc caaccgatat cgtcccgact gcatggattc gttgtcattt ctccgggaca 2280 gcttgctaaa tgtgggcaat gcggctgttc tcatccaaac catgaaatcc tcatcttcat 2340 gcagatttgg gattccactg tcgtagttgg gatagcgttc tcgccaattg ggtggcggaa 2400 ctaccgcacc tggttcgtac tcagtcttct tgatgagctc tttgtcactg tcccacgcga 2460 taccettett ggteatattg tacgteteag gateaceace geggeegtta acaagtatag 2520 ggttatttat tgtgtcattg aacatggagt tcgcgatgag tccgcaggga taataggcct 2580 ttccgttttc atcgagcttg aggggatcgc atgagccacc attgatcgta gcgtttttga 2640 cagectttee ttteagetga tecatateaa ggetetteae gtatettega tgattetggt 2700 agaagttggt aagacggtag tacatgaaaa ccggcggccc gatagtatcc ggaatatcaa 2760 acatcagtcg gcaatgatcc tctccattgt cgttacggaa acgttgccag gacggccgtt 2820 gatcgaaaga cgatttgaac gtatatttga atttatcatc agggatcgat acagcatccg 2880 ttgtggcgtc cttgcagtct gaatagtcta tcactaattc ttgaacctaa gagcaaaaat 2940 caaagtcaga aagcaagatc aaggtacggg agagtcagat tgtacagttg aactagccca 3000 tagcaataac ccaccgatag gggcaaaaat gactccgacg atgaaaaaga gaggtaaaac 3060 actcttgggt gtcaaaatcg gcctgcagcc cgtcaactac taaccccagc ataagcattt 3120 gaatttgcgg acttactgcc aggcttttag acgttgttgc cggaaggcag tgtctgtatc 3180 ctcaatcagt atcgtagaat cgtacggata atgcggagct ctcacttgct ggccttctgt 3240 ttttgggctt cttatcaatg tcggtatctc ccctatgttc ttgttcacta aagggctcaa 3300 tactgttccc ctgtgaatga gacatagttt ctcataagac ccattccata gagaaatata 3360 tatggatgta agcgcacgtg tgacaataag tattgtcgct gttgtctaag tagacaaacc 3420 gtggtggcgc atataacggc ggttgcgtgc ttggtaggat cgccccagga attc 3474

<210> 1815

<211> 3444 <212> DNA <213> Aspergillus nidulans

<400> 1815

cagtggccca gatttcgccg gcgccaagga tctgttcggt aacaaacata tctccatcac 60 tgaacaccgg attaagtaat tgtcatgtcc gctcaaggta aaaacattcc tgcagtacct 120 caagaacatg gtgtgatgac ggtctgtagg atcagaagga aagatatcac ttcttgcctg 180 attgttcaag tagtctttag ccgatacgtc aatgtctatt aagtcgtcct ggatcgtgag 240 gagcgagccg cacaagggaa gaatgtcacg tettagaatg teeteegaca ateetgatag 300 gacgcggagt tcagctaggt gcagtggacg acgatatgcg agtgtgacag agctaagcac 360 accacggcaa aactcccaca tttcttcctt ttctctgagt tgtctcaata actgatcgta 420 ggagtcactc gtcattgtgc gttgtgtgcc tttcgtcccg ttgtggggtt gcccagctgt taaggactgc tgctttgagg tgtctgagca gacatccatc ggtggccttc tcgattgttg 540 tgtcgtagcc ataggaagaa acactcggag gatcactagt ggcgaaatgg tttggttttc 600 aagtcaagcg taacgcagtc gcagcttaga aatggtgcta taaatgcgag gagaaatgag 660 atagcaagag cgcaaaggaa atcgaaacga acggccacga gatagtcctc agccgatcct 720 aagaaacaga aggacagagg tctcgtcccg ggggtttctt gagccttggt ctggtctttt 780 840 cttattttat ttattcttga aagcgggttt gtaaagcatt ccctagagtt aattacctga ggaaccgaca aggaagccaa aggatagaac aagggatata ctgacgaagt ttctagtcga 900 atgtcacttt taaactggga tcagatggcc tctttgacct tgcaaggctg tgttgcttca gtgcaaagcg ggggtcagct gaagtgggtt gtctgacccc tgcccgttct taacccgcag 1020 gattgcccat ctctcagacc atcgactcct tgcctgaggg tacggactga cacatggggt 1080 agccgcacct gctacctagg catgagacag ctgtaatttc gccattcaac aacccatttt 1140 agccggagtt gaacgtcatg gtgtcaaatt ctcctgagtc ctccgccgag tcctctgtca 1200 agagtcaaca gaaaaaaaa gcaaaaatgc atggcactat cgaccatgcc ccgccgccgc 1260 gcgtggttgg ctgaagagcc tacctccacc ctacccctgt tcccctgtga atagctttga 1320 ctatggcgtt cccctccttc gaagccagcc catccttctg aaaggtaagc gtatatgtgt 1380 ttcatgaacg tgatattggt gagattgcgg gaataaaatg ctattttggg gagtcctgac 1440

atcctacatg atcctgcccg catgttacgt ctttgtaacc tgtagttagc ggccagtgct 1500 qtctcaaatt tgttagtaat tgatactaaa tcataggcaa accattgtag tctatgcgcg 1560 ttaaggtttg ccagcatctt tcgtttcgtt gaggcatgat aggggcaaga taaggcacgt 1620 tggtctgagc gtgaaatgaa cttcagcgtg ggttaatctt accttgtcgg acggggtggg 1680 gtataggaca aagetteega teaacacate tteetttgge atttaggetg attttgeece 1740 ggagctaatc ttaatcaggc tagcagagta tgaccggtgc agattcatag tgcaggtaca 1800 catttcatca aattacgcca cccgaaagct ccaacccttt attcgaccgc cacctctgtg 1860 ctttatgtgc taaggtaccc gaaacagccc aaagcttggc cagattcgca tggaacaaat 1920 atcacgggca tgtgatgttg ctcagtgcgg cgattgacca ggaaataccg tatggttcca 1980 cgatgggctg gaagcttgac ggaagcggaa taagaattgc acttcacagg aaagggttaa 2040 aggcatattc tcttcaacac actgagatgg agacaataag agatacatta gaatccatat 2100 tccacggata gaccgtgcag aacccggcag cttcatgaca cagacgatac ggcttcttaa 2160 cccgaaaata tttgacctag cgaggttaag agtgttgaac tgagaatcct acctgaggct 2220 tgagatettg aactagetat tgeaatgtat gageegaagt aatacagagg acaegttett 2280 qaccaaqaac tgttgtcaat tgttgcaaaa tggtgtgctt agtagtaaat ttcaggttta 2340 taatcggagt gcgagaccca gttcagatag tccagcagcc accaataata tatattctgg 2400 aagagaatta atateeteta aegtatgtge gettaaetag atgeggttga ttettaaegg 2460 gtgtggctag aaggactggc tacgctcaat gcttatcggc cagaaggctc tgggcgacat 2520 atctgcagat attcttaacg atgtaggaaa atatagctta gtgtgttgca gtatcgttac 2580 aaagcatagc agaccgctcc tcaccaggac attgtccgca tgatattaat gcatactgaa 2640 tttggccgtt ccaggaatag tatcatttag atatatattt accaacaatg cattcatcga 2700 tatggcgctt atgagttcta tattcggtaa tacaggctct gagaatgaac tcccaacata 2760 caaccgccaa ttctttacat gcgccatgtg ttccacctag gtaagggaac ctcaacctac 2820 cccaccggca acatttgcct atagggagct aacaatgagc tcctccaacc caagctcgcg 2880 cgcgcggcga atccaagccg ccaaatatgc tttatcaaag tggtcccata aagactagcc 2940 attcgagatg ccaattgatc aaatgtgata cccataccac tgctatggtg ccggaagcgc 3000 acacggctat tgtgcgtttg atcttgagca atcgccctcg cgacctctgc aacgtcgtgg 3060 aagtcaaaaa agccetcgga tteggcacca gtggcacagt gegacttage egegagaaac 3120 gtagaattga atteetegeg tegteggacg gtgegegate gecgatgaet gaaattgtte 3180 ggtagagace gataggeagt gegeatgege gegacaatet tteeaagaac gettegettg 3240 eecacttgaa agcegtgaat eecteagace egteggetag tgaagagtae gecateattg 3300 atteetgegtt ggeettacaa geecegget gaagaatgge eeggeeagae gagacgaaat 3360 gtageggaa eeggeggaa tggeecaggt agtaatgtt gtgtggacag eaggtggetg 3420 actggagega ggtatagtgg ttta

<210> 1816 <211> 2623 <212> DNA

<213> Aspergillus nidulans

<400> 1816

60 cctccatgta ctgtttgatt gcgtcggtct gtcgcttgct ttaaaggtta atggaagttt gaaacggcgg ctgggtacct ttgcacggct gaggtcgccg agttgagtct cgatagtgca 120 gaggtagtcg attagctttt gttgcggtat cttggtgccg tcgtagtaaa tcattagggc 180 ttttgggaga tcttggttag taaggcatac tagctgacat cagaaaatct tacaatttcc 240 acagccgacc aagtttatca agccgtttga tactgagata tcgcctgctg cctcgctgag 300 cacttttttc agcgcggtga ctctgtagcg gtggttcaga tcaaaggcac caacgccgta 360 gtcaatcaga aggtagtcat caccggccta ggaaactgtt agatcggcag cttatcagga 420 atgtccttta ttacctgtcg gtaggaaaca agcggctggt tccctttctc tggaatttga 480 tgcacgatgc cagagacccg tgttgacgag gacatggctg gaggcaaaga agaggctaga 540 ggagttatac taccgaagtc ttcccccttc tgacagcatt gcacaatgtc agatataaat 600 ctctccagct cattgcgcgc cagtagagta tctttcaatg acgtagctct gaatttcaat 660 ttgtctccag ctttgacctg tcctagtttc cacaggtctg ctttgacaat tgtatgactg 720 ctaacaaagc caccaagatc tggtgcatct tgcgggaaaa tcaccgggtc gtcacctgtc 780 cagttgattg atccaatggc gtatccacac tcgattaggt tagaagggtg tgcaccgccc 840 tctcctccat ccggccgagc ccaggtgggc ttaggaccaa gcagacgaat cccaccctt 900 gcagcgttgt gcgaaatagt ccattctgcg ttgtagagca tgtctatact ctcgggcgcg 960 agatateett cateataegg teeeggeate gacataagtt eeeagetgte aggataetge 1020 gggataagat gctccggtaa acttaattca ttatccgact cagggatttg ggcggagata 1080 gttagataat ctccagatgt aagctgtcga ccctggtaac ctccgacacc gaccatgggc 1140 gcagtcgctt tggagccaaa ccactcagct atattgggga atccaccgag gacggcaagg 1200 taagccctgc aaccgccacc cgtggtcttc cctatcttca agcgttggcc tgccgatacc 1260 tttaccctag accacatggg tacaggagct tcatccagtt tggcatcaat cggtgcaccg 1320 caaagtgaga ttaccgctgg tccaaggaaa cgtagctctg gcccgctcag cgtgatctct 1380 aagccctcaa gaccgactgg gttgcccacc agagcattcg caatgcggaa cgcaacagaa 1440 tccatcggcc cggagtgaca gaagcctcgg cctactgttg gacgaccggg ccagtcttga 1500 atcagcgtat aagcgccacc ggagatgaca tcaatagcag ctagattgta ttcgaaatta 1560 ttcaagaact tagtcaaggt gtttccagcg ttaaagtcct tgttggcaag gatttcagcc 1620 agaaacccga ggttagttgg agggccacag atccgtgacc cagttaggat gtctctcagt 1680 ccctcaatcg ctttttgcct gctcgatgca tgatacatga cctttgcaag aagaggatct 1740 attecttgte aggattetet tgeaggtaea ggatttgeae aaagtettae egtagttege 1800 ggacactttg attcccctgt acacccacgt atcaattctt gatcctgtgg tttccttcca 1860 atccacgtcc tggagtatcc cagggcaagg agcaaagtcc ctgactgggt tctccgcata 1920 cactcgagcc tcaatggcaa accettgtgg agcgcctacc ggaatgctcg agagaaactc 1980 tgcttcgaga ccttttctgc ctgacaactg ggcatccgct tgtcgaagca tgagttccac 2040 caaatcaacg ccgtagcata gctcggtaat tccatgctca acttgaagac gtgtgttcat 2100 ctccaagaag aaaaacttcc ccgattcgtc atccacgaga tactcaattg ttccagcgga 2160 gccatagtca attgattcag cgaggcggac agcggcgtcg cacaggcctt tcctgagctc 2220 cggattcctg gttacaaagg ggcttggaca ttcttcaatc actttctggt gtctcctttg 2280 gatggagcac tctctttccc caatggaaat agccttacct tgcccatttc caaaaacttg 2340 gacctcaatg tgatggctag acggatagta acgctcgatg aagagtccag cgttcttgaa 2400 gagagettea eccetggatt gtacagtetg aaacgattee egtactteet teteggtgtt 2460 gcaggtaagt aatcccattc cgccaccgcc agcggtggcc ttaagcatga cctgatgact 2520 gtgagcgcag tgttatacta ggcacaaggc ggaaagaata caggaaatcc gagactttga 2580 <210> 1817 <211> 2051 <212> DNA <213> Aspergillus nidulans

<400> 1817

acctttactc tctgggttgg tcttaagcta cgataaaaat ccgttctatg ttgctctgca 60 gaggcagtac gggcatgagg tgtcgaatat gataacccgg ctaaatgatc aagtgttagc 120 ggctccaata aatggtgtcc agtgtctttc cgcatataca tccaacattg ccgcgctcat 180 tectegetgg ecgeagettt egeageeett gatteaggea ttgageattg tecatgaeet 240 agcagaacca aaagacgacc acagcgggta cggcccggac gaccaaatgg ttccccatgg gcatcaacaa gcaatggata caatatacag cctcgttcgg tcggtagacg agctatatca 360 gactcacatt actaaaaaat ccccctggat aactaacgag gccagtgcca cagtgcttcg 420 tcatatttca aacacataca tggccctgtg caatcagagc gcaagcttag cctcgcagat 480 tgccgacgat ctgtctatac aggttcctga tgacgctccg ccggttagtt tgccaattat 540 tgttttttac ggttggagat ttggcgttct caaaaagcac atcatggacg gccgaatgga 600 gctccgtgtc gctgggattg acacaatgca aggtgacttt gtcaacgtct attctcagta 660 tatgcgaaga gatatatcct ctggactgca taatcctgtt gtccaattta tgctcaagat 720 gctgagggag aataggattg tcgagtacat ggtcagcatc gaatcccatc cccaactgat 780 tagtagaagc cataacatag taggcttcct tgttgttacg gggacatata ctgatgcgga 840 taccgacact atttggaaaa cggtcacaga aagcccggac cctcgaacgg tgtctgaagt 900 gctcggaatg cttatgaaga cattcagtct gcatcatgat ttatctggtc ttctttatct atgttccaag ttgttggagc tgcctttgac ccattttgac cagcgaatgg tggagttctg 1020 cgaacaacta tttcacgttc tgcgtgaaag aaatccgatc agacaagact cctttgacag 1080 tgtacacgtc gatgtgaggc cgttacgtct gtgcgtgcgc ctaattcgcg agagtgctgc 1140 gaccgaagac cttgccgtcg atcaaaaagc ttccctgcaa aaattcgctg gtggccaact 1200 aagtteettt atggatgtag ggettagega tgeegataag atggatatet atgagagatg 1260 cgttcaggat atcgccgaaa agaatcagtt cagcgtgggc agcatccaag ccctaaatgc 1320 tetteteage agteaagatt egeaagagat eeggaagett getaeegagt teaateteae 1380
atacetgett attteegaga tggetgaagt agtgeaaggg aacegaacag attttgegga 1440
tacetttea agaaatgget teattteeeg tgtteaaatg ettteeegaga ttattgaaag 1500
gatgeetgat teeattaete eggaactegg tgatatetta tggeagaaca tetteatgte 1560
eteatetett eeceaacaag gaagaagaat tetetgggat atgttetgeg eaateactag 1620
geaegtegtg acagggaate egtteattga eegetgeate eaatattaee taeetaaget 1680
gtegeeetee geagattatt eeetegaggt getegegttt geeaaacaga etataaatta 1740
egagattege tteaaeeete egteetetgt egeegacaae gaagtaattt egatteetgg 1800
aatggataga atatggaact ttateetgae tgeaeeeea aacteaateg aageegatge 1860
gaetgetttt geeatagagg tetatettga teataacate ateeateget eteeeagte 1920
atetgttgag gegaceacat ggetttggtt gaeagttgtg ttgateaete aaateegeg 1980
eateaaaget gaaattgtae tegggtgaee ageagtgtg aagaatgatg gttgtggaag 2040
acetagtgat g

<210> 1818 <211> 2498 <212> DNA

<213> Aspergillus nidulans

<400> 1818

atgtagggta tatgtaatta taatacgaat ctactatttg ctcaattctt tggtgcttta 60 gtcccgagta tctgctctgc tggctctgcg ttgatgctag ctaaaaggac cgatgccacc 120 180 tcgaaaccgg tctgagtcga gacgagcgat ttttacgggg gggggtcttc aaagagtgta gtcctccgta gacgaggcac caatccagca tggaaagaca gcacgtgtcc tgccgcagtg 240 gatgacgagt caagcaacgt caagagtttg gcaagaaaag acaagcgtta caggaaactc 300 tcaggtctgc ccgcccatgc gaatgacagc cggcggcccc accacgtgca gaatcggggc 360 cccccattgg ccgccaacca aaccataagc tcttcctaag ctgttcctaa gctgcctgcc 420 gagccagcgc caaggcgcca agataaaccc ggtcggatcg gggttcaagt ctcggcgaat 480 540 ggggagggac cctgcacgaa cgtggacggg cacgtagtgg tagaggccag aacgagagac 600 agcggccgat ggcatgcagg cttctggaaa gtggctcagg gtggtcgggc gtcgagactc

gggtgtttca ggtcagctcg tgcagctggc gcagttggtg cagctcgtgc agctcgtggg 660 cgctcatggc ccgcccaagt cgcgaacggc cgtctacacg tgggtgatgt gctgacagac 720 agacataaaa ggactccaac gctccctggt ttcggtccct ggtttctgtg tctgtctcat 780 cccggtcagt ctagacttca cagcagtcaa gatggtgctc gaccagtaca cctacatctt 840 900 cgccattggc accatctttg ccatgctgga tgcctataac aatggagcca gtacgtgacc tetetgetge tgetgettet getgettetg etgettettt tgeetetgeg ttggtagtat 960 tgctgttctg ttactggctc tgtcgctgct actgctactg ctactgctgc ccctgctgct 1020 gcccagcgac gtactgaccg cgcaacagac gatgtcgcca actcctgggc caccagcgtc 1080 tetteceget egateteeta eegecaggee atggtetteg geaceatett egagtteete 1140 ggcgccgtga ccgtggcgcc cgcaccgccg acacgatcaa gaacggaatc attccccccg 1200 aagcetttga gggcaacgeg ggcgtecaga tgetegeett tgegtgegee etggeegeeg 1260 cctcctcatg ggtgatgtgg tgcacccggc actctacgca cgtctcgtcg acttactcgc 1320 tcgtctctgc catcgccggc gtcggcgtcg caacggccgg cgcctcctcc gtccaatggg 1380 gctggaacaa gggcaacggg ttgggcgcca tcttcgccgg cctgggcatg ccccggccat 1440 ctccggctgt ttcggtgcta tcatcttcct cctcatcaag ttcgtcgtcc acatgcgccg 1500 caaccccgtc ccctggtctg tctggaccgc gcccttcttc ttccttatcg ccggcaccgt 1560 ctgctgtctc tccatcgtct acaagggctc gcccaacctg ggcctttcca aaaagccgcc 1620 cggctgggtc gccggcgtga ccctgggcac tggcggcgcc gtctgcctgc tctccgcctt 1680 cttcttcgtc ccgttcgcgc acgcccgtgt catcaagaag gactacaccc tcaagtggtg 1740 gatgttcctc tacggcccca tcctcttcag ccgtccggcc ccggcggacg ctacctccgc 1800 cgagctctcc agcgtcccca actacgccgt catgcaggac gacggcctcc cgcccgactc 1860 gccagagacc ctcgtcgacg agcccctccc gccagccgcc cagtcggaaa agaacccctc 1920 tgcttcagct accgaggctc agctcgacta taaggagctc gtcgctcgcg gccaggagcg 1980 tttccacgcc aaactccgac gcggccgcgg ccccttggcc tgggccatgc gcaccctcca 2040 cgacaacccg atcggctccg gcgagatcta cgagctgcac aacatcaaga tcctgctcaa 2100 gcgtattcct gccatgatca ccgttggact gctctatggt ctgcactacg acattcacgc 2160 cgcgcagtcg ggtatccatg ggacccccga gggggcccgc atggagcgag tgtatgccca 2220

<210> 1819
<211> 3323
<212> DNA
<213> Aspergillus nidulans

<400> 1819

gcatccctgt gtcaacggta tagcgatgca ccattcctag gtgcatggtt ccggatcctc 60 gatctcgttc gcctttggtt gcacagagcc ggaccacgaa gattaaaaag gtatcagctc 120 gttctcttct tttcaccagt ggctttctta tctctgcctc ttttgttctc tgtgccttgt 180 ctcctcccca tcatgatgat gttagtgttg ctgagatact gaattgcttg gctgctagcg 240 gagcaggagg actttgatcc atcatactct tgacgtactc gcttgttgca tctcaagaca 300 ggatgactca gtacctggca tatcagtttg ccggggattc gcccagtgcg gcatcgtaca 360 tgtttggtca gttaagctat cggtctgttt ttcggccggg ggaagagcgc cctcagttta 420 acattgcgta ccgatggtgg gaggatgaag caacaactat tctttggact tttgacgtcg 480 aggtgatcaa gagagttata cgtttcaagc ttttctctga cgaacagttt ccacggatgg 540 cgcttcatcg tcgaccaact tccacagtgg acgatctcct caagggactt tttgactctc 600 aggaaagagt attctatgct aacctaccgc acgctcaaaa agtggacgcc attctacagc 660 gatgcaagcc tactgctccg cccatgattt cgtggggctg gctcccagcc cggatggaga 720 taggccggac gggcgataac ttggaatctt tagccgtcgc caaggccatt gatgccgaaa 780 gtcatcttca tttcacccgt ataacatttg aggagctggt ccggtattcg ctgggttacc 840 cgtctggcca agtggaatgg ttcttgcggc agcatacatg tttctatgcc cacctgttgg 900 atcacctgca tgcatttccc gagcaggttg agagatacgc ggaggttgag aaggtttgtg gctttttaaa ggtgattgtg acattcttgt gcagactgac tgagcttccc atagcacctt 1020 cagactcgaa gcccctttgc ccatcgcgct gtgattagtg ctctacaaga tgcaggttac 1080 gcgctcgaac tgccatgcat gacacccggg ttcggattct ttgctggagc aattcaacgt 1140 cttttcaatg aacttctgaa cttgaagttg attttgaagg tgctcaatgt cttaggagtt 1200 cgatttgcgc ggtggtactt gcacgcccag gaaatggact ggtcgcggcc gttcagcatc 1260 gtettetett ttettgagga catggacage teggattege cagtgagett tgetegtaat 1320 ctgaccagat ctgtcgagcg ggattttgcc ttactgattg aagggggtac tttggacaaa 1380 agtgtggcta atcgtctgtc ggaacgttgg cagcttctct ctgtagaagt ttgggaatgt 1440 tgcaaggcgc ttccagaaac gatccggttt atccaagaat gtttagaggt aagtcatcgc 1500 cacccaggat gattgtctgg ttggctaaca ccctgcagcc tctattgact ttgcggaact 1560 accattccct gactgccatt ctcagtgggc ttcacaagta ccgcgtttcc gaatcttcgc 1620 tegteegeet tgaaaacgga acaactgeec tgaatetgaa ccaactgett eettetgaga 1680 tgttatacct cctcaatccg tcacagaact acgcgctata tcggcagcaa tatcagcagg 1740 cgccacggat tcccttcctc attcctcact tgtatgagta tcatcagctt ggtgagccta 1800 ttcttcaaaa cctctatgag caaatgagcg ctgtcattcc tcagctctaa tgcgatgcac 1860 tcggatggat gctgggacat acatatgcga cgaaatacga tgaaagtgta cggtgccgac 1920 ctagatggct ataacagcaa aacgatccat cccggcccgt caatagaata atacgaaatc 1980 tgttggtttt ttgtttgttc cctttgcccc tttccccgaa gggcataatc actcggcttt 2040 egegggactg tttttgattg attgaattgg egtgtaetet egettattgt gteatgaege 2100 tactgatatg tactcttagc gaattagact acatcaggtg caggatgaga ttaaggtgta 2160 ttctccgact gaacagttaa ggaatgagca ttccagaccg tcagacccgc ttcttcggct 2220 ccttcacgga gccaccttca gcatacccaa aaacacccag gcagtacaaa agccgattca 2280 caaacagaaa ggccgtaacc ccaacattgc cccaggtgag cgcattccac ccaccgacat 2340 caaagaaaag cgctgggccc atggcaaggt aggtcacgta gatatgccct acatcaccaa 2400 tggccagagc gaccaagtag ttgcgcagca ccttcggctc cgaggtggcg tagagcacgc 2460 cggcgccaag gagcgccata agcccgtaaa cattcgccag ctgataggcg agggcgaagg 2520 aagttgcctg gacttccagc tcctccggcg caggggataa tggtatctgg ccgacgatga 2580 atccctgcag gtcgaagatt ggagctaacc agccgccgat cctgggtttt ggtaagctgc 2640 ggagcgtcgc gtgtctattt ttgtcctgcg atggagggga tttcatgatt acgcagacac 2700 agttgaatag gggttgggca cgtacagggt tatgggctca aatatagcaa aaacgatatg 2760 gggccaggtt gggaggattg tggctggcat tgttttattg tgcttgtcga tcagtggcaa 2820 agagtggttt gaaattgatt atcgtgctca atgtcgagta atacgcccgc agggaaaatt 2880 cctcagacct gcaactagag gacggagtgg ggntgttggt gctctgaagc tgaagctgaa 2940 agatgtatgg cccattatgc gtgcttata ctgntgctga ttcagcattc tgagctcaca 3000 tgataagggt ttcgatctct gattgctgg ctgagctttt cttccccaag cacacagcac 3060 attaatatta ttctaagcaa tgagatttcc acgcaagaag ctggngtctg agtctctcag 3120 agttttatag tgctagccat cttcttgat tgtgccttc cggcccagga gacgaaattg 3180 actttcggcg atgatccaac ggaattcgc cgcactacat gaatccttgt cgcgacttct 3240 tacctcgatt gttcttcga agcggttcat tccgaactag atcctttgcc ttagccagcg 3300 catggagccg aattagcctt ttg

<210> 1820 <211> 1051 <212> DNA

<213> Aspergillus nidulans

<400> 1820

tacgtgacct accttgccat gggccagcgc ttttctttga tgtcggtggg tggaatgcgc 60 tcacctgggg caatgttggg gttacggcct tactgtgcga gacccgggtc gtcgtcgggg 120 180 tggtggtcaa gggggagaaa gagaccaata ttgactcata gaaggactga agtcgccgac tagatgaaag ctacggagtg aagggagtgg actctcggta gtagataaga agagagagac 240 caaacagggg gcagagtata acttggagac tacgtgatac gccagggtgt ttcgagagac 300 gaggcaacca cgactgatgt tgactggatt cctgcttggt taggtatttg actttccaag 360 cactttcacg gtcctgggat ggggggcaac tatggaacgg tactgtaatt cgggctttag 420 ttgatagcag ttccaagtgg ccggatatag agtattgtga gggatgtcca aatcaataag 480 atatgtccaa actttatatc gtggttgcgg ctcctctgat ggcaccacgt ttccctgctt 540 ctttcagatt aagagaagat aggtatatgt agaccaggac catcgtacag tagtaaagaa 600 aagatgaaaa agagaaatte gttteeeate eteaategee tgacageete tteeageace 660 acteactect atggeaatge ttetteetea tecettatet gaegttette tggttgetee 720 agaccacgca gctgctgcat aacgccagag ctgatattct ccgcgattag gcgctaattt 780 gtctcatctg tcgactcagg cacttaagcc ttaaaggtga cgtgagcgct tggcaaagag 840 cctttgccga cactagcgat ggcggcttcc cgagcgcctg taaggcatac tggctgttaa 900 tacctcaaca cggtgggtag agttgatgtt cttgaccagg gtgatttgca gcaagtagca 960 ccacctgacg ggaggtgatg gtggagtagc aaggaagtat cccagatctg agagaaaggg 1020 gttagatgtt gctgtcagat tttagaggat g

<210> 1821 <211> 4284 <212> DNA <213> Aspergillus nidulans

<400> 1821

gaacactcgt ccgtcgcctt atcaagctcc ataatcgctg gactagttac tgactcggaa 60 ctttctcttt gtccattcga tactccttca atctcaggcg tcttcatctt ttgtgccatt 120 tatgacgtcc ttggtccaat tttattttt ccctcacata gtacttagcg gcatctgtca acgccttttg tcgttcctcc ttttcccaac ctctactttt taggttctgc tattgttttc 240 cggaggttta tcttagaatg gatcaggcca tctacatctc ctcatctagt gaagatggat 300 ttaatgatga tccacctctc ttcgatgaag gcgacaattt tcaggaacag ctaccggacg aagagcggtt tgctgcttac ttcgacagag agactcctga agagttgttt ccagacaggt ttcccaaaag gcaaaggatc catggccccg gggacgtcgc tctcgaccaa atgctttcaa 480 gtccgcttgc attccggggc cctgattctc cgcagtcttc aatggcagcg gcagctgatg gtgccaatac actcttcatg cagattttag agatatttcc tggcatcagc cacacgtacg ttaacgatcc tgatagccca aaaaaccgtg gcatttcggc tcggcgcgga tctcaaagca cgtggttttc aactggcgat attaagagat agcatctatg aggagatcct cggtcagaaa tcgtatccta aacaagacag tgagaacggc aaaaggaaaa gggaagagtc tgaagaggcc 780 gacattagct gggaacgtac tttacaaaac gcaacaaaca gtcccgaata cttcgaggca 840 gcgtaagcca cctatcatga taggagtcat tgttgttgca aactgatcag tttatacagg 900 tctgctttcc tgggacccga atttccatgg gtgccgatga gtcacattaa gaaagtcctc attgataagg gacgccttta tcacgcattc gtagctcttt actctgacga taaccttctt 1020 gagcaacgga agtatcaata tgtgaggttg aaaagtcaga gaagtacgaa ctctcccaaa 1080 aagtacaccc ctcttcgtga cactcttata cgtgagatca acgcagcgag aaaacatgta 1140 gaagaactgc agagtgagtg gcctgtcttc ttcctagctc aatgtaatta ttctcattgt 1200 tectaetagt caetttgege aaaaagaagg aagaagagga ggeggaaaag gegaaegagg 1260 aggaacacat tcggacaggc agtctcattg agtgccattg ctgttacgcc gatgtcccgt 1320 caaatcqatq tattccqtqc gatgqaqacq accttcactt cttttgtttc acgtgtattc 1380 gcagatcggc cgacaaccaa attggtatga tgaaatacat actacaatgc ttcgacgtca 1440 gcqqttqtca agcttcqttc aatcqtcagc aactcaggga aatcttaggc ccagtagtca 1500 tggacaaact ggattcccta caacaagaag acgagatccg aaaggcaggc cttgaggggc 1560 ttgaggattg ccctttttgt tcctacaagg ccgtcttgcc gcctgtggaa gaagacaggg 1620 aattccgctg cgagaactct caatgcaaag tggttagctg tcgtttgtgc aaagagaaaa 1680 gccacatece ecaaacttge gaagaatate gaaaggacaa ggggetetet gaaagacace 1740 aggtagaaga ggccatgagc aatgctctaa tacgaaaatg ccccaaatgc cggctcaaga 1800 ttatcaaaga gtatggatgc aataagatgc aatgtacgaa gtgccatact ctcatgtgct 1860 atgtgtgcca gaaggatatc acgaaagagg gctatgccca tttcggacgc ggcggatgtc 1920 cccaggacga tatacatacg caagaccgtg atgacagaga gattcagaga gctgagcggg 1980 ctgctatcga taagattcta gcagagaatc cggatatatc cgaggagcag attcgagtgg 2040 gccatgagaa aacaaatgct caaactcgcg gagttcgtag agacccgcgg ctgcaaccag 2100 caattcaaat gcgggatgct atgagagtta tgagggcgga catggggggt ttctaccctc 2160 aacagcacca gcatgctaat acagctgcgc aaagacaact ccccgtctac cctccgccag 2220 cttacaatgt accataccct atggactatg gcactatgtt caacccacct ttccctggct 2280 ttaatgteet teaaaggggt eteeageegg geaaceteee ageteageet geggttatge 2340 ageceatggt agtgggettg gecaaceete etgeaaaett teaceeacag gacatteaga 2400 atatcaccgc gtttccccct cagcaaagtc tacctcggaa tcaaaacgca gcttatcgcg 2460 gtgtcggttt cggacccttt tgagttcctt aaagaagcaa tccagctcca cgtctacctt 2520 ctttcccgtt tggcagtaca acttcacctc atacaccttc cgaaatttat ggcctaaata 2580 attttggata ttcgattcaa tcttggtcgt tggagttaac ctacgttccg ccgtataccc 2640 agaaaagcgt tatttgcctt tcacactgag cgtttcttgt tccagtcttt tttccctcct 2700 cgtacttcta ccgtctcatt cttttctaga gggtctcgat acagacactg atggtgcact 2760 gactatactg caacgcagca ttctgtttcg cgattattgt cctactccct gaaacgaact 2820 tccattcccc ttaactgtcc aaacattttt cgtacccaga aggcatacaa ctttcagaac 2880 ttagactcat catacatgcg atgcattttc tgcatttcca ttatatctgc tctaatatgt 2940 gcataggatc catccatacg agtttgtcct gtactctcct tgggcactta atgcgtggcg 3000 tattcaaccc catccgtaag accaaccatg aaatgctcac tattcactca ccgatatcga 3060 atatgcttat atctctctcc tgacacacct atacttcagc caagatgaga taaaaaatgg 3120 gaggtccccc tgtgcccccg ccaactgaag cgcccttcgc accaccatag ctggctgacg 3180 tcaaaccttg ctgcagggac cgatatcttt cgaattccat acggttcggg ccacactgtt 3240 atcgactcca gctatcctat gaatgcagaa ccagccagta gaccacatag cttgatgcca 3300 ggcagtcaat cagacctcgg ctatggcttt ctagacgtag attgaacgca aataactgac 3360 actgtatgtc gtgtttaatt ttcttcccta cagagctact caatcatatg aaatactacc 3420 ttgggaaget tgteeeettg geetteaace atgagtaegg gtgattattg agaggeteea 3480 gctcatatgg ataccgactt gactcgacct accttcgcac tgcgtgctgc tgttaacggg 3540 gggaaggatg gtaacactca tagctaaggc tagatagtta gatttgctag taggaaccgt 3600 gtaaaaaaac tccgacagga caagacgcga cgacaaagta caggcagtgg tatgaatggg 3660 aaggtgcgat gaaggatgga aaggagaaga gaagagagaa gagaggaaag gaatgttcac 3720 gtgagagaat atgaaatggc ggaatgaaag agatgatgaa cctgatctat gtaaatgcca 3780 tgcgagtccc aaaattcgtc cgctccccat tttatatatt tgcaccactc attggacgac 3840 gataccagaa tttcacttca tccatcatat atgttcgatc attggtcacg ctaaaacaag 3900 aagtaatgag gtaaaaaact gttaagaaac gaagcacccc cgaatgctcc acagtagtag 3960 aaaacttggc aagcagaaaa tatgagcagc aagtcagttc atttatggcg gatgctcaga 4020 atccaccggt tcattgaact tctgccgtgc ctcttccacc cataactcga gacgaagttc 4080 teeggettet acacgaegta eeggeactgt tttggeacgg eegttggaea ettteggggg 4140 cggttgttgc ggcccaccgt tcttgagctt cgaaacggaa tatggagccg aacatgatcg 4200 gagatgaact ttgcctggtt ccgccacaac ccaggtctgt tcttctgttg tggtccccgc 4260

<210>	1822	
<211>	5044	
<212>	DNA	
<213>	Aspergillus	nidulans

<223> unsure at all n locations

<400> 1822

cagagaaata cctcactcat qqtqcttcqt qcccqtcttt tccagctaaa cagcacccta 60 ttgccgggtt gccgatttat catgaacgat agtaaccaaa gcaccagcta ggtcatccgg 120 aacgtagagg gcctcagcct ggggtaggat agccaccttg aatctgcctc gccgtcgtta 180 cataccgaaa tccccacatt tgcgtagtga ctataacaag tcttgagttc agaatcattg 240 aactgttcga actgcgatga gatctcgtca cccqtaatcc taacaatacg accgtgtcat 300 tgtcggttgg ttaaaggtgt agcaagaaaa tacggcacga ccatcacgtt gcaggagaat 360 420 categatace tactagages gettegages gagestictt agesegasge ticatetege 480 gettqqaaaq agqetteteg ggeecateeg catetggete agggeetgta gatgeettee 540 600 ccacagaagc agctgcttcg gaagcaggag ggatttgtcc accgtcaaca acgtcgatga taccgcgcca gctggtccgc ttcagtcggg ctagagcagt aactttcctt gtttccgcgc 660 tgatcgcctc cttgcccagc tcctgtgaca aaccccatac acatgccaga ttaatcacat 720 cgaacggagc gcggacacct aatgcccttt tggcctcact cgacacaatg attccgcgac 780 840 cacgggetge gegaatcagg gecategegt tgeegatcag atttegacgt gettetagte 900 cgcttcctgt gactcctggg ccgtagcata tttcgaagcg gataccgcga gcgatagcag cagaaagcat cttgaacttg aagtgataag ggtgcctgat tgagaggtct aaggaaatga 960 tgtcgcattc tgcattggtg catgcattca gtaacgcttt ctcgttggtt gggcgcacgg 1020 caaccagate ataageetga getatactgg taaggegetg attetgegeg gggtetgaga 1080 ggggtatgtt gaggcgcgtg aggagcgtaa ggtctttcgg ggcgtcgctg ggaagcggcg 1140 gcggggtagg gtttggggg agttttccgt tgatagtctg cgaaagggca acggttgtgt 1200 aacccactta ctgtcaggtt agcttttcat gtggccatat tcaacctgaa aaacgcccgc 1260 tggtcgtgtg gccccgggcg tggccagggg agaaaaaggg taaaaaatgc ggcatacgtt 1320 cggcgagaaa gcttagcgtt gcagagatct caggatcacc cgggctataa ggcacgttca 1380 gatcgtagta catgacgaac cgttagagtt taaaaagggg ccaatgccag cttctgttgt 1440 tgtcctctgc tcctcagcaa agaaagaaca agctcagaac tgtcccagaa aggtaagcca 1500 cagtaccege atcaatgttg tteegtgata geegeategt teatgacage agaceaaate 1560 tggtcccgtg actctaaagg cggagcgtca agtcggggtc aatccactat tatcagcaga 1620 ataggttgaa agagcctaac tttctcacca gtgatagctc cagacgatag cacagctgcg 1680 acceateaaa tegeeteggt tgegetteet ettgeggetg etgetgtetg tetateaage 1740 ttgcgctgat ttctcacgcc atcccagttc atcccaacgc accgtcccac caaccccgcc 1800 gccgcttttc gccagtctga atatccaatt gtgggcttga taccaacatt gcttttcagc 1860 cgccatcacc atggcgcgcg tctacgctga tgtcaataag cacatgccac ggtcctactg 1920 gqactatqac agcqtqaaca tttcatgggg cgtcctggag aactacgagg tggtccgcaa 1980 aateggtetg tteccattea gtategtega gatttgagga ttttgtaeta ategetgete 2040 atgcaggccg cggaaagtac tcggaagtgt ttgaaggaat caacattgtc aactaccaga 2100 agtgtgtcat caaggttcta aagcccgtca agaagaagaa gatcaagcga gagatcaaga 2160 ttctccaaaa tctggcaggt ggacctaatg tggtcgcgtt gcttgatgtt gttcgcgaca 2220 atcagagcac gaccccgagt ttagtttttg aatatgtcaa taataccgac ttccgtacgc 2280 tataccegeg cttttctgac tatgatgtcc gcttctacat ctacgaactt gtgaaagegt 2340 tqqatttctq ccacaqcaaq qqcatcatqc atcqcqatgt caagccgcac aatgtcatga 2400 tcgatcatga gaagcgaaag gtttgatgcg ttcctgtttt gaatgaatga gctctgattt 2460 tettetaget tegeetgatt gattggggte tagetgaatt etaccacaaa ggeacggaat 2520 ataacgtgcg agtcgcctca cgctacttca agggccctga attgctcgtg gatttccaag 2580 aatatgacta ctccctggac atgtggtcgc tcggtgctat gtttgcttcg atgatcttcc 2640 gcaaggagcc tttcttccat ggcaacagca actccgatca gttggtcaag atcgccaaag 2700 tgcttggaac tgaggaacta ttcgagtatc ttgacaaata tgagatcgag cttgatcctc 2760 agtacgacga gatectitee egetteeete geaageettg geaateettt gteaaegegg 2820 agaaccagcg attcatcagt gatgaagcga tagacttctt ggacaagcta cttcgttatg 2880 accatgcagt aagcctactc aatgcatctc cgcaaaggat atctcgctga cctgcattta 2940 ggaacgcctc accgctcagg aagccatggc tcatccttat ttcgcacaaa tcagagccga 3000 agaggcggct aatcgaagta ctgcatcctc atgagtcgtc ttacgatcat acatgccgtt 3060 atcttgatct agaaacacct cgctgtctag accttttccg atgataatta tcgttctacg 3120 cgaaccttac gaatcctctt accacaatat tctgaatttg gtctacgtgg agaaatacct 3180 gtgaagatca gcagtgaggt tatgggactc tttcacttgt gctggatttt attgaaagat 3240 gccggggttc aaggactggt ggaaatgggc ggagcgacga cgaacaactg acataaattt 3300 acctctgttg ggtattaacc ctacagccct ttccattggc gcgttgagcg ggtagcaatt 3360 cctgtggcag aatcggcgtg cggtattgtt tactttgtgt gtttgcgcgc gcggtcagaa 3420 ctccatctgg ggccaacgtc tgcttttctt actctgtctc ctcttgagta gttggactgg 3480 tgttcatgga aatttttctc ttcaactcct acaacctcct ctctgcatta tttatgctca 3540 tcatccttat tccttttcta ctatgctcct tcgtggtttt gattgcagct atcgggacat 3600 tcatacattg ttatcattga atggcgcggg ggttagttcg acagtcatat aatacactca 3660 tgattcatac acatgctgta ccgctatgtc ttgcgcttca gttgaatgag tcagaagcag 3720 aggaataggt cacgtgcccc gagatttggc cggacgtcaa gttattgcgc ttcatattaa 3780 tecettgagg acceatgtag acttagettt tegageagee atcegettgt tttgtteggg 3840 gatgttctag acaatttaca ctattgtcag gccaactgca attcatcatc tttcctctaa 3900 cagcattgca ctactgggga ctcattcaag ccccgcagtg ccagacttga ttcgttccgc 3960 tctctgttca gcgcctggga aatttaattt gcccgcattt cccacaacgt ccgacccctc 4020 cccctcttat cccttgtcgc cgtttgagtc atcggtggtc aagatactta tccgacattt 4080 cgtggcgcga gcggcgccta ggagacttgc tcctccaatc tatcgatctt tttcaaggat 4140 ggctcaagac tcagcttcca tgaacccaag tcagcttcat cccagctaac ctacagtcgt 4200 cggatggaag aactaatgac tgaccttctg acagctggtg agccgacagg cccgaaggtt 4260 gacgttcctc ctgttggcaa taatggccaa cagaacgctg gccaggatgg agccgcgcca 4320 aaggtgaaaa ctgagaaaga acgtaagtcg ccgccaaaag ggaacgatct accacatcat 4380 attcaatatc atctcgtctt gctgactgga ctatgcctgc ttagtggagc gagagcgcaa 4440 aaaagccgag aagttgaaga agtttcagga gaaacaggca aaggctgcag ccaaaactac 4500 gacccccaaa gccgaaaaga aagcgcccaa ggtcgaaaag gacaagacag cagacgcgta 4560
tgatcctaaa gttattgagg ctggacgata ccaatggtgg gaggaacgcg gccttttcaa 4620
gcctgagttc ggccccgatg gcaaggtcaa gcctgagggc tacttcgtta ttccaatccc 4680
ccctcccaac gttaccggat cgctgcacat gggtcacgct ctcacaaatg cccttcaaga 4740
cactatgatt cgctggcagc ggatgaaggg caagactacc ctgtggctgc ccggaatgga 4800
tcacgccggt atctccactc agagcgtgt tgagaaaatg ctttggaaga aggaaaagaa 4860
gacacgccat gacctgngtc gcaaagcgtt tctggaaaga gtctgggatt ggaaacacga 4920
gtaccatggc aatatcngta atgctttgcg aagagtcnga ggctcttttg attggactcg 4980
cgaggctttt acgatggatg acaaatcttt cgcagccgta ctgaaacttt gtccgtcttc 5040
atga

<210> 1823 <211> 4977 <212> DNA <213> Aspergillus nidulans

<400> 1823

60 ccgcgtgtcc gaaactgttg gaataaacac atgctcaggg aggaaggaaa gaagagtgac tctgtatcga tgacacttac gtagcctact gaggaacaga tacctttatc gatactatgc atatctctcg atagttattc aatttatcta tattcataca acataaaagc tttggatcct 180 ctggggttgg agtcgtggcc tagccgttta tgtcatgtga tttccgtagg ccctatgtag 240 300 tctatattgg ttagttgggt tgatttggca tgtgattgat acctgcaacg aacgattgca ttgatggtcc taatggagca gctgggacct gtcatatacg caatgtgatt atcgaatgat 360 tgaacgagcg aggtgctgga cgccttatct gccctcctgt acttccaagg ccaatctttt 420 ctgcgccttt agtgtattta ctgggatctc gcctgtaccg gtcctaggcg gctcgacagc 480 tgtccatata aacgttgttt tgagcccttt gcataacctg tatgaagttt taatcaacct 540 gcagactage atacagtacg aacatgetgt atagecetta tatttggata taetaggatt 600 ttactcaagg gttatagtet cattaggaga ttetgegaaa tgtgetettg getgttgeet 660 720 ggggactece caaaaceetg egegaattag caggtttggg eteggattet ggeettggge cggttgcagg ctttgtcatg gtctagctat atacacagga agcaaataag ataaggcgtt 780

aggataccaa aaggatgagg cttgtataac caagaaggct aggatctggc tttaacqaqa tatgaaggca gctatgtagg gcaaaactaa gtcacacgta actccaatgg ttttttctta tagttgaaaa gaaaagattg gccttttgca ccaggaccta gagctatatt gttgagaact acttcagcag ggtagattag catgttaact agataaagac accgatgcca cgtaagccca 1020 atgatagagg aacgaatagt caaggtaata caggacaaga ccttgggatc ctcctgaccg 1080 gacgatetee caeggaetga aatataetta tggggatata tgaetaaace ceagtateaa 1140 cgtcattacg aagtctatct gaaacaagta gctaagcccg atggttccac tgatgtagtt 1200 teteactggg aaaggetegt tggtetegat egettgeetg gggettgatt gaeettttge 1260 cgaagacccc cgacttccga catttggtct agggggagta gttgtaacaa ttaaagaggc 1320 ccttaccact gttaatcact gaaaacggca aacccagctg ccatgctact ttcataagcc 1380 ctaaatagcc tgcgtaaatc cactaaatgt caagttttct acctgcagtg atgttataat 1440 attatttgta tacgctacaa atgtttcagt tatctgcttg tcgtagtagc tagcagacca 1500 ggggagaaaa ataaagaaaa tagtcgccgc gtgaatactg gccatcaggt gatcaacaat 1560 gcagggtgcg ccgcacataa agtagcacat tccccgccaa ttcatctcct gtgttcccat 1620 gtcgtacaca cccctaacaa tcacattggc tttcccaaag atgctatctt ttggtctcgc 1680 aaacgacgcc tggggtcatc cctgggtggt cctcccatta gccgtgatct tatatattgt 1740 agtgctcggg gtatatcgcc tattctttca tcctttatcg cgctttccgg gccctgtcct 1800 cgcagctttg actgtctggt acgagttcta ttacgacgga atccggcgag gcctgtatac 1860 ttttgagatt cagcgcatgc atgaaaagta cgggcccgtt gtccggatca gtcccaacga 1920 actccacgtc aacgagcctt cctttattga tgagctgtac gcgggatcgg ggaaqagqcq 1980 tgacaagtac ccctactcca cgtgccagtt cggtattccg gacagcgttt ttgggacccc 2040 gggacatgac ctccatcgcc tgcgacgcgg cgctctcagc agattcttct cgaaaacctc 2100 agtgacgaag ctcgagccta taatcgagaa tgccatcggg aaactctgca cgcagctcga 2160 gagctattct gggtcgcagc aacccgtgaa gatggacatg gcctttagtt gcatgacgac 2220 tgacgtagtg actgagtacg cettegetaa aagetacaat tttetggaet cacceaegtt 2280 cgaacccaac ttccaccgcc ccattgttgc cggggctgat ctgggtccgt gggtcaaqca 2340 gtttcccgtt ctgctaaagg tgatgaacga cctcccaaaa tggatcctga cgagaatcaa 2400

ccccgaggcg gcagtctaca tccagttcca agaagaccta cggagacaga tccgtgaggt 2460 gcaatcacag gtcgataagg gagagtcgaa tgggaagatt ccgaccattt ttcacgaact 2520 cttgaccggg gatctgccag aacaggagaa acggattgag cgcctctggc aggaaggtca 2580 aattgttgtg ggtgccggta cggagaccac tgcatqqaca ctctctqtca cqctqttcta 2640 cctgctcgac aacccgcgca tcatgcgcca acttcaagag gagcttgagc ggatcattcc 2700 tgatgcggca cagtctgtga cttggcatca gttggagcaa ctcccgtatc ttagtgccgt 2760 gatctgcgag ggcctccgtc tatcatacgg agtgagcagt cgattgcaac gcatcaaccc 2820 ccttggaccc ctctgggtgc ggtctcggga tgcgaaaggc ggcccacacg gaaagggccg 2880 ctgggtggag tatgagatcc ccaaggggac gcccgtcggg atgacttcca ccctgatcca 2940 taccaatccc gaactgttcc cggatccgca tgagttcaag cccgagcgat ggctcgatgg 3000 tgcaggaaaa cgccatcatt cacttgacgg gtacctgttg tctttttctc gcgggagtcg 3060 tcagtgcatt ggtatcaagt aagagcagcc tgctccctcc ccagcaggga gcctttgcta 3120 ggcgtctaca gtattgggcg atcttttgct gacagaccca cagtcttgct tacgccgaac 3180 tctacatggg actaggcttg ttgattcgac gccttggcca tcgcctagaa ctctttgaaa 3240 ccaccagege agatgttgag atecactaeg aacgetttet geegacaeet aaaqaeqqaa 3300 cacagggcat cagggttctg gtccatccgg aatcagaata atggcgacga tgccgatttt 3360° cttccgatgg aaatagtttt ggatccaccc tcgtgctctg gacagcgttg cctgtcgggg 3420 tatcaaccac acaggaaggt gaccaatcta gttgactttg tttgacaagt tgaatttctt 3480 ctaatgttag cggcgcctca tggctgcgct gtgcccgacg ggtggacgtg aatcagcctt 3540 acagctgcgt tgctgttcgg agcatgtgaa gcacggaatt gtggcctagc tcaactgaat 3600 ttgcagtacg aaggctcgcc gtttgcatgt tgatttgttc gtgatatgtt catgatttgt 3660 tctttttccc atgaatctcg ataatccctg ttaccttgtg ggtaaaccgc tgttgttgtg 3720 cttctatcag ccctcatcca tggattgttt gaacaaggat aagaatttcg attcgaataa 3780 ggaatacaga ttaaaaccgt tctgacctta ttgtgaagag gtggcatcta tcagtcagcc 3840 cagcgcttgc catacccctc attgggctgc agatccatac ttcataggag cgaagtgctt 3900 tttagtggtt acccaccaag accccgttgt ctcgaacccc gaacttcaac atctccccag 3960 tgctcgtaaa acgagcgaaa tcgaacgcgg cctctagcct tttcacagcg cgatgtcacc 4020

tcactaaatt gggttgaacg gtcttgacac gttttccqcc tcqcttqcaq qccatqatcc 4080 ttgccttcgc tcgacctctc tgcggagact ttagggcttg gagggtgaaa ctgcatgtct 4140 ataggccata tctgttgcag cctatggtag cagaaagctt gggccgccac accaaagaaa 4200 taggagactt tggacacctc atgaatggtc atcccqagcc cctcqtctcq cqttqatccq 4260 accacaacaa atggtcgtgg ccaatggccg tggtcgtgca gctacgacgg acactaattt 4320 tgcgacgacc actgtcgatc tgtgacggcg acgacagcgt gtgaatagct ccqcatttcq 4380 cyttctygag caggtttccg cyctytagag gyaaaaggag ttggagatca ccgagcygac 4440 ategtgeete gttetegege aetgetgeag etgteeacag gaateeaget tegetattet 4500 gatteteate gtgtgegaga agattgatag tatettggag aaggtgtege gtgtgggagt 4560 tggatctcta ccggctcctc cagcattacg aaacatccca gcagcttttc atgtggttgq 4620 ggaagtacaa aatcaacgta atgaaggagc actgccaggt tttggcgacg ttggttacgt 4680 tctagctttg ttggttcgtg gctcctcgcg gtagccagaa ggagtgacat aggttgtaaa 4740 tgagagactc agctgcgcgg tctcactaca gtgaactagg ggattaatgc atcgcaactg 4800 ctactcaata tcagactgaa agtcatggtg gggtatatct ggtgttattg gcctattttt 4860 ctgccttgta ccctggctgc ttaacagcca gaggacgata gtacggcaac gcaqctcqaq 4920 tattctggat tatgaaaaga tatacaaaaa gtagcgttag gaagcatcta aggtctg 4977

<210> 1824 <211> 4418

<212> DNA

<213> Aspergillus nidulans

<400> 1824

cetgcgtaca gatggtgtgg gtagegggte etgacggaet ggaeteagee tegtttagag 60 getaagteta ataaggtaag ectattegga gtgaatatgg cagaatgeae ettttggete 120 atagaegggt tegtgaetga ecatataatt ttaeteggge ecatttgeeg tateeatega 180 acagteatat geaacgaetg taaeggeaet geagageaga caaatgeaga tegaaggeet 240 ettggttgaa ggtetateee tteaateage ggeggeetgg eacagaette agteteageg 300 tggegaaete eagteaegee acaaatagga ataettttgt ggeaeegaee tegeteett 360 aeggeeaeee tgeatateae geegatagtt geegttetgg ttttegagat aggagtgttg 420

acgttcggag ctgcacaaat gtcatcaact ccacttttaa tttacacaac atgcgccatc 480 ggtctactct gagtatatac ggccttccgt cagcgaatcc ccgaacctcg ccgctgccac 540 ttgagccgct tctccaagtc ccaaccaccg attgaactct catcttcgcc ttataaaagt 600 tggcgctagc agttgaggct gagactcaga ctcagaacca ggacaagacc agacgaacca 660 ttggggcact tgagtcttgt cttgtcagtg actgtcatca agcatcttcc gtaagcagac 720 gccaacgcag agaagaatca aaacaggcgg tcagggtatg atcatgtgcg gtgtatgtag 780 accccatcct acagaaaata acgcaatcta tgtgagaacg cgcagtcctc tacctctgct 840 ttgtatcagt gatgagcaaa tcccagagat ttctcgtttt cttccccgct tcgacggcat cttcagcatg gctaacgaat acgagccctg gcggccctat ggagaaggtt acgtggagta 960 teggecatge taceggetta ggeteettea tgeaagecag ttacggteet acaettgaae 1020 gggcaagcta gccttccaaa agatccagtg agttgcttgc tatggttaag cctagaccga 1080 atctttggct taggctcggg catggctcgt acactgtccc gtttggctcc atcacgggag 1140 agcctcagtg aggctactga tcgttcgaca tactatgatt ggctgatttc aacgggatgc 1200 caacgtcaat gcacatcttg aggattccat accagtctgt tccgtcttgg tcaatctcgg 1260 ctgcggactg tagtggattg gctaacccaa cgaggcttat cgacgtctta accatgccaa 1320 atcgtcaggt ttcaccgctg acacaccaag tattgtggcg ttcgagttct tgcccgacta 1380 taaacagatt teeggetgaa gtggataacg agetttaeca gtgeegetgg teagattagg 1440 tagttggatg catatcgacg tagatctttc gcactccaag gaaaatgctc acctgtcgtg 1500 tcagaaactg cacttgatca aattagaatg tttcacatca atggtccctc ggttcagcgt 1560 ctgtgccttt tgggccccca actatgtgct tccattgcac tgctgaggcg tgatatgaaa 1620 cataacacaa aacagttaat tgaccagtca cttgttacaa gatgttgttt gttcaaagtt 1680 gtgagacgaa tttttgctag cctctctgca tttgaaaagg atggcaagat gcagcgaaga 1740 gcagatctgt cacatcactt tcagagcacg atactgagga aaccgcatgc atcttacaag 1800 ccactgctgc gcatacattc tgaagtctgt tgcgtaccaa tcggactagt ccttcatacg 1860 gcattctctt ggttatcagg atttttgatg gtccggaccc tcaactgtac gaagtacaaa 1920 agcctcaaat ccacgacggt ccccaagaga ctcatgaatg accctcagaa tccttttggc 1980 tctcgagaaa ccagtatcta cagatcctat tggtatggcc gtccagcacg gacccgacat 2040

ctggcgtcag agtgggcatg gtaatacgat actacactct ggaatgttag atttgattat 2100 ccttattccc gagcatctac tttcattgaa taatacagtt taccttctca tgcacatatc 2160 tttaggtgca ggaccttatg actcggatta tctgcacttt gacctcatac cacgcagagc 2220 acagacagag acacctagac agagttaatc aatccgacgg atctctgcca taccacttga 2280 tagacatcca caaactggac tcaagtaacc cgaaagagag tctagaccag gaatttcatg 2340 gcatgacacg gcacgacctg ccacaaaaag taatctagct ggtaccaaac cctttggaag 2400 ggttcaggac aggctcaagc tcaaaataga tgaagaactt gacccgtttg gactagccta 2460 acagatttac caagttactc cttgattaac gacagatata acctaccata acaaacgtga 2520 taggtaggta cagtagcagc agcaatagtg gtaatggatg gaatgaatac gtagggttaa 2580 ggattatatt acactatcaa gttgaatagg agagtccacc ctcgcttcga cgctcctcac 2640 gcccgttcgg tattgcttcc ttcagcttac gtggccataa aggtttcggc aagattccag 2700 caggetgtat etacaattat eccagtgegg ttgaegtega gtteeceett eacetteaac 2760 cttccgtcaa acagccagaa acatcttcaa ttgtccagtg atatggtaag aaaagtctat 2820 cacagctatc tgtacaggta aactcggaga gcgctcttag cgactcgtgt catagtactt 2880 gaggcgcggc tttgcatttc tcgtccatgc tatgttgcca acggagccag ttgcgttcca 2940 gcagctcaac ggctggtggg aagtggtatg cctagccagc agggaatggg ggcgagtgga 3000 gagacageeg gataegagae tttagetgaa getteetgtt gtttettgta tetgetattg 3060 ctgctctatt ctagagcgtg gccattaaga tgggctgaac aattcgagaa cggacttggc 3120 tectatttee tqaqtqaaqa tqqqtqqttt gtetatagta caagaaggte aggtaaggag 3180 tataccagtt ccttactcgg ttttttactg agcatgtgtt tcttgcagag cgatatttgg 3240 aaggagacgg gggttttcta cttacaataa ttgcttctta tgctgccata gcctccaaca 3300 gtctcgtcac taccagcacg aaggatggtg gaagtccact gtttctgagc caccagacgg 3360 cccctgagag gcacctttgg ctaagacttt gcgagctttt cttcttgcac gcgcatgatt 3420 gttgattggg aataaaggca agtccagact gtggacctga aagagaaagt gggtgagtag 3480 cgagaaggga gatgaaagaa tcgtgttaaa gaggaggaat aaaaaaaaa agaggatgag 3540 aaggcgccaa agagaggata aagttgagtg gataacacaa tgatagcatg tttttcaatg 3600 actttgacac aagaaaggtc caaaactacc acgcatacac catcgcaatt aggatagtcg 3660 acgtttggaa ctgggtcaca attgcttgca tgttcaattc gcttctatag tttgtaatca 3720 ggaccgttgt caatatcgaa tggggatgct ccttgccgtt tggtctactg caacccatga 3780 gcatcaattt cttccttgac cactgtgacc gtcatttctt atggagcttt taccgaccaa 3840 cagtacggac acgagttgat ccgccagcgc gtttatatat atgtcggcct gttacgaaag 3900 caaagttcct ttctagacag tcgtgccggc tctcggaaga gtgcataggc cttcttactt 3960 ctattcgtac gatgatcaag cttaagttgc tagcaatact gcaggaacat acgaaaggcc 4020 tatacattgt accacgagac ctcctgccgt gaggacatgc gccgcattac caacctcaac 4080 atccagcagc ttcgactgcc attcttaaa cttgctgtca ttcaagtttt tcgtatgttt 4140 tcttaatcga ctggaaaaga acgaaagga cgaaggacct gtacagactt ttggagtatt 4200 tcccggcaga cacctcgttg aattgcggcc ttttaagcac gattctaaga gagccacaag 4260 gagatttgaa aaaatacccg ggagacagat ggcagaagat tgcgattctc cctgcaagtt 4380 gctctagtta ttgaagaatg caggttgaat catgataa

<210> 1825 <211> 3779 <212> DNA

<213> Aspergillus nidulans

<400> 1825

60 tactcqttct ctataccgcg ttcaaacccg caccatggcg actgaagtac agaagatcaa ggtcaagaac cccgtcgtgg agttggacgg tgatgaggta ggttttatcc tgagcgttca 180 aggaagagcc gcatgaaaaa taaatcttca attgcgttgt accccgccct gcatggcctt gcgttgtgcg actgcgcctt atatcatggt cgatttgacc ctcggagccg cattttcgtt 240 300 ctggccctcc gcaggtgcgg ggagaaacgg cgaaagttgc cttgctttct gctggatcag cqtcaatacc cqqaqqttct agccttgcag ccaacaagcg tgcttgaagc ttatatcaca 360 tgtcactgac aagtactctt cctagatgac ccgcattatc tggaaggaga tcagggaaaa 420 ggtgagtcca cacttatgat cctctgcatc atatcatgat gtagcttccg tcactggccg 480 540 aaccetaage taacggttac teccateata gttgatettg cegtaagttg atattgtace teggettggg tgegtegtgg etaagatagg etagttteet egatattgae eteaagtaet 600 acgacctggt atgtcttgaa tgcttgtctc ccattttcag tgcactgatc ttgctttagg qtcttgagta ccgtgaccag accgatgaca aggtcaccac cgagtccgct gaggccatca 720 agaagtatgg tgtcggtgtc aagtgcgcca ccatcactcc tgatgaggcc cgtgttgagg 780 840 agttcaagct gaagaagagt aagcattata tgctcactgc gcggaagagc tgactgacaa aacaacccta gtgtggctgt ctcctaacgg tactatccgt aacatcctgt atgtcacctt 900 taccttttqa aatcccttgc tattgcagtg tgctgatacc atcaagtggc ggtactgtct 960 teegtgagee cattgteatt cetegeatte etegeetegt eeeeggatgg actaageeca 1020 tcatcatcgg tcgtcatgct ttcggtgacc agtaccgtgc taccgaccgt gtgatccctg 1080 ggcctggcaa gcttgagctc gtctacaccc ccgagggcgg ccagcctgag gctatcaagg 1140 tetttgattt ceetggeggt ggtgttaeee agaeteagta caacacegat gagtegatte 1200 gcggcttcgc ccacgccagt ttcaagcttg ccttgactaa gggccttcct ctctacatga 1260 gcaccaagaa cactattctg aagaagtacg atggccgctt caaggacatc ttccaagaga 1320 tcttcgagtc cgactacaag aaggaatttg atgccaaggg catctggtac gagcaccgtc 1380 tcattgatga catggtcgct caaatgatca agagcgaggg tggtttcatc atggctttga 1440 agagtgagtg catctaaaac agttgatgct gtcgtcgact aaccccttta gactacgatg 1500 gtgacgttca gtccgacatt gttgcccagg gcttcggctc cctgggtctg atgacctcca 1560 cactcatcac ccctgacggc caggcctttg agtctgaagc tgcccacggc accgtcaccc 1620 gtcactaccq cqaqcaccaq aagggccgcg agacctccac caaccccatt gcctccatct 1680 tegeetggae eegtggtett ateeagegtg gtaagetega egaaaceece gaegttgtea 1740 agttcgccga ggagctcgag cgcgcttgta tcgatgttgt caacgaggag ggtatcatga 1800 ccaaggacct tgctctgtcc tgcggccgca aggagcgcga cgcgtgggtt accacccgcg 1860 agtacatggc tgccgtcgag cgccgactca gggcaaactt gaaggcccgt ctatagatat 1920 atcatgatct agcgttttgc ttacttttat tgtcgcattt ctaaaatatc acgataccta 1980 ttcatgacga ctgcgttggc tagattctag ctagagttat tgggtccaag ataggaacat 2040 ttgactacca tattgtacac ttaactgagt ggttgaggag agaatctgtc tttgtattac 2100 gaacagtgca gtacagtcaa tactactgcc tattgtctgt caataggagt cctgagcgcc 2160 tgttcttata gcttatccct ataatgtgca tcgctcgctg agcttgcaac cacatcgacc 2220

acgacatttg tcttgacaac ccgagagtgc tggcgtattt ggcccgtctc gtggtccgtt 2280 catatttgac ttgtaataat atttcatgat atctttttgc ctctcaagta cgccgtgcta 2340 tccgcccttt tcctgctact tactgcttcc agcaagctag gttacataac attccaagga 2400 tagctgacag tcgacccttg gctcagaact gtgcacgacc aactggatgt tcttccggtc 2460 tctagattca gactggatta ttactggccg ccacggggcc ttgacgcaat accaagcgtg 2520 ctactaccat attraggact accggctttt caaccgacct catctccacg cccatagtgc 2580 ttcggctgct gtccctgacg acgcgccaga atctcatgct tatggctttc tttgctacgc 2640 ctaaggtccc tgtcaggtat ttgcagggca gaagtgattt cgggcatata ttgtgcccgg 2700 aggtgcagga tgtatgtact acctgtcagc ataacctttg tctctgtggc gactatcaca 2760 gtggctctac ggctctttac acgcattcgc ttggtgtgcg cgccctggtg ggatgattgg 2820 tttctggtgc ttgccctggt aaataccatc ttcagttcaa tcgaccatct gggctaacgg 2880 ttgattacag atgacggact acgccttctt cggtatcctg attgctggtg ggatttgctt 2940 acatgcatat cttggagcta caaagtactg acgttagaca gaaaatgcca acggcctggg 3000 gaagccgaaa gagtctctta ccttggctca atatcgattt cacctcaagg tatgcagcct 3060 gacacctcca ttatcggtaa ctgggaactt gcgaatgaca ctggtagctg ctttggatat 3120 ccqttccttt atacaacctc tccttaaacc tgacgaaagt gtcgatggtc ctcttatacc 3180 tgcgtctttt cccgtctaga cactatcaga taatattgaa gatactgctg ggattggtcg 3240 ctctcaccgg aatgtacatg gtgcttggca cgctgttcgt ctgcgttccg atccatacgt 3300 tttgggatcg acaaaatgtg gatgagaatt gtgtctcgcg agcggtggtg tggtatctca 3360 ctgctgccct ccagatcgct ggagacttga ctcttgtgat tttgcctatg cccaaattgg 3420 tcatgctgcg cgtccctttg aggcagaagg tttgcctgat agtggtattt gctcttgggt 3480 tgttgtacgt ttcttctccc caggttatta tggacaacga cccagcgtaa actaacggat 3540 atgattaccc agtattgtcg caacaagtgc agcccggatc gactccctga tcacgctcgt 3600 aaattcaaaa gacctcacca gttagtttag cctctcagat gttgccgagt gaagaaaagc 3660 taacatgagg tacttactca gaagctaacg gcctaatcgc aacctggtcc ttggtggaaa 3720 ttaatgttgc gatcatctgc gcaagtctga caacattcag acagctcatt atacagata 3779

<210> 1826

<211> 4837 <212> DNA <213> Aspergillus nidulans

<400> 1826

caagaacttc ctaactgaag agacccttgc ccttctggtc aagctggcta agcaagctgg 60 ggtcgaggag ctccgcgacc agatgttcgc tggcgagccc atcaacttca ctgagaaccg 120 tgcagtctac cacgctgctc tgcgtaatgt tagcaaccag ccaatgcagg tcaatggcaa 180 gagcgttgtt gaggatgtca actccgtcct cgagcacatg aaggagttct ccgagcaagt 240 gaggagtggc gagtggaagg gttacactgg caagaaaatc aatactatca tcaacattgg 300 catcggtggt tctgacctgt aagttttgtc acctgagtca gcagcaatga tattctgacg 360 cgcgcatcag cggccctgtc atggttactg aagccctcaa accctacggc caccctgatc 420 tcaagctgca cttcgtctcc aacattgacg gcacacacat cgctgaggcc ttgaaggact cagatectga gaccacactg ttettgateg egtecaagae etteaceace getgagaeca ctaccaacgc caacactgcg aagtcatggt tccttgagca tgcaaaggat ggcgccaca 600 tcgccaagca cttcgtcgct ctttctacca acgcagagga ggtcgccaaa tttggcattg 660 720 acaccaagaa catgttcggt tttgagtcat gggttggtgg tcgctactca gtctggagtg cgattggtct gtccgttgcc ctctacattg gctacgacaa cttccaccag ttccttgccg 780 gtgcacacgc catggacaag cacttccgcg agactcctct ggagcagaac atccccgttc 840 900 tcgggcggtc ttttgagcgt ctggtacagt gacttcttcg gtgctcaaac ccatctcgtt gctcctttcg accaatacct gcaccgcttc cccgcctacc tccagcaact ttccatggag 960 agcaacggaa aggccatcac ccgtaccggc gaatatgtca aatacactac cggccctgtc 1020 ttgttcggcg agcccgctac caacgcccag cacagcttct tccagctgct ccaccagggc 1080 accaagetea teeeegeega etteateatg geegetgagt egeacaacee tgttgagggt 1140 ggaaagcacc agcgcatgct ggcctcgaac ttcctcgccc agtctgaggc actgatggtc 1200 ggaaagaccc ctgagcaggt caaggccgag ggtgctgctg acaacctggt gcctcacaag 1260 accttecttg gtaaccgccc gacgacctcc attetggccc agaagattac accegeegec 1320 ctgggcgctc tcatcactta ctatgagcac ctgaccttca cagaaggagc tatctggaac 1380 ataaactcct tcgaccagtg gggtgtcgag ctcggcaagg tcctcgcgaa gaagattcag 1440 aaggaactgg aaaccgaggg cgagggcagt ggtcacgact cctccaccag tggtctactc 1500 ctcgccttca agaagaaggc gaagcttgcg tagcgcccct tttattttgg ccctagggag 1560 aaaagcagaa aagttgtgaa taattgacga gaacatgagt ggtacatctt cggtgttttt 1620 tctttggtct tcggaatcaa atgtttaata atacgatagt atgatcaatt aaacatttta 1680 ttgaattcat atccagtaaa aattccattg ttttcgcacg aactggtggc ggccaggcgc 1740 cccgttgcat ggtcgctaag gccttgagcg agcggagaat cgccgactcc aaggttgctt 1800 gctgggtcaa ccaccgtgtc tcctctccgg attcatcttt ttagaccaag tcattatcaa 1860 tacattgtaa ctcatacctt agccgcgtgt tcagctattc accgaatcag ctgtgcgcgg 1920 tatccaatat gacttctgcg ggaagaatgt ttcctccctg gaccctggtt gcttcatgct 1980 tgtttcaaat tgcggctgcg gggagaactg atggctacgc atacggccag ccgatgccag 2040 taacctgttt gaatcggaca atgtgagtag aacctggagc actgagtcta agaagtatcg 2100 agactteett ecatgateaa gtaetgaege egttttetgt acceagegae teeggtgaae 2160 atgtatgtct gacctcaata ccgtgataca cttccaaacc atttccaacc taagcaacca 2220 cagaacaacc tcactgaaca ggttactaaa ttatcactac gctagataac cgacgatctc 2280 ggaaaactcc aattcatccc cttcccaaca tgcaaagaga cctccgcccc cctcgccctc 2340 cqctacqqtq tctccqaatc aqtcaattgc accatcgagg ccctacctga tgaactctac 2400 catctactcq aatattacqt ccactcagac gtccccatga cgtgccgcgt gcccaccgcg 2460 cccctcgact ccagttctgc aacggattcc aagaccgacg agcagaatga cggaaataac 2520 ggcggtgata atgtctctac gctagaggac aatggaccgc catacacgcc aatcacgttc 2580 gcactgcagg gaactctgca aaaaagccac ctgcacatct ggacggacat gaatgtttta 2640 gcgcacaata tcccgcaggt accgtcgcca gagaagacaa agaccgcgaa aaaggctaag 2700 gagaaaggct atatggtcgc gggaacggca tactcggttc cggaattcga gtattctctt 2760 ctccacggca aggggaagaa aaaagataac gggaagaagt cagacgaaga gaaagaagct 2820 tetgetgttg eegaggeege eegegageee tggacagaag gacaegggae aaaagtgate 2880 cgcggtgagc cgctgacttt cacgttccat gtaagctgga ttgaaggcgg ccgaggcatt 2940 qqqtqqccqq qccqtqatat ttcqqtqtcq tcttcqtcct tgtccqgqtt ttqgtqqttg 3000 ctctcgaagg tgattttctt tggaattgcg gcgtcagtgg gcgcgttggt cgcgctttat 3060

tgggagcgga atggcaacgg aatcgtgggc agacggaggg gttggaaggg agatgggatc 3120 ttgggtgttc cagctgttgg taagggggcc gtgggtatat catttggaaa cgggtcgaga 3180 acgaacggat atgggtacgg agggtattct gccaatggtt ctgggggtgg atatggcggt 3240 tttgcgagtg gaaagagaga ttgatgggtg tagcttgttc tggtgtttgg ctacattgtc 3300 ggggatctgt aaatataaaa cgttgcatat tttgtttata gcccatacaa tgcgaccgtt 3360 cacgtctaaa aaacaatgca gaaactcttc agtacatggt aatatacaca tcaacttgat 3420 aaccettate titigtegaaa aagtagatgg geatactgee tacetaceae eettgegeee 3480 tcatcctctg gatctttcca accgtatgcg caaatgaata agcaaacagc tttctccatc 3540 ttcgaatccg caagttcttc ctcatctggc ccctccgaac atgatacttc tggtccaagt 3600 actgatactt aacattattc teettgagaa tteeegaaag tetettgage gegaetteea 3660 aatcttgtcc gcgctcaggg acaacagcta catcacgacc cagcgtcgga ttaagcttga 3720 ggtcgaccct gcggcgttcc tgacgaggaa ccgcgctggt gcttttgccg ctagagatgc 3780 cagtgccaga ttcggcagtc tgctgactgg atgcttcgtt tctagacggc gcgcggtttt 3840 gacggccagt gctgagattg agacggttga ggacttcgtc gatgttgccc gggtacttgg 3900 qqcqqaqqaq ctqqqttcgg gggggcggag atgcggtgct agtggtgtta tcggtgttgg 3960 tctcggaggc gttgttggtt ggggttgagg aagaaaagcg gagcgattga ttttgtctgg 4020 tgaggaggaa ttggctgtgt aaaattgatt ggcgagttga gaggaggaag tgttgtcgcc 4080 gtcgttgtcg gccttgaacg gaggcagcga gttaaagatc gctccattgt tccgtcttgc 4140 cttcqqactc qatctqaagt gaaaaaaata actccagtac aaatgacgct ctcaacaatt 4200 ccttcttgac tcaaacgtga ggcatgggaa ggagcggcag tcacccaagg cgtggtcgag 4260 acgagatatt gcagctccgg cttcattttt ccagatcgga agtctccaat caatcacgtg 4320 atgttccttc agatagtatt tgattatttc aagaacgttc agcaatattc gcaactcata 4380 aagcacacca aatataccaa gcatccagaa tgtcctcaat cacaatagct aacctcccac 4440 gcataagccg cgatgcgctc tcggccctca tcctctctgc atccacgcct agcaaactag 4500 caatcattga cgtgcgagac tctggtaagt gaccttgatc actcactcct gcagtcacta 4560 acataatatt tagaccacgt tggcggccat atcgtctcct caacctgggt tcccagctcg 4620 acactagatg teegcatace ggaactegtg eggaceetga aagataaaga gaaagtegte 4680 ttccactgcg cgctcagcca gcagcgcgga ccttctgcag cgctaaaata cgcgcgcgag 4740 cgcgaaagga tgctaggaag tgaagaaagc cacaagcagg aggttttcgt gctagaggga 4800 gggtttgtcc agtggcagga gatgtatgga aaggatg 4837

<210> 1827 <211> 2671 <212> DNA

<213> Aspergillus nidulans

<400> 1827

gacaggagtt agtgaaagga ccacccacg cacaaagaaa cgagccgaat gcgaacacag 60 gcaagcgtcc ctcaccagcg acaacaggga ccagaggaga gcacaccgca ggaggccgag 120 cccgacccga cagcagccgc caaagacggc ctaaaccagg accccggggc ccagaaactg 180 gctgaggacg tgccaaaact gatgcccgac tacagggagc acgggaagtg cgaaggcagc 240 300 acctetgcqt cacqqccage ttetcacgge tatccaggga aaggetacte atcatggcac 360 attaccqqqc qatqcctttt acaactggga ccggtctgga ccacgttgct agtttgaccg 420 agattcatct acatgcatgt atgacactcc cagcgcatcg tcctctgata cggccactgt 480 tegegatetg ataaacacat tettagtgat acttggcage gateaagtee atactgegge atcagagete etcegeaatt caetgeagtt tgttegattg etggacaete acaaagtgge 540 600 ctacacattt gcgcccaact tctttctaac caaggtgctt gacagcttga gggaaaaccc 660 aacqttcacq qcaqacctqt cqaqccttaa ggctctgatt tccggcgggg agtctaatgt qqttqtqacc tqcqacaaqc tcacqaggga acttcgccgt cgaggtgtcc aagccgaagt 720 gattcgtccc ggcttcggga tgaccgagac atgtgcagga tccatctact ctcgggcttg 780 cccatcgtat gatatcaggc agtcccttga atttgcgagt cttgggtcct gcatccccgg 840 catgcacatg cgtattatga gcatcacaga gcccggaaag ctagctgcac ccggcgagtc 900 tggagagete caagtegeag gteeggtegt atttgaceae tactacaaeg atgagaegge gaccagaaac gccttcacgc cggatggctg gttcataact ggggatttgg gctggatcga 1020 cgatgccggc aacttgaacc tggctggtcg gaccaaagac accatcatcg tcaatggtgt 1080 caaatggagc tcgaccgagc tagaagcggc tattgaggag gaagcggttt ctggcctggt 1140 gegttegtte acagtagttg tgeegaeeeg eecteetgge teggeeaetg aggaaattge 1200 tgtcgtctac tcgccggcgt acgcccccga ggactatcac gcgagatatg agaccgcgca 1260 ggtcatttcc aagacagtct cactgctgac aggcacaaag cctgcgcgcc ttatccccct 1320 qcctcagtca cttctggaga agtcgtcgct tggtaaaata tcgcacagca aggtgcgtgc 1380 tgcactcgag agcggcgagt acgcgtcgat tgagcgcgca gaccagttga ttctggcgca 1440 ataccgccag ttcaagtggc gccctgcaaa gtctgacagt gaaagagctg tgcagaaagc 1500 cttggttgag tttctgcaag tgcctgctga ggggattaat atggatgatt ctatttacga 1560 cttqqqtqtq aqctcqttqa atctqatatt gctqaqgtct acgcttcaga ggatqctaga 1620 ccccaagatc gatatcccat tgtctatcat attgaataag tgagatccca cattcccttc 1680 aaagaccaaa tacaaactgt tcgttaatgg ctccgcagtc cgacccctgg agcaatcgca 1740 aggtcgattg actcatcccg ctctagttta gctggataca atgcgatcgt gccactgcag 1800 caacacagac acggtggtac accgttgttc tgcatccacc ctggaagcgg cgaagttctg 1860 gtattcgttg cccttgctgc acacttcccg acgcggcccg tgtacgcgct gcgtactcga 1920 ggttatggct caaacgagca attattcggc tccatcgagg aaactgtgga gacgtatgca 1980 acacagattc gccaagttca gccgcatggt ccgtatgcaa tcgcagggta ctccttggga 2040 tccacactgg cctttgaagt agccaaagtg ctggaagcgc agggagagga ggtaaatttc 2100 tggcgagcat tgactatccg ccgcatattg cccactacgt gcgcgacttg aattggaccg 2160 acgtgctgct acatattgcc ttctttcttg agcttattga ccagaagacc attggtcgag 2220 tcacaacctt acctgaacac gcttagaccg acagactgta ctgacaccaa atcttgaata 2280 taggcgaatg ctaaccgggc agagccctat ccattgacac cagcatctgg ggttattagc 2340 aaattccgtg actttcgcgt aacattaaga cgtatatctc tagggaaagg gagtatctgt 2400 tctttttagg agatcctact cctatcagac ctgtactatg tattgaagag acagtttgtc 2460 ctggcccatt ttctgaaaat tttatttatg atgtcctatc taaccaaatt ctacagttcc 2520 attttctctt cccaagttta gctcaaatgc cagggtttaa attttctctt tatcatctct 2580 tttaaatttc ttcctcttaa ttcttatctt cttcttatct cttcatctta tttctatttt 2640 2671 tctccctcct ctcttactta tcattcttta t

<210> 1828 <211> 2635

<212> DNA

<213> Aspergillus nidulans

<400> 1828

60 cgtaacactt cctacgaaat gaccttcaga tctgcatacc caaagataaa tttgctcttc gccagccatg aggataaggc tgccatcgcg agagcagtag ccgagcacga tctggtcctt 120 cacttegete tgagegeaga ceateteeet teagetgagg caategtete egggttggaa 180 gcacgaggag gaggaattta cattcatacg agcggaacgg atgtccttct tgatccgcac 240 gagaacagca ctcgagcggc gagggaatat gtgttaagac ttttgatgac tgggagggta 300 ttggggagct tgtgtctttg cctggtatgt cacttcggct accctacctt catccttcca 420 cggtgtgaac ggattaaccg gtaaattaga tgctgccccc caccgcaacg tggacaaatt tgtcctgtca tctggctcag acaccctcaa gaccgcaatc atatgcccct ccactgtata 480 cggcgcaggc cggggcttga tctcgcagcg ctcagaccag attccaaacc tagcgaaact 540 tattcttcaa caaaaaaagg gcctgcaact gtccgacggt aagacattgt ggaactgtgt 600 gcatgtctac gatctctcgc gattgtatgt gcggttcatc gagcagtcga tttccagcgg 660 720 ggaattgacc tggaatgagg aaggctacta cctcgtcgaa agcgggacgt atttatgggg cgatatatcc agaaggatca caaacgaagc gtacgttctt ggtctcctgc cctcagagca 780 gatgatggtt gtggagatga aagaccgcga tatcctagcg cccgctggtc ggcctgtggg 840 caattatgcg gtcaaggcaa aggcggttcg ggcgcgaaga ttgctaggct ggactcctat 900 cgaggggagc ctagaacaga aaattccagc aattgtactg gccgaagcga agtccctggg 960 cctgtagacc aaggtcgcag gagaggacga ggtcattgta taccagaccc tgggtataac 1020 atgcaagtat atatcataac gcatgacctg accacgcaca cgtacccaac cagatacaaa 1080 agaaaatgtg gccgagatta agccctgtgg ctgacagagc cgatttgtcg cccagtatgc 1140 aagccctatg cggtatgatc aggtcccgag tcctcgaggc agtcactgga caccacaatg 1200 caagtgttga tggtggcctg aaaattggcg aatgatgcca cgccacacag ccccgttcca 1260 gggttgactt ccctcgtggg tctggggtat tgccgtccaa tcaaagagtg tcccccagtt 1320 tgagtttttt tgaggggttg attgtctgat gatcaatata cagaatccac cccagttact 1380 ccgatacccg gactatcgaa ttcaagtcgg agaggcgtct gtcaatttcc aaggaagaat 1440 atgcgccgag gattttgtaa cagtatcgca tgatatgatg gccgacataa tcacccggcc 1500 gtaccctatc ctatcaccgg ccaaagcagg gatcaccggc ctagccgtat gcaggctgga 1560 atctccacca ctgccagcga gtgccagact tggatcaccg cgaccagggc aggggtgcag 1620 ccacagatta tagctgtcta aaaccgcgga tcaggaacat gtttacttta tttttgtgct 1680 ctgtcttcca tgggataaca cttctgggaa actgtacaga actccataca tgttcaaatt 1740 acggctaaag ccagtcacga ggcttttccc cataatgatc gacagcgagg ctttcctcta 1800 ttccgcagcc ccaggggcag ggtccacgcg ctatccggcc aagagccgaa tccgtcaatc 1860 agegacettg cagagaeget aggeaeggag taeggataggg tgegataeta eegtgatgeg 1920 gggggagcgc ttggttagga aggtgactcg tgcagctgca gagcagagag gatcctggag 1980 tgccagcagc ccacttcgct tctgatttgg accgatggat gggcgagtcc aagacagaac 2040 aaagtgcgat gccgggtata aagagggcag atgcgccagt gtcgccgggt ggaagttaca 2100 agtagaagga aaggagaaac gaaactagtc aaaatgtcac teetategag ggetatgtta 2160 cccttacttc aagtttctct gattggcgct ggcctcacct ccgcggccac accgtacgcc 2220 ctgcaacaac cccctttgac aacagattgg acggaagaag tcggcacgaa cccgtggcct 2280 gagtatecte ggccccaget acageggeeg caatggeaga acttgaacgg ggtetggeag 2340 tatcgggatg ctagaaatgc ggctgcaatt gattcgccgc cctttgggca gagtcttgat 2400 acggaggtgt tggtgccatc ttgtttggag agtggtcttt ctggtaagcc tccgcaattg 2460 cttgatctcc ttcaccaatg caacggggga tgagagggca ctggccatat atattgacga 2520 tgttgaatag gtctccaagg ccaaagccta ttctactcat ggctttcgac aaactttact 2580 2635 gtttctgagg actggcaagg caacagtgtc ctcgtaatct ttggacagtg gcaat

<210> 1829 <211> 3284

<212> DNA

<213> Aspergillus nidulans

<400> 1829

tetetggttg etegeetage ttataaatta ettgaaagat gatgagteag taagaggeta 60
teetetegga tatatggeaa aatagagtaa aataagaaca etteetttgg eageatteet 120
ggaaceatte aaaatatat ettetgeeaa aetetettge aeaeeeette eggtggetga 180
gaacatatge taaagageea aegttgetgt ageggetgtg getgagttte ettagtgtag 240

ttacctaaga ccagtatact tatgtctagt ggaatattat ctcaattaac cactatatat cttatcaatc aatatctctc taggaaccta ttgcaaattt caggactagc ttcatcattt 360 420 cctcgtgcgc atgtgtatta taactgtact tttgtccaca ataagtagct gatatagtag 480 aggattgagc gtatacaatt atctttacca tagatgagta atatgctcag gacatgcgat tatgcattgc tggcgcagga gaacgtgttg gtagaagcgt catcatgaat tgccttgcca 540 gagacataca gaccgagacc gcactgtagt agacaatctg tcagcaactg caagtggtat 600 660 atttqcqatq acattggtaa ggccactcac catgcacccg ccaacaagaa caatcagcac gtttatgata gcgaggcaga tttttctggg cgacgagaac cacttcccgt agttaatgtg cagccagtat acaccaccaa gtccgtaact aaaccaactg gcaaaaaggg agctctgcga 780 840 tggaaggaca gaaagcatta gttacgagga atcatataat ttggctgata cgcagctgta 900 gcaagactta cgataagact gagcaggtcg ctgaagaccg ggatcgcgtc cgcaataatc caggcaatga tccagcaggt caagccgatg gcaatccaag agccaacaga cacgaaatcc cggcgatgca tgcggtctgt tccgcgaaag agacggacgt agatgtactt gaggccaatg 1020 tggccgttga ccacgccagc gccaacaatc tgagattgtt agttgcaaat agaataagga 1080 agaaataatc tagtggggag agcgttaaac gtaccgtggg gatggcaata ccgtacgcta 1140 ctttttcag cacggggcct gcagagccca gcgcaggcga atcgacggtc tggccggcat 1200 agtagtagat tacgacggcg gcaatgacgt aaaagatgat ctcaaatgtc tgcagcatgt 1260 acagageett gggaaagtee etgggeteee teattteage eagaagaeea aagaaegeea 1320 cgtgcgcgca gtaggcgaac acgatattgg tcacggcggt aaaggcatgg aaaaggtcgg 1380 tgtcgacggt ggcctttagg gtagtagacg cgcggccctg gactccaacg ccaaccatgg 1440 tgattatgac agcagtaaag atactggcaa aggctgaacc cgtcaaggtt gagcaatcag 1500 tattttatac gctccggaga gaggaacaga tgcacgtaca catgcaggag atataggtca 1560 tattetteat qqtacqqqqa aqeqaqeeqa qeatqeaqae qacqaateea acaqteqtqa 1620 agaccatagt gcaggtgcca tgctcagtaa tagtgttcat catgacgctg aaggtcaaga 1680 tgtgacttcc catgatgaag atagagaaga ggagctggcc aatgccgaag agctcccgtc 1740 cgaatgcacc gagcaagaca tcaccagcgt cagccagatt ctggacgtgg ggatagcgtt 1800 ggtggaactg tccaataaca tagcctgtgt aagtagcgag gagacccagt ccaataatca 1860

ggacaagagc gctaggatga accgttagct cgcgtgatca gtatcagtcc agcgacgtct 1920 atggacgtct ctccagcaca ctcacggagc aagccccagc tgggcaagag tcgctggcaa 1980 tgacagaaca ccgagcgata ctgattcagc aatcataact agggttgcca ggattagata 2040 ttgctccgcc cgctatgtgc ataaaagatg ccgtaaaact cacacattcc agtttgcctg 2100 caatcgggcc atacttgtaa gacaaacgct ttcggcctat ctgaagctct agacttacca 2160 ccactccatg gttttgtact tgacttctgc gttggactca tctccaaatg cgtccacgta 2220 acgcggcatc tgggccttct cgtcctcgtc cctccatcct ggctctgcgt ccactggacc 2280 gggggcggtg ctgactttgt cagggctcat ttttctgggt ctgagtgagt atcgacgaag 2340 tettetggge caaaattete ttgtatggeg atggtaaaac tettaatage egcaceaace 2400 ccggaactcg gccagattac aaaacgcgcc ccgcgtgaga cagcttatca acgcaacaat 2460 gcaagataat gtaataatta atggtaaaaa aagttgcaga aaattcaagc cttcttgtgt 2520 gtagttaagc atctcccaat gagaagcttg gcctggggat ctattagata accattagtt 2580 aacggaaatc gagctccacc ccgactgtag ccgcaataat gactaacgct atggtcgtgc 2640 ctgcataaat gcgcttaacc agggtatctg tgagcattag agggcatgca cctgcgagac 2700 acgaaaaatc taaaacccta gcgtccaaca agccgtcaag tttggttggg gcagccttga 2760 gtggtccgca aagccaccaa gagccagcac taggatatct cccgttgatc agaaagacgc 2820 gcacgaattg tgtaaataca gagctcctgg atctgcggta tcatggctaa gtctggaaat 2880 ttgagctgaa cccaagaatg ctaaggcatt gagttcacga ctctggtaag agatagcgct 2940 gtcgctgcca gaaggcgata cgcaatctac catcgtttat tccatgcatg agagatcgaa 3000 ctcgtgcaat ttgttcaggc agacaaaggt atagctcctc catgtccata ataagaggta 3060 gcaaaaggag gccctaatat caggtagaat ccaccaagaa attcaggatc agcaaatgct 3120 gctcgaaaag ggcggtaggc agtgcatcaa gtacccactt tagatatcaa atggctgctc 3180 gcgaacttta ttctcgaagg agcctagacg atgctgtcag tttctggttt accagatgtt 3240 ccaagattat cgtgcgttat ggagagacgc tttcctcagc gtgg 3284

<210> 1830 <211> 2089

<212> DNA

<213> Aspergillus nidulans

taactatcac cctagacagg atggcttcta atccactaat attgttttct ttcgtctacc 60 120 ggacttaggg attcggggct cgagttctag taccccgact tcttccccaa gaaaagctgc agctactgta gatcagagcg gtgattcagc taaatctact cggggatgct gagttagaca 180 tacatcattc atagcagact ggactaattc aacaaaccag ggagacaaaa cataaacaaa 240 cgagacacag atcaatttag taaagtatgc aaactcaaag agaccccgct tcccccatat 300 aaggaaaacg aataatctcc cctttcattg tcattgcctc caagtaccct gtgataagtg 360 gatcgatacc agcttgcaat gcgcgctcag tccactcggc catggaaacc tccttgaagg 420 ggcacgcgaa caatgtctcc attcggccct tgaagtcctt cattgagacc ttgtgcccgc 480 tggagtggtg cctgactcgt gcggcagact tgctctccct tgattcagca gacagagcgt 540 ctgcggcgat cgtcgcagct accctgtgta catcctcgaa atcaagatac ccttcgaagt 600 660 tttcaaaacg cggaacacag cgtgtgagct tggagtactt cagaagagcg ttcagggcat 720 cctcgtttgg cgcttcctca ccgaacactg cacacggacg atggattgta acagggagtc cggatgcaag gttggcgact gattcaagga gccgttcact ggcccatttg ctggcggtaa 780 acccctcaga gccatctgta ttgggtaggg aggacgaaac tgaggctgga gggagactag 840 900 tgctgccgga gagcaaggtc acgcggttgg acgagatgaa atggatggga attctacaca aaagagcgat ggccgccaag aactttgttg agtcgacgtt tgaagcgcgc agcgaagagt agttgttcag gcagtgtcct gtgctgccgg cgtggatgat gacgtctagg gacgattgaa 1020 gaactgctat ttcggtcttg gtcaacccca gacttggcgt gaggagacta ccggtgtaaa 1080 tgctgatctt ttctgacgct gggaggcgag gtatgtcctc ggcaggaaca gctacgcaat 1140 gcactcgttc gactagtggg ttgtggagga gggactgaag gatgtttttg ccgagaaaac 1200 tggtagatcc ggtaagcaag atatcctgac ggtcatgggc cttcgtttga cgtgttgaga 1260 attggttctt ggcggcataa atgaggtctt gtgtcagggc tgtctcagaa tcccaattga 1320 tcactgttgc atgggacgct tgatgatctt cctttcggcg actgattcgc cgcgccattt 1380 ggccgagagt cggaaactgg tagagctctg caacggggat agaaacgcca atggattcct 1440 tgatagctcc ctggagtctg accagtaaca tggaagttcc acctcgcata aaaaaatccg 1500 aatcagcgtc tagtcgtgac gggccaccgg aggccgggag caccttctcc catagcagac 1560 gtagctcgcc ttctgcgagg ctgagatgtc ttgcagtatc ggtgcctgta cccgccgcgc 1620
tctcagtgcg ctgagttggc agaggcaggg ccatgatagc cttcctatca actttcctgt 1680
tggcgttgat tggcaggcgg tccagggaaa cgactacgga tgggagcatg tactgtggca 1740
ggggaaggtc tctagcgagc tgctgaagtc ttgagttgtc gacgttgtct ccaagaggga 1800
cgacgtgagc gacgagcaat ggcgaacccg aacccgaacc agaatgaaca gttacgacgg 1860
cttcggacac cagatcattc ccagtggtga gtatgctgtt ggcaatctca tcgagctcaa 1920
tccgcaaacc atttagtttg acctgattgt cgccgtccat gcggcccata aaaatcagcg 1980
tgccatcctc cgtgagacaa cccatatctc cggaaaatgt acatcttcgt ccaaccgcgg 2040
gtaatgtcct ctgggctagc gaagggatcc cgaacgaata tcgtgtcgg

<210> 1831 <211> 2050

<211> 203\

<213> Aspergillus nidulans

<400> 1831

60 aggatcacct accccacgcc gagcgcgtag ccatctggta tttatgagct tactcacatc gagtggctgc aggggatgtt taaaattagt cggacatgaa gcgccattca atttaggagt 120 aaggagtaca ttaaatgtat ttaagagtag ctatgctcgg tacaaacctt gcgtgtctat 180 240 ttactgttca ctcttctcac atcaatctca tacccgctct gatttacaaa atcctagtat ggcgcctgaa tatctggatc acaggtgaga agcaagaatc ctgtcgcact agctgatgct 300 gacctaggta gaacactctc tggcggtatt gtgaatctca ccgtagggcc ctcggagacc 360 ccgtttgatg tccatatcga gctactgtgc gaccgatcac cgtactttga caatctacta 420 gagaatcggt ataccgaaat atcccttcaa gagctcgtgt tccccgatga cgtccccgaa 480 gtctttgccg acttcatctc ctgggtatac tgcgggaaaa tcagcggtgc taggattgca 540 agaaaattgt ctcggtcact gcatttattc cagctatgga cacttgcaga gagattccaa 600 gtacctgaac ttcaagatat agcctttgca atttgcaaag agctcttaga cgccgagcct 660 gctaaggttg taggeteega ggeegtteaa catgettaet egeatteeag teeaggetet 720 agtatccgcc aacttgcagt ggatatgtgg gcagcgaggg catcggattt caaaatcctg 780 cgatcccgga tgaacttgcc ttcagaattt atagcagatc tgaacgccac ccggcttaga 840

actcagaagt tgttcgcgtt tgaggtatac atgctccatc ctgtcaccaa ccatgatgac cgtctatgta cgtttgtcac taacctgaac tacgcaaagg ctgaaaagga tacccccgat actccttttt cagttgcacc aatttccaag cagtccgaac ctacaatttc agatgattca 1020 ccgcgtcgcg cgtcagcggc gcaactcgcc cataacaaag ataaagccct ttcttcttgg 1080 cggcgagatc ctgatcagat atcccgactg ccgccgcagg tcctgatttt tacgactccg 1140 gtatcccgag cccttgcacc gtcagcatca agactaccaa gatctggccg acgtaaagtc 1200 cgagttaagc tgccaccgtc aacagacccg tcatatacca agttctcgac gaagtcaatt 1260 ttgggcgaac tatacaggat cgaaaataat ggtgaaaagg tgtaagcagt cagagttgat 1320 ggtcttttcc tggaagagag cgggtaatga acattttata gctgaatgag aaataacagt 1380 cgttcatggt atagcactta gctcaaggaa agtgaggcag attagtcggt aacgagttgc 1440 ttgctttgcc tatacaccca gctaacccta cttcacgtgt agccgtgcgc tataaatacc 1500 ctatttaaca tcccttggaa tagtgctttg ggtatcggtt tattaataca acccaaggat 1560 gtagatctac tettgatata agetateacg gggettegeg tettgetgeg ttetgeggte 1620 cctcttttct tcttaggcgc tgttgatggt tgcgacgtag caactattca tgggatcgtc 1680 tgtatagaaa atgtgccgga cttgccccaa ttagagcaag aaaagaccgc caaggcaagt 1740 gataccttgc gaatttaact tcttcagtca aatctgaaag atatttcaag ggtcttggta 1800 atatatcgca atgtttgctg gaggcgcggc tacacggacc caacagacaa gtagccatga 1860 cgccaggaga taatttacag ctctgaggtc ttggttctta agataggtaa tgttcctgcc 1920 tcatagggac gaatgaaggt gacacatact tcgtagctga cgagatgcgg tggaccgttg 1980 ccgtctagcc cgttcatatc ttgaggatat ccaaactaga cagtaccgat gtagtaccgt 2040 2050 cagagettat

<210> 1832 <211> 1581

<211> DNA

<213> Aspergillus nidulans

<400> 1832

aatacaccct gagcaatgcc cgaagtaaga gaaaagcaac agatgaacaa cccatgcata 60 taaagacgag ccaatttctc tgaaacatcg tttaaagtaa aaagagaaga aaagaagaaa 120

180 tatcgagaga acaccgacgg acccaagtta aataaaggaa caaaaaaaaa ttggaaaaaa aaaagaaaag tacagttcag agagaaagag aaaggatgag atacataacc ctgccatgag 240 ctgcacgagc acactgtgac ttcaacaaac aaaaagtgca tattagtcaa agcggaactg 300 gaagcgatca ttcctgtcga ctgcgcttag tgccgtgtgg attccacgag ccgtcaccta 360 cgccttggtt ctgaggaaag aagccggtat tgaaaccctg gttgggacct tggaagccac 480 ctataactgg gaaaaaatga atggttagat atctagggca aacatatacc ggtagtaggt gtatgtgatg taccttgcat gcccatgttc cctcctatcc cgcccatcat tggattcata 540 600 cctccagcca tcggattcat gcccatgcca cccattggac ccatgtttgg catacccatc atgttgggtc cgccagccat gccgccgcca cggccacgca ttccgcctgg tccgccgcgc 660 atgtttccgc ccatcatacc gccacggcca ccgaatccgt agttgcccat ggccatttga 720 ttaccctgga acccggcgcc gaccataggg ttgttgaaac cgcccatggg gttattgaaa 780 ttgcggttga cgtagccggg catgttcgac atccctccgc ggttgttgaa ccctcctcta 900 cctccacgga accctccggc catgttgccc atgccaaaat ttgcgttgtt ctggtttgga gaattgaatc ctccggttcg cgcattgtcc ttgcgcatgg ggttgtcttt agggagtgta cggaatggat tcggaatggg gctagtatag ttgactagga acttgcgtcc actctgtcct 1020 gtagtggaaa gggagtcgat gtggtgctta gtggctgttg cggcggggag agatgtgaac 1080 tctaggaatg cctgactgta gagagaacac acatgagtac cggatgtgac atactaaagc 1140 tcgacaactt accetttact etttecatta accttgtgtt egetgaaagt tacatettte 1200 agetegteet egeaecegge ttegegtgte eageetegga tateateate tgtagteeae 1260 cagtgtaact ctgagatgag tagcgcaggc gtcgcgtcag gatcaaccgg gcgttcgtcg 1320 agttccttgc gtttcacacc ctgttgggga gttgtgtctt tctgcatttg ttgattattt 1380 gtgtctgatt gtgttacagg cgcgccattt gttgtgacgt tgggttgttg ctgaatagtg 1440 ccggagtctg tggagttgcc actgttttga gcgttatcgg acgcatcgag aatgagatct 1500 gtgtcttcct gcttcatgtc atggtcctgt ttgaagtcgc cttgatcatt ggcgttgtac 1560 1581 cactaccatc tccatagatg t

<210> 1833 <211> 2134

<212> DNA

<213> Aspergillus nidulans

<400> 1833

atcgttggtg tagaagcgtt tcgagatcga tgccccaact ctctcagccg gggtatacgg 60 ccaccatcag acttgtacga catcgtgcga cgctaagtcc aatttccagc tccagtctcc 120 cggatatcga ttagaacgtg gcgcgggata gtgtgaaggt agaatcattc cgtcttgagt 180 240 tgaatagcta tattatgaag aaactggaaa caattgtcca gtaagcattg tcggcaatgc gagaagaaag gagcacactt agcacctagc aaacatggat atggtgggtg tatctgcaag 300 tatgaaactg gaaaagtgcg gttcgcgcga gcgatgtaga tctaagcttg taaagacgga 360 agaatgcaac cacagacttt gttgagtaga aaaggaaacc agcctctcca acagaacata 420 gatgatgtcg cggggggga aatgaggcag ctagttagat atgaagctgc agctcgatca 480 tgacaaggca aagcaataag aaataggcga caaggtgtac atgcccaagc ggtatagtgc 540 600 gagatatgca ggcgctccgc cacaggcagg tccgctgtgg ctaagatggc gaaatagatc cgagctgggc ctgcacgacc acgtcagagt cgcatatact ttcaggccac gcctaaattc 660 gaaaaggcat gggtataccg aggaacttaa gctgtgcgtg taacaacgca aaataaacga 720 780 gagtagaaga tgtgagagat gcgattgcgg cagtcctgac ttgcgataga tctggaatct gggccttttt caacgtgaga acgtgcctcg cgctaaattt caaccctgct ggggcctctg 840 ggtctagtgg ggaattcaga tccccattcg caggggagcg atccatctaa agacgaccat 900 gagggateet ggegegatgt gegagatega egeeggtete geattegaga ttggtgtgae 960 gaaggcaatc attggtgaac atgctgcacg ttcgtctttg cagtatcaac ttcagctatc 1020 tctcgaaggg taagagggtc aacggcacca ggcgtcgttg gtcgataaaa ctggtgggta 1080 acgggatgaa gacaattcga cccacttttc tcaatatttg caagcgacga caggtacgaa 1140 tctcacatca actcaaaagg acgcggtatg accggcttta aaagcggttg ggccgtgcga 1200 ggaaggtgac aggttgaagc cggggcgagt ggcggaagat agcgcagaga cggcttaagc 1260 agaacgacca taggcaaaac agagaacaat atcagaatct ccactagctg atgatcgaga 1320 caaaccgcgt tgatagtttg atgggcagag aaaatatgca gtagcttagg actctccttg 1380 gccagtagtg ttgctggagc agaatggtct gatttgatgt aaagtcggat aatttgcccc 1440 taggctgctg gggagatctt tctggcagta cagtacagtc agcagtcggt caggtgctgg 1500

teactgcact tactggtcac tgaccacgge cgatcactac cggagacacc gaactcgacg 1560
tacagagtac gtgtgagacg ctacgtacce caactgactt ttagcaatge atcaagtcag 1620
tttcgagttt ctcgcatcat ttcgcatatg tcccagttgg ttcgcccgga ttcccaaaat 1680
aaggcatact tgccccacca ctcgcaatge attacgagca gggcgcagta ccaactacaa 1740
gacctcgact ctggacagct aagtggaatt tctacaccgg cattattgga cactcgagac 1800
tttcttgcta acaattaacc ttcgttggtt agtggaatac cctgacgata cacaatagaa 1860
gcgaggcctg tagaaagtte gctccgagte cgaacgtte gttgcacage caacacaagt 1920
gaccggctat cgcgagcca gattgggcaa aagaaagttg tcttgtcaca gagaacgtga 1980
atgctgagaa gtgtggccte gaccagtgac gggcttggag gcattcccag tattgtgatt 2040
tcttgaagct gagacctccg cgcagagtta cgtttggaac gggccgtgaa ccaacacagg 2100
tcgcactctg gttctgaacg gttggcagtt ggat

<210> 1834 <211> 9968

<212> DNA

<213> Aspergillus nidulans

<400> 1834

atctacagca acaccacgtg agtcgccggc cattggtgct gtgccgcgcg gcagtcgcaa 60 atgccaatcg taacgtaacg ccaatgccaa cgcatttgcc agcaacagct ccctgtatcg 120 ctcccagtcg caggccgaca tgacggggct ttccccgagc gtgcgcaaca tgaccacctc 180 gtcgcagtcg ctgctgggct tgccagcagg aacgagctat ggctcgttct cgggccaatt 240 ccagcccact agtacgtcaa atctgctgtc caggagttca gactcgctcg ggcagctgag 300 360 gagctcgtat gactctttgc agggagtcca gaggaatatg aatccagtga cgaattaccg gcatacttca ctgaactcgc aaacgctgtc accgcatgcg caggggctga gtacatctcc 420 acagcagtcg ttggatcgga tgcagcagct tcagaggcaa tcgccacata cgcagtcgac 480 ttccgctccg tctaatgcct cgccgatgct ctcgcattcc cagaaccagc aatatacgca 540 gtatcagcaa tettegeegt atcagacaea gteggeteaa tateageage eagtgtetea ,600 atatcagcaa ccccaaaaga cgcaaccaac tcagtaccaa cagccgcagc aatatcgaca 660 gccgcagcag gctcagtata cgccgcagac gcagagctct ccttacctgc ctcagacgca

780 gtaccctcag tatccttcgt cacagcagcc gccatatcag cagctacaga actaccaaca gcagcagaag tcggcccaag taccacaatc gagccagcag agctatccgc agcaaacgca aataccgcag acaagccaac aaaactatca acaagcgtcg gctcagcgag caccgcagac gagcccggta cagcagggat atcagcagaa ctcgacgtcg gcccagcaag cgccacagct gagtcaacag agttatgcac cacaagccca gaagtcagcg caaggaccgc aggcgagccc 1020 ggtgaaacag agttaccagc agccgggcca gaaaccgtca cacgcaggcc aacagagcta 1080 tcagcataca gcgcaaagtt cagctcagca acttccacag tcgagccaac agagctttct 1140 gcttagttcc gcccaggtac cacagtcgag tcaacagaag ggttatcagc aagcgtctac 1200 tcagcaagta ccgcagtcta gtcagccgag ttatcctcag caagtaaata aaccagcgca 1260 gctaccacag ttgagccagc aacagagtta cctgccggga ccgactcaag tgtcccaatc 1320 aagccagcaa aaaagttatc agcaagcagg tcagcaagga ctgcaatcga gccaacagag 1380 ctatccacag caggcgcaga catctgccca agcgcagtcg agcccgcatg tacaacagta 1440 tcagcaacat gcgcagaaat cccatcatgt actacatcct caggcgcagc aagtgcagca 1500 aaatcagaaa gccgctcgac cttctcaacc atctcaggct caggctaagc cttcaccatt 1560 gcagtcgcag caagctcagc aagtgcaggt tcaagctaac cacacttctg catcaaatgc 1620 ccacccagcg caagcaaatc ctcagcctca acgggcgtct caacaggtcc aggctcagca 1680 accageteaa teteaaaaga egteteagea ggegeagaat eageaaacee tgeeaaacea 1740 ggcttaccag caattctatt ctcagcatgc gcaacaagct cagcgttcac cgtaccagac 1800 tcatatgcag aatcctcagt atccgtatac ataccagcct cagtttgctc aacagtacat 1860 gcaatcgcca caattacgga cttcgcaggc aacccagcag cagtaccagt cacagcagtc 1920 ccaaacctct caatctcagt ctccgcagca atcagtcatg cagaaacagc caacaaccca 1980 attgcagcag gagcagcaac cgcggtcaca agcacaagcg caacctcaga aaccgcctgc 2040 acagaccaat caattagctt caaaacctcc cgctaaagag ccaaagaaga agaaagctag 2100 caagaaggag gccaagcaga agcctgctgc gtctcaagct gtatctcaga ctgcgtccca 2160 acctgcaccg caagccaggg catctcaaac tgctgcgtca caggcgccgc cacaggccaa 2220 gggctctcaa gtcaccgcgc agtcctcagc ctctcagccg tacgcctccc agacttatgg 2280 ttcccaagcg ccggcctatc aattccacgc ccaagcatcc caaccatacg caccacaagc 2340 acacactcag caaaatactt ttcaaactac tacctcccaa gcacatgctg ccccaacaaa 2400 ctctttccaa actaacacgt ctcaatcaca tggccaagct cattctttcc aagttcccgt 2460 ttcacaaccq catqcctccc agatgaacac ctttcaggcc acgcctcaag caaattccct 2520 gggageteaa ggeteecaac etacgeaaat ecetteteag eegteaacce aaccgaaagt 2580 tgaatcgttg tctcaacaat ctcaaccgtc tcagcaagtc cagcctacaa ccaacgggaa 2640 tggacaggct tcgggtacat ttatcacaga aaacccaacg cagaagaaga ccaaacctgg 2700 agaccccaat cacactccca gaaagcgagg ccgtccgcgg aagcaacccg gcgaagcaac 2760 aaagccgcgg aaaccgaaga gacccagaaa tccggatggc actgttgact tatctgcagc 2820 attgcctcca aatctagctg ccatcccggg ggtgggtatt ccgttttcca tagctccgaa 2880 teegeegeet geteeteeag ettetaegge gteeagegea eegeeggege etgtaategg 2940 actggatggt aatccgattc cgcagaagcg caagcgtgga cggcctcgta agtctgaggc 3000 ggacgggacg cctcgtaaac cacggccacc gcgggatcca aaccggccga aagggactgg 3060 geggeetegt gggegaeeee ggaaggtgga egtgetggea aggaagaaac tagaagagga 3120 gcaagcagca gccgccgccg ccgccgctca tgctgcggat caaaatagtc agcctggagc 3180 cggccaacct gcagccactc aagcgccacc cagtcaagca caacatggcc acatgcaagc 3240 tgggcacgtc caagtcaaag tcaatcaaac tagtcaggga cagccaagca aaggacaagg 3300 acaaatccac cagtggcagg tcaatcaggc caaccagagc cacgtcagcc aagcacaagc 3360 caaccaagcg ccaacgaatc gcgcacaagt cacccatcaa actagtcaag ggcaggccac 3420 acaagggcag gcccaatggc agattagtca agggaaatct ggctcggggc gaqagcaaqt 3480 cggtcaagga caatttggac aatctgtgca ggcaccgtct ggacagacca atcagtatgc 3540 gcaagggact caccegggac atgcacacce ttegcatgge catecatege aagegeeegt 3600 teageeteag teteaaaate aggetgeeag aceteaagge eageageaaa tgeageeeca 3660 gcagcacgct cggcacactc acgcgcagca agcgcagcca atgcagaatc agttgcgggg 3720 gagccccatg caaagcatgc aagctagccc gatgcaatcc atgcaggcga gtccgctgca 3780 gaaccagata ggccagagac aacctgtgca gcggcctcct gtgcagacat cgagtcaacg 3840 acctcagtcg cacttgcaag ctcaggtgaa cgccaaaccg cagatgcagg tccagccaca 3900 aaaagcgcag cctcagatgc agaaccacat gcaggccaaa cccgttgtgc acgctcagac 3960 gaccaagact caggggcaga cccagcaggt acagcaggca cagcaagccc aggttcaaca 4020 agcgccagcc cagggtcagc cgcagaaggc tcaggttcag cagctggctc agccattgca 4080 gatgcagcga caggcgccgt cgccgatgca gacaccggcg cagcggcccc atcaaccgca 4140 cctcttgggg catggccagt cgcagttgca tcacgcgcag gcacagcagg ggcagatcca 4200 ggggcaagcc cagactcggt ctccgacttc gcaagctcag gcgcagacgc acaatctcgg 4260 caaggcacac cctcacgctc aaccaactca acaagctcat tcatcgtatc ccactcactc 4320 tacccactcc teteacteta eccaeteete teacteegee caateegeee aateegeate 4380 gtacccgcac tcgcacccgt accaaccaca attccaggag cagataccgc agctgcacat 4440 gcactcgcag ctccaccacc tcaaccagca acatcctgtc tactcacaat tctcgcaaag 4500 acaacagcag ccatcgatga cgctcaaccc gcagaccggg cagaagcggc cgtcctcggt 4560 gctggacgac gatccccgga aacgcgcgta tatcatgcca catcagctct agcagtcctt 4620 tgtttggtgt tctgagatac catggcgcaa ctctctctga ttacggtctt ttccttgttg 4680 cttggttgtt ttgcttgctt ctagccggat cttgtttgtt aatgcctaat cctgggcttc 4740 attttctctg ttcggttgtc aggtcaggtc ttgcatttct atttatttac ataataatta 4800 gcgctagcat tgacatatat aatcaacgct caatacccag tggccgtgaa aaggcccagc 4860 tgcaacgttc tcctgttcta gtcgtcgtag tagcagtgcc aaccgctcta aaccattcac 4920 acctttcttc cctctcatcc tttccagctc caatccctaa tttggtcccg tttccatcgc 4980 cattcctacc acactctcta tatcccctca gacgcccctt tacccacttg ccaacctcat 5040 caagtaagcc cagatcaaca cccgttctca ccccgttctc ctcaaacatc ttcaccaaac 5100 tcaccgtatc cacattcccc ctcgcccccg gcgcaaacgg gcaccctccc agtccagcaa 5160 cactecegte aaagaceetg acceeaactt cataegeege ceacacatte tecagteece 5220 taccccgcgt atcgtggaaa tggcacgcca acctgtccac gggaactccg ttctcaagaa 5280 gatacctcag taacgaggaa gtgagacccg gggaccccga tccatctgtg tcactcaacg 5340 caatttcatc agccccagac tcaagtaaga atctcgtaca gtgcagcaca gcagacggat 5400 ccgttggttc acgcgtgatt gggtcagtga agatacacga tatatacccg cggactcgcg 5460 ggattccggc tttttttgca gcgaccgtca cctcgcgggc tcgaagaagc ccgtcgtcaa 5520 cagagcaatt gatgttgcga tggctgaagg gcgcggtggc ggagatgaag acgcatatgg 5580 atcttatggg tggccggggt gagtgcgaga gcaggaggga tagccctttg aggttgggca 5640 ggaggatggg aaggcagaag ccctctcgcg gctcaagttc cagttcaaat tcagtctcgg 5700 actcgaagct agactcgctt tgctggcttg actctgactc tgactctgag tctgactcag 5760 aagcagaggc tggcccgccg cccccggact gtgacagccg cctgacaacc cgatgtccaa 5820 gcacagecet ecaateegee aactgeggea ecaeetttgg agacaegaee gaggegatet 5880 cgatcgtctg tagaccggtg cctgctagcc ggcggatcag ggcgaccttg atctcagtgg 5940 ggatgaactc ggggatgttc tgcaggccgt cgcgcgggga gacttcgacg atatggacct 6000 gcggttcaat ttctatctca tcctcatttt tatgctcatt ttcattctca ttttccttcc 6060 gaagcccagt ctctggctct ggcttggact catggtagag gcgcataatg acttcgtaca 6120 atagagtggg atagccaggt tagcgggtga gcgggttagg gttagatacg atatatgtag 6180 ataatcagag gatactctgc ccctcagctc aagtcagagc tcaagtcagt aagcttacag 6240 tataatatag tacaattaga totgatogaa gtagcaaaga taagaggata agagggaaaa 6300 tagcccgcgg gataatagtc cgcagtcagt ctgaatcggg ccgaggctga gcagtgacgg 6360 cgatgacgac atgtatggaa tgtatggagc gtatggagtg taagggtcat ggaaagcgcg 6420 agttcgagaa gccgggagaa gaacctctgc cggtatcata cgtcgacgcg gattgtcctg 6480 gctatgacgg gcagtgagag tgacccagct ggtcgtctaa agattggctg ccacattggc 6540 tgccactgcc atggtactgt accggtacgg tattgttacc gttacaattg tacccacacc 6600 gtatccatat cgtatggata ccatacgccg gttgtatgcg gaccgtattc gtctgtccgt 6660 ttttcgtacc taccgtacct cccgtgtcta cccttcgtat cttcatacct cccgtaaaaa 6720 tgcccgatct gtttgtctga cgtgagagtg aggctgcact acactacgct gcaactgggg 6780 ttgggctggc cggagaataa atacagcaat acagaagata taaaaagaag gatcgaagaa 6840 ggacatactc tggcctgtat tattgtccta aaaacgctca ttgatcaatt gagcgcccgt 6900 tgcctgtaaa actggagcaa ccctgagaaa gtagggcttg ctagggctgc gggggagccc 6960 gttccccagc agccggttcg tcctagagag gtttgagcac tcccttccag aggtaatcga 7020 ggtcagcaat tccgtcaatc aggtgcagat gcaggagaca gcaaatcaag gtcgctgcat 7080 tagatgagct agatgagtgt gcattgtctt gtgctgtctt gtgctcggaa gggtcggaac 7140 teegeactic accatgaegg aacgeettet etitegagti aatetettaa tetattiete 7200 cctaaaccta ggcacccaag cacgctttga gctgacttgg cctgttatca agctggactc 7260 cccaaccgat tccccgcttg cttggctgtg gggactgcag ctgacgagcc atgcaggctt 7320 ctgcgactgt tgttattatt atgactatga ttattattat ttaaacatcg gcaatccccc 7380 cagttctctc caccctgttg cctacccaaa cgagtcctct gactagagat atctctagat 7440 atccaagect teagagacea tgcaeggeet tgtegeegee etgetetgeg ggetggetgt 7500 cgcagcgccc agctgcccag cgcccgcacc atcgctgggc acgctgcaaa cgctcaagta 7560 caactacctg agcgcccaga acaacggcac atcggcggtg ctggtccacg accagctcag 7620 caacgctgct gcccagactc gctgcgctgc cattggggag tcgctctacc ccttcgcgtc 7680 tgcgcccgcc gccaaccgca ctgagctggc gcatcagttt gactacctgg tctatgccca 7740 ggacctgcgc cgcgaccaag acgtctgggt ggccggcgca gatgcaggaa aaggaggaaa 7800 aggaggagac tgccaggcgt attcgcccag ccagagagag gtcgtgtctg tcccctgcga 7860 cegecgactg ceggegetgt geactgeeaa tgtgeeceeg actegggata tegaceggae 7920 tgtcgtgccc tcgtccaagg tcaccgtttc gaccgcgggt tacacactga ccggcatacc 7980 gcgatgcgcg gtccttccgg ttcctcggca tcccgttcgc cgacccccct gttggtgagc 8040 tgcgtcttgc gcctccgcgg gagtactctg gccctaaacg catcgacgcc accagactcg 8100 gcgcctcatg tatccagtcg gtctctggct ttgcgcgtcg cgcgacatct ccgaggactg 8160 cetgtacttg aacgtettea egecaategt geeegagegg eeeggeatag tgegeaagee 8220 cgtcgcggtc tacttctacg gtggcgcctt caccagcggt accgcgtcga tcatcgacta 8280 cgacggcggc aatttcgcca gtcgcaacga tctcgtcgtc gtcaccgtca attaccgtct 8340 cggcgcgctc ggctggctag ccacgggtaa cctgaccacc ggcagctacg gcacccgaga 8400 ccagatcctc gccctccgct gggtgcaggc gaatatcgca gcttttggcg gcgaccccag 8460 ccacgtcacc atctttggcc agtcggctgg cggccagagc gtcgtcgccc tgctctcctc 8520 gaccgccgcc cgcggtctct tctccggcgc cctcatccag tccgctcctg tcgaccttcc 8580 ctggtacacc cggcaagtct acagtgaatt ggtcgtcccc cacgtcgcgc aagctgtggg 8640 ctgcggtaac gcgacgactg agtccgagtc tgcgctgctc cgctgcttgc gcagtctgcc 8700 ggcgacatcc ttcctcgaca actcgacggc ctttgaagcc gccacatcgg caatcgcaac 8760 cgacgtcgcc gactcctacc tgcatgtctc gcagctcctc gcctcgattg aaccctttat 8820 gcccatggtc gacgactccg actcggcttc gggcgtcatc gacaaccaat tccaccgctt 8880 ggtctcggaa aacactctcc ccaaccgcgt cccgaccttc ttcacgacga cgccggacga 8940 agcagccctg tacgtgaacc ggctggtgcc cgaactcgga tcggcgcaat ccggcctcaa 9000 caccetgete ggtettgett accegecece cetegeetet gegeteatea atgeaacege 9060 attecetaca gacacaaage agecagatte tgteegtate gagggegeet cegetettae 9120 ccacagtgaa tggtcgtgtc ctctcgcgca cctcctccgg gtcgccgtcc cgggcacatt 9180 tecgaeeetg tacagegeae agateaetga egggeatgeg eagageaaeg getegaeaee 9240 ggatatttgc aagccgaacg ccatctacaa tgcgacctgc cactcaaacg atgttctgcc 9300 ggcgtgggga acgctgaatt ccaagacgat tgacgtactg ccgtactacg ggctcgctga 9360 cctgaaacac agtcagtttt tgaatgatat ctttggttcc tttttcaggt catatgaccc 9420 gaatccggat cttgatatgc tccgtctgcg cgggagcgcg tatgaacata ccctcaatgt 9480 attcggagcc gggtacaaga tcgatgagta tactcctgcc gaaaagaccg tgcctttgct 9540 gggacgcctt cctggccgga cggccaatcc gggggttacg gagcagtgtg acgttttcga 9600 ggcgtatggg tatacctttg agaacgccgt ctttacggag gcttgattca ctgaagaggg 9660 aggttggttt ggtgttttag agtcgtaggg ggctggatat aatgaagtca tggtatatac 9720 atatacggtc tgcgttagta gatatccaat aatgcataaa gagattaatt gataccactc 9780 cgtgcaaagt gtgcaggaat ataggaccat attctgtata tttgttcata atctagcaga 9840 atccatgttg agagtcaggg tcgttatcag tacctttgct gacttgatag ggaggagtac 9900 aaagttttct tgtaggtccc agccagactt cgccatctca acaaggggat atttgcgcca 9960 9968 cttcaccc

<210> 1835 <211> 2092 <212> DNA

<213> Aspergillus nidulans

<400> 1835

ttaatcagtc tggtgtcagt ggtaacaccg gtagctttct gattggcggc ctattacggt 60 ccaggaacga actatacaga aaggttcacg aatttacgat ctagccaagt aattggttga 120 tgttgatgtg actagaaatt cagatccagg gaaccgagtc ggagcgttgg aaaacaacga 180

cgctgcgcgg atatacaagg tatgtaaata cttacacact ttgtgcgtta gactatattc tagcacatcc atatttcggt taaatgctaa ccggcaaatg acccatacca agaaacaatg 300 ctgcgaaatc aggtaccttc tatctagccg agccgtccgg ccagcgtttt gaatattgat 360 420 ggatttgtcc agatgctcgg ttttgtcatc ttggggaacc cggaggacgc tgctccgcca aggccaagtg atcataccgt accggccccc agcaatgctg ttgcccctcg tgacagtgaa 480 gatttttggc ggataaacca ctgcatctgg gctaaactga aagttgggag agacggaaaa 540 agcaatcagc tgcggctatt gatgttggat gaaggggtcg aaggctctag taaggctttt 600 ggggtgctct agatggacat tttccgcggc ccgcggggca gctattccag ttaaaatgtt 660 atctttggag cggagatgcg cctcgctgaa gcatgtgctt ggtcattgtc tatggtaatt 720 780 acctccggcg gggtagctgt accctgtgca gcgatgtccc agaataacgc ccgccttaga 840 gtagccgctg gtcatattgc cacgaaaatg gattaattgc taagccttac tcaggctgac 900 tacggcttcc gctgaccaac aggacacaaa ggtcaggatc atctgttgag tgagtgctct ctgttggtga ccggtgaaga ttgaacagca ccagttccag aagtgcccca ccgcgacatc 1020 accgtcccca cctgccgttt cgatgctctc gagttcaacc cctccatcct ttttctgtac 1080 tgccctgctc ttgctccaat cccccctttt atttatatac ccagacaagg caggtttgat 1200 tactagacag tacggtgttc tacccatccg gcactctgca aagctctctg accgcggctt 1260 tecectetea acagataceg caateatggg ttacacegag ettgateaat tggecateaa 1320 caccatccgg cttcttgcgg tatgcctctt cctgaactcc ctcttctttt agttctgtgt 1380 tttgtggtgc tcttcgtaat caccacgcgc cccctggagt ttgcggagaa tgaggtcacg 1440 gaattgggag tcagacgctg ccgccgataa actcaatcca ttgagccctc atcgcgttat 1500 tgtttgtaca ctgttcgctg cgattactcc gctccgggga ccgagttgca cagtgtcatt 1560 gataaaaagc gttggaatga cgttatacta acagcattcc aggttgatgc caccgcaaag 1620 gcgaactccg gtcaccccgg tgcccctatg ggcatggccc cggtggccca cgttctcttc 1680 aacaagttca tgaagttcaa ccccaagaac cccgaatggg ctaaccgtga ccgatttgtc 1740 ctctcgtatg aagcccattt ctcttgcgag tacgatcttc gctaacgtgc tcgctatagc 1800

aacggccacg gctgcatgct ccaatatgct ctcctccacc ttttcggata cggcatctcc 1860 atggatgacc tcaaggcgtt ccgtgtaagc aacaactcta ttcgttctca tactgatcat 1920 tcaggccgtt agttaattta tcaattctta tagcaactcg acagcattac tcctggtcac 1980 ccttgaggtt acaacacac ccgtattgag gtgaccactt gttcccctcg ggcaggggtt 2040 2092 atcccaacgc tgttggtctt gccttttgcc caagctaaca gtgggtgtgt ct

<210> 1836 <211> 2523 DNA

<212>

Aspergillus nidulans <213>

<400> 1836

60 cgcattcaga agtgcatcga gacttttggc cgacacaaca ccgacaagac gttgcccccg aagcctgcgg ctgtcccgcc agagggagcg accgttcatc tgcaaaagac tccccgagtc ggtcccgaca ccggctctcc cgaagtgcag gtcgcaatcc ttaccgcaaa gattctgaat 180 240 ttgtctagac acttggaaac tactaacaaa gacaagcaca acaagcgcaa cttacggctt ctcgttcaca agcgacagaa gctactccga tatttgcgaa agaaggaaag gggtggtcca 300 aggtggaaga atcttatgga tacgctcggg ttgtcagacg cttcgtggaa aggcgagatt 360 agcatgtaat ggttcaagcg tttgtacatt agttgtttct gaatctctct ccaacaaagc 420 480 gttggcttgt aactttacga tatttgacct ctggcgtgtt aggtctttcg acgctgcttc tccgtctttc ttgtatagat acaatttcaa tcaactgccg tcactgaggg tatgttacgt 540 gtttcttggg gaagctacgt ggccagcaat atagacttcg aaggtatttc tgtagctagc 600 tgagtctgag gtgctgcttc atctaagttt atcgtcctca ccctaaatcc atgccaggca 660 gttaaagcta attttgacct gcaccgaaca atactgttcc agcctcgtct tccaatgcag 720 gcagttggct agggcgtgat agcgcttaca gaactaccaa cctcctgata tgaatcatat 780 ctaggttcat tccctaataa caaagacagg caagaaagct acgtctattt ctttctacac 840 gtaaactgag ccaattgggt tgctgccagc ctatcgcccc gtcttattcg tatgctgcca 900 tgagtggacc tccgtataat tcatcctcag agccagcaat acgtctgatt tcctcttggt agcccacaat ggtgatgtta gctgaaccgc aacgttcaaa atgagaagtt aggaacaaga 1020 gtgatcgact aatgctgtga ctggacactg atggagggcc tctccaggaa tctaaacccg 1080 gcttaatcga tgagcatcct tatttcaaat taacacataa gatgatgata aggtcctttt 1140 cettacggac gaactacttt gcactgacag cetatgaate taccgaatgt tttatgaagg 1200 gtggagccgg ggccaaaaca gatcataaag tgcagtactg accgctttct gggtttgggt 1260 tetgeeggea tgteacttgt tettggeace teetteecea agttaatttt eeeteacaac 1320 ttaatttccg caacctcatc tcatctgctt tctaacactt caacatctca tcctaccgaa 1380 ggtgagtaaa cttttgctag caccagcagt ctatgtcgca accatagaag attgtatcag 1440 gacetttgag gagtetttgt gteetaaaat tettetetea ttetatatet teegeaegeg 1500 ctccccgatc ttcaggctcc aaatctgcca agcaaatctc tcaatgtaca tttccccttc 1560 ttagctaaag ctcttgaatc gcaagtcgga cctcgtttta tcacagttac tcttcattga 1620 ctttctctgt cgcgatattt cacgaagtcc ttgtctaatc gcgcaaacac aaatatacag 1680 tcagaatgcg tacccgttct cagccagatt cacctggtgg cttcgtctcc ctcgatgaca 1740 ataaacgcgc tactcgtcgt actaccagat caacgaggtc tgcttccaga gctgtttccc 1800 aggaacctac ttctgaacag cctgccgagc ctacaacaca accagcgact cggtcaaaaa 1860 cccaggcacg cactaccaag aagaccacta cgaaaaaagc cacctcgact acatcaactg 1920 caaagcctca aactcgcaaa ggtgcgaggc gtggaacgcg aagtgccact cgaagggcgg 1980 acacaatgcg accgaagaag tgcaagagag tgttgaaaag aacactcatg acactgtgcg 2040 aacggataat aaggaaaatg ttgatgtcaa cactggagac cttgagtctc gcccacttgc 2100 gtcggattcg gctttaatgg aacctaagaa ttcagagcgt gagtaccaca cctatcattg 2160 tttgtcagct ttttatgtca tcgtaaattt ctttcccctc ttctttcatc tcccttttac 2220 tctcaaagga gtcacaggaa tccagagatt cccagtccca aaatgtccga gtgctgcagg 2280 atgccgaagg accacaggtg tacgcggata tcaagttgac cgtgaaccga tatatgccga 2340 cttctccgcg ccggtcatca agggtcagat cgatagacca tttggtaccc caagccccaa 2400 gggacttacc ggtcttcgtc aagtacttcg cttaatccca tcccggaagg agatgacttt 2460 gaccatcctg cgagcgccaa tattggacta aacaaatatt gccctctcag gccaccctat 2520 2523 ctc

<210> 1837 <211> 3464

<212> DNA

<213> Aspergillus nidulans

<400> 1837

agegegecca aaateagetg ttetegeate tgeegggaag tttgaagate caaaaagtea 60 120 catteggaac tetteeteta tateteacae etegetagea ecatteggee ggaatgegaa ccgccaaagg tcgaattctc tgagaaacga tgtcacgtcc ggtacatttg cgccggagtt catcaaatca gaggatctcc gccacggcgc tgaccagatt cgtggacaag aaggggacaa 240 tgacttctcg ggaaataaat acgtctggtt acgtgatccc gagaaggcct ttgtcaaagg 300 gttagtttta gaagagcaag atggagctcg attactggta cagacggatg atgggcaggt 360 atgagcaacc ggtgctaagg tcatccgcat acttacaatc tgcaagcaac gagaagtgga 420 cgtcgaccaa gttgatagag tcaatccggc aaagttcgac aaggcagatg atatggctga 480 gcttacacat ttgaacgaag cgtccgtggt gcataacctc cacactcgat atctggcaga 540 tttgatttat gtaaggettt atetttette egettgttge caaageetga ttgacaatae 600 gttactagac ctactcaggg ctgtttttgg tgacagtcaa cccttactgt cccctgccta 660 tctattccaa tgagtacatt aatatgtaca agggacaaag tcgcgaggag actcggccgc 720 780 atattttcgc catggccgat gaagcattta ggaatcttgt ggaagagggc gagaatcaga gtatccttgt gacgtgagtc tttgcgacgc atccgtgtaa atgcaaattc tgacgcccgc acagaggaga gtctggggca ggcaagacag ataacaccaa aaaagttatc cagtaccttg 900 cagccgttgc aacatcagat aatatgtact ctcgctcagg aagcaagcag atgaacaccc tttcgcagca gattttgagg gcgaacccga tcctcgaggc atttggtaat tcgcagactg 1020 tcagaaacaa caactcatct cggttcggca agttcatcag aattgagttt tctcgatcag 1080 ggcagatttc aggtgcttcg atcgattggt atcttttgga gaaatcccgc gtggtgaaac 1140 ccaatttgca ggagagaaac taccacattt tttaccaact actcaggggt gccgagccta 1200 aactaaagca aaagctgctt ctgtcgaact tacagatcga ggacttcgct tacaccagag 1260 aagggaacga tacaattgct ggagtttctg acgaaaaaga atgggactcg ttgctcgagg 1320 ctttccatat catgaatttc tcggaagagg atcaaatgtg catccttcgc acagttgcag 1380 ctgtcctcca tctaggaaac attaccatcg tgaaagaaag tctacgggct gatcaagccg 1440 cccttagtcg agacgccctt gatagtgttc ataaagcatg ccagcttttg ggaattgaga 1500

ctgagccctt tgtcaagggc ttattacatc ccaaggtaaa ggcaggccgc gagtgggtag 1560 agaaggtaca gactccggag caggttcggc tggcattaga tgctttagca aagggtatct 1620 acgaaagagg ttttggtgac cttgtcaacc gcatcaacag ccgactggaa cgaaacactg 1680 tcacgggtga agacagctac ttcatcggtg tacttgatat cgctggtttt gagatcttcc 1740 aaaacaacag ctttgaacaa ctctgcatca actacacaaa cgaaaagctg cagcagttct 1800 tcaaccacca tatgtttgtc ttggagcagg aggaatacgc gcgggaacaa attgaatggc 1860 agttcatcga ctttggcaaa gatttgcagc caacaattga cctcatcgaa gtcacaaacc 1920 ctatcggtat tttttcttgc ctggatgagg actgcgtcat gcccaaagcc acggataaat 1980 cgttcaccga gaagcttcat tcgctatggg acaccaagtc caccaagtat cgcgcctctc 2040 gcctccgaca aggctttatc ctcacccact atgcagccga ggtggagtat tccactgacg 2100 gttggttgga aaagaataaa gaccccttga acgataacat aaccagactg ctcgcatcct 2160 cgcaagataa tcatattgca gctctgtttt cagactgtgg aaacgcagat gaggttgacc 2220 atcccagaag tcgcgtgaag aaaggcttgt ttcgcacagt ggcccaaaga cataaggaac 2280 agttgtcaag tctcatgaat cagcttcact caactcaccc tcattttgtt cggtgcatta 2340 tecegaacea caaaaaacge eegaagatgt tgaatgeeee ettggttett gaccaattae 2400 gctgcaatgg tgtcctggaa ggtattagaa ttgcgcgtac cgggttcccc aaccgattgt 2460 cctttaatga attccgccaa cggtatgagg ttctttgccg ggatatgccc aaaagctata 2520 tggatggaca gtctgccgcc cggataatgc tgcagaagct ggctctagat aaagcgtggt 2580 ttagagtcgg ccgcaccaaa gtgtttttcc gagctggcgt cctcgcagag ttggaggaaa 2640 aacgtgacga gctcatccgt acaatcatga cacgattcca gtctgtagcg aggggttttg 2700 ttcagcgcag gatctcaaac aaaaggctgt atcgtgcaga agcaacccat atcatccagc 2760 acaacttccg agcctatttg gagatgaagg ccaacccgtg gtggcgtttg ttctcgagaa 2820 tcaaacaact cgagacgaaa atgaagcagg accaatccga acgccagaaa gttgaggaag 2940 aaagacggcg agcggagata gagatacaac gaatccagca gaccctggag agcgaacggg 3000 cattggccct tgacaaagaa gaaatcttca aaaggctgca agatcgcgag gtagagctca 3060 gcgagaaact agcaggcgct attgccgacc aagaaaacct cgaagatcaa ctagacgaac 3120 taatcettge gaaaaagaag acggacgaag agetcgacet gcgaaaaaca caactcgage 3180
aggccggaga gattatecag cgcctagagg ctgagaggaa ggagatgcag cagaagttgg 3240
aggatctgga gcagaagetg cttgaggcac agagcagtge cteagagacg gaaaaccata 3300
tgagggaget tggacaagag gtcaaaaatge tgcaaagtca teteagtetg aaggagegga 3360
aactgcagga tttggaggca aaactgetga agaccgacca agatetggat gtcaagetgg 3420
caaaaacate aaaggaattg gaccgatega agaaagaagt caag 3464

<210> 1838 <211> 1993 <212> DNA

<213> Aspergillus nidulans

<400> 1838

ggtgccgcgg gagaggtaag gccgttgcgg gatgtagaag atgtcttcaa agcgaggctt 60 cttcacgcgg ccgccgtaga cgggccagag cgcctagaat tcggaaaaga gaggatttgc 120 cgcagccgtt agggccgaca atgaggaggt ggtcgcctgg gtggacggta aatgtgagtt 180 tgcgaacaag gacgtcacca ttgggggaaa cgatggggac atcggtgaat tcgattgcgt 240 cgctttcttc aacgatgccg cggccggaga gtacggcagc gttttcttct gttgaggcgg 300 aggacacaag tttcttttcg aagcgtccgg ctaggaggtc gtccatcaca tcaagcaggg 360 atgatacacg ggctgtgaaa cctgctagct cggagatttc cttgtaggag aacattagac 420 ggccgaaggc gtctgatgag gagagtaaca ttcgtctatt agtgacaaaa cctgtttcac 480 gcattagttc ctattcgagt acggttattc aaccgaaaag caataaggtc tcactttctg 540 tacggtcacc cattgtctgg gtgacttgat cagagattct aaagaaaacc gggacactgc 600 660 acagaatcaa acccagagcg ccccagaagt acttgataac gaaatcctcc ataaatccgt ggtataggcg cctacgcagg attcgattca catgcttaat gagggtgaaa tagcccttgt 720 ccaaggtgtc cttctcagct tcgtggccat gatatagagc aatttcttca cagtagtcga 780 ttaacctcga atggagaaat ctgaactcgc cttccaggcg agcttcgtcg gcaacgtatt 840 taccgaacgg cggcgtcaat gcgcgcatga cgttggcaga tagttgaacc aagagactca 900 taataaagag accttcacct ccaacactct tcgaaagcga gtaattgtag atcatcatgt 960 caagtattgg cttggccaga ttagagtaaa gttccgccaa gctatcagag aatcgggata 1020 cgtccactgt aatgagttga tcagggttct tgactcggtc gtccaaggcc gatatcgcat 1080 agaaggtcat gtttgatagg tatttgtcgt gaatgtgatc ggtaaggcgc ttgcggtagc 1140 tgagtgcaag cttgcactga tgataagaca actatttcgg ggggaaacat gttagctacg 1200 ttctgttccg acagcaatta gtttaaccct gaatgtgcat gatgctcacc atagagtttg 1260 tgaacgtcgc aggcaccgca acaatcatcc accacaccag tcccagcaga aagtcctttc 1320 cettteeteg caccagattg etgacaagee gaccgtttag etcagcaacg tacagactga 1380 ggagcgtccg cagcaccaaa aagacactat ggcttatcaa caagcgtaac tctttactcc 1440 gccagcccgg tatcacgatc ttgagcagac gtgccaagtt ccggaagaat tcacgattaa 1500 cgcccacctt cttccgtggt ttgtcgccgc catcgccgag actgctggtt cctggtttcc 1560 teegeagate cacetgaege tgaaaegeeg cettttgete egatatagea ttatgaatae 1620 gctttgcgag ggcagcaaat agcgcgagat agactgcgcg agaaatattt gtgcggtggc 1680 ggaggtacaa tgatgccagg ctggagagaa tctgtcggac ggaacgttcc ctagggagtt 1740 tcgactgagc agccatagtg acggaaatgg ccactcacgc aaggataaaa atgactttat 1800 ccggaatcaa cgtaaggcaa catgaccagc ggcgatactt ctttgaggaa agtgatgata 1860 ttgttggatg ttgcttgaag aatggtgaga tagctgaagt gccccatgca tgtgaacgcg 1920 gccaaaacac tccgcaaaac tggggatgga gccgaggtcg ggccagggtc gagttcgccc 1980 1993 atatatcacc cac

<210> 1839 <211> 3638 <212> DNA

<213> Aspergillus nidulans

<400> 1839

ccagatacat cacagatacat attenting tatagactag attendada atatent 60 caaaatcagat taggetacta agaaagaagat gtattatte gaegatteet atgaattagat 120 taaattetae taggetagaa agacaaagaa tagataccat gaggeegatta tagaagaaga 180 teetaatata ccaggaaaga gageegaat tagaattagaa attentingaa gaatgaaga 240 teetaatata ccaggaacaa gagteagaa gaattagaa attentigaa gaatgataga 300 ctaggeacaa ctaggeegaat atgaagact tagaacaa acacaggeaa gaggaaggat 360

attcccaagt ctgttgccat cgccaaacaa attgaccacc ctcagaagtc ttttctcgtt cagccacagc ctagcggcac taagccggtg ggcagagggc tcataaaaca gcggtacctt 480 aggttcctgt taagaagcag tatttaagag cccgaacaac aagtgtcaag tatcagttgt 540 600 acttcatcat cgttactcat aacgaaaagc gattttcgat gccaacgaca atgcaatgcg tgggcggtca tggagctcac gggcagatgg gcccaagtca atgatggatg cacttcaacg 660 gatctggcgc tacctgacta ttaactacga ttacaactac agcccttgtt gcctgcttac 720 aggcagcttc tgcttaatga gcacgcccag ccccaatgct atgatgggtg tcactttgca 780 840 tcaagaattc aaattgaacc cgttggtgtg ataaagaggt atgataagca tctagagcat cgagacgacg tcacagctga tcgaattaga agtaaaggaa atactcacca tgcccaaaac 900 aaagttaaca tcgcttctgg aggaaacggc taaggagtac gagggcaagg cttgtattgc 960 ccacaccaag aaacaaaagc ttggtccctg tagctcccgg gtatggagat ataaagtgaa 1020 tttaacggat gtaaagccta tgtccaacga tagagcagta gtgcttttgc gcatatcgtt 1080 agttcgtatt tcattttgta taggagcgat aaatatatat tctgcaggct gagatttatg 1140 tacttgatgt gccgttcata taaccacagt atattacacc atgtaggctc caggaacgag 1200 cttctaattg gtcaagtcag aataccatag ccccgcgccg tgtctttatc acaatcgccc 1260 cgctctggtt ttctgttctc aattccagga caattacagc cagattctcc tcagactttg 1320 tattgacagt aagtaccggc cctatttcct gatcctctgc agctgttcaa aatatattct 1380 atcaagtcat aatactacaa ttggctcgca gagaattctg gaattcgaga tgtgcttcca 1440 ctggctcccc gcacctcaca actgccatat cattccatct gtttccatta ctctttcctg 1500 tattectaca aactgacege ggtecagaaa tateettaga teetatacat etgggeteta 1560 gtcgtacggt tgttgctaat tcctgcccat ctaatccgcc ctctcgaatc tccgaacctc 1620 cgccctacgc gtccgtctga gagtcggcaa cgatacctga taaacataca acatgtcctt 1680 ccaaccaaca ccgactgaca tccccgtcgc aattacaacc ccatttacat cttccccctc 1740 cgacgaaccc cgcctgcatt cagaacgccg cataactcca acatggaccg tccagcaggt 1800 caaggcaaag ttggagacca tgactggcat accaccaagc agccaaaagc tccgtctcaa 1860 gacacccggc cgtgcagaac attgggttga tggcgatgac acaataattg gggagtgggg 1920 gttgacgcgg ggatgtgaga ttgaggtaca gttcatcaaa agaacaagaa aggtgatttg 1980 gtattaactg atgcctggat aggtccatga tacacggccc caagcggcac gagtgaattt 2040 caccgacctc tcatccgtgg agaagtacgt ccttccaaca gagacatacg aaagcctgcc 2100 gaattcggtc cttgcgtgga agaagagcca gaagctgggg cggtttgatc cgaacgcgct 2160 ttcgccagtt gaagcgatgg ctgagcaagc gaggaaggat aaggaggagg tcgagaaacg 2220 tggtaagtat cctttgttcg cttatcacca aacctgtgtg gtgaacgatg agaatctggt 2280 ggatggcggg tgctgttaat gacactctgc agacatctcc gtttcaaaac gagcaatcat 2340 tetecettet teaceacec atgteegeeg tggeacgate egettegttg geecegteee 2400 ggcaatccca gttcccggtg ttgacataga gaccgtggac accccagcac tgcccatctg 2460 ggtcgggatt gaactcgacg agccaacagg gaagaacgac gggagtgtca atgggaaacg 2520 gtactttatg tgcccaaatc ggtgcggagt ctttgtgaaa ccggagaagg tgcaggtggg 2580 ggattttccg ccgcttgggc tggatgatga gttggacgag gacatggagg agatctaaac 2640 tagagcaaaa ttggggtatt atataaaagt atgctaatcg actcaaatgt cgggtgagcc 2700 cggtgttcct cgttctggct caaagagaaa tgttggaaag gtaataaaat tgatagatgg 2760 atacaacaac accgtaccag ggtaacatga gggcatcgct aaaaccaaaa cagtcggaac 2820 agtgtcgaag ctacaccaac aagatgagaa acgttggaaa ttggtaacgt aacggtatgc 2880 aaaaaggtga gttgtaaagt cgctggaacc ggatcgggat aatagaacac ttaaggtgat 2940 gttgcctttt caactcaagc agcgggcttc tgcttcccct taggcctgcc tttaccggct 3000 gtagccttct gtggcctgga acgtgctgga ggggtgtttg attcgccgtc aagcgcatcg 3060 gttttagacg cagaaccagg agcatcatct ccctccgccg tgctagggac acagccctgg 3120 gtgaagaaca atcgagcatc tttgttgtat gtgtttgcga agctatagta gttacctatt 3180 atgggtaagc ggtgcaaaat gagtggtatg ggttgcgatt gtctaatact gaccacgggg 3240 aacctgaaag acgcatccct tgccagcact aaattggacg cctgagatgt ccactagaac 3300 tcgcccgttg acaacgtaga atatcatatg cattttcttc gcgttctttg gcttcttgac 3360 tccgccgggg ggtagttcaa cgatgcctga gccgatgaat ggtgaactca gaagcttggc 3420 gaacctgaat gatgcgccct tgacatctcg agtctcgata ccagacgggg cgtacgcgat 3480 atctgtacgg cgtcaggttc gtcgattatt gatgaaggtt tggtgtacat acctaaaact 3540 tectectegt etagagetgt etgtgtetea ttgteceatt ttetgatata accatgtaaa 3600 <210> 1840 <211> 2432 <212> DNA <213> Aspergillus nidulans

<400> 1840

caatactcca taatctcgtg aaaaaggtct tcatgcacca agggctagac atctccttgc 60 gccaaataat gttctatttt attttagatc gcaccagtgt actaaactat cttgtcattc 120 taccaggaaa tatatcatgt aagcaaggat ccatcgcaac tcacttttcg gctaggccga 180 agctccaata gctggaagta ctttttttt acaatactcc tcaataagat catctagaac 240 300 attgcaaact tccatcagca atcagcacta ccatagcctg tccagcaaag ttagggctag gctacagcat tctcctccta gctactcaac cctcgaaaat accactccgt cccccgtcat 360 ggacaatctc gacgactctg gatgcgattc ttggattttg ctgatatggg ggcaagttcc 420 tgttagaggg aaggettgac atetgeetca gagecacece gtatgataga gteaggaagg 480 gccctcttca agatttagag gagctggatc tacgaaaatt ataacattct ttcgtccctt 540 ttgaagtcgg tgatagcgat cccttagaac ctgattcaga gaagtgcttc gttgaatact 600 gaacggcgca agctagggaa aagatgtcca aggtggtacg gagtgtgagg tctactcgaa 660 ggtgaaggca agagtgaggc catgatgcca agctcacact tctttatgtc gtggcagact 720 ttctgcactt gagcagcggc tgtcatccct tgtctgcggt caattcctcg gctcctaaat 780 cccataaatc tggcccctct gactaccaga tatcccagtg ggccagtgtt cgacacgaga 840 900 aacaagttcc tgtgtcataa ggatctccca ttctctccag gatgtcaaac atccatggat aatccagttc cttgagcact cagtgtcctc ttctccaagc tcagcaagct cttgagaaga 1020 ccgtgaacat cgccattgcg tatcaaacgc cgccacagca gcagtcctaa atgcctatca 1080 acgaaccttg caggcctcca cgcgtcttag tatggtttct cgagataccg ggccgatcct 1140 cttgttgggc gggacacagc tgacccggca tgtagaatct agaaaccggc caagatttaa 1200 gctgatcaaa gcatcatata taaaatcgaa gcttcccatg cctatttcat acgcctggca 1260 ttagcgggtg acggtctcag acgttcgact tttagttcac gttatcgaga ggagacgagt 1320

aatatagtgg acgtccgtaa agagcccata gcgacaggtt tgctgtaaaa tatgattaat 1380 tgccacacga aaccaaagct ctagagatga tggattggct gacgggctat tcgcttgagc 1440 gtagattatg agatggcatt tggtgagtga ttgagggtaa tgtggagggt cgagtgtcaa 1500 gtgtcaggct cgagtattgt gccaagctcc acagcccaag cttgatctgc tggagcttct 1560 ccaacttgtc ccctgactgc tttttgttta atgctcagtc cacgatgtcg acgacgagat 1620 tgcctaacat cccgtctctt cgcaaatacc aactgatcca ggagcagtaa gttttggctg 1680 cagaatcaag ataaaatagt atctcattgt tatcagtgca agcctgaaac atgcagctcc 1740 ccctggggtc tatgtcagcc tcagtcctgg tgacccctct ctctggtcct gcgtgatctt 1800 cgtccgctcc ggtaagctac acttattgcg attgaagatg cctctaatga tctcgtttgc 1860 aggcccttac gcttccgcca tcctccgatt ccggatacgc ttccccccgt cctatcctga 1920 tegeceaceg etegtgacat tegetaegga egtetteeat ecceteattg tacceeteae 1980 cacatatact ttcagcactg gcgtatcaaa tgaagaccct gtcagcgcaa cggatgaaga 2040 geggttgccc ccgggaggct tcagtcttag acacgcattt ccccattggt ttggaagggg 2100 gagacatgct ccctcatcga ggactgtgag tctcaatggc tcgaataaag ggggtgcaga 2160 ggtaaacctc cacaaagatc ctacgcaaga gacttcagcg ccaaatccag atgagagcga 2220 gggcggggaa caagacgaca aagaagggga aggagaagaa cggacatctg ttgatattgc 2280 tccagcagaa gctccaaaaa tgaggatatc agtcccggtt ctagagattc tagattacat 2340 ccgaacttcg ttcgatgatg aggctgtcct tgattctgtg ccgctcgagg ctgctgggaa 2400 2432 ccaagtgcat ggcacgcatg gagagctcac cg

<210> 1841 <211> 4627

<212> DNA

<213> Aspergillus nidulans

<400> 1841

attaggaact catcetgetg gagtttcacc etgecetata teatettgge atacaaaaca 60 ceegttttta etaceegggt teeatgggea gaatettgae egtgettget egaactetaa 120 ggaegeagte aaggegagge acagatggaa gagttgcaaa egeeggeete ataaatggea 180 tacaaatget gaatettgta tettgaacaa aaataataga ateetetata gaeggeatet 240

tttctttctg gttacgtaga ttgtttatat accgcacagc agtagctctc cccgttcctt cttcctcctc acatggagct aagcactgac aagtcgacga atcgatgtat gtgttttgga 360 accggagagt acaccgctta gaagaatgcc gtatactcaa cggtaaggat aaagcggaac 420 ggaagccaga actaggacta tgtagtcgcg tccgcctggt tacagcgatg gccgcccgaa 480 agcaggagtt ttttcctcaa aggagcctgc gtaactgtaa cagtggcttc atctcaaagg 540 600 gagacgacgc tgatgaggcc gatgcggaca tattgcaggc aagccgttcg acgatgcagt 660 ctcttgcgaa acgtgcgaat tcgtcttgct gtagtagacg cggtggcata cagtagctgg gctgtgtctg cctcatgaat gcatctacac aagattgtgc acagcctcat tctgcgttca 720 ggaagactcc tgtctcttca gtaagaaaag acgtgatgtg gagtatgtca gcgccacgct 780 840 tcattcctcg acctcgtact cttccatctc aaccttaaag tattcagcga cctgagtctt ttcagcagcc gcgtattcag aatcgacaat aaaccgcact gctgcgtccc ggcctttttc 900 tcctggcttt gggcgctctc cgttggcagt aactggaatg agagggtgat gaagagcccc agtcgtcggt gctccttttt ccgtctttga gctgttggtt gctggtccct tgcgcgagtc 1020 ctttgtgagt ttgtcttcat caatcgagtt ggtgtaccgc gggagattct gttcttctgc 1080 ctctttgttc aatggaatgc gtacggtgag gaagcggtca gcgggaaaat gagggccgac 1140 ggtcgtagca ctgcggttgt gtgtgtatag ctcgaggagg tcaagtagag tttctaaatc 1200 cattagtcct ctgatggctt ctttgtggct tcgacgtacc cataacctcc tcccggcttg 1260 ttctccatct cgcgtagtct gtcccaagct caacctcctt gattcgttgt tccagtaagc 1320 gtccggcgag ctccaggcag ctgaaagcca tcgtagatgt cgtctgcttg agcggcgcaa 1380 aggtgcgata gaggtcttgc gagatgcggt aggctacgtt cgagacttct gattgaggtg 1440 taagtctata ctgtcttgcc agctttatga gagttttttg tggatgccgc gttcgaaaat 1500 cgaaaccgga actctcgagc atgagtctct cgaggccgat gatgcctcgg gcgggttcgt 1560 cgagtatcta ttagacccga tgtcagcatt cagtcgcaag gcattgttgg aacaagcacc 1620 atacctgatt atctgaagag atgtgttctg attgcggtaa cttgagatta tacgccgcgc 1680 atagaatete aegegaettt ttgagegtgt ettegatett geaggeeata aacagggeag 1740 ccgcggcagc atccttaacc gttagactcg gtcaacaaaa cgagaatgtc agaaacctta 1800 ccatattatt gtagtccgtg tcgtggtgta tcagccggaa cttgtgataa tataccactg 1860 cagtattgaa tgttcgaatc ggcctatctc attagcaagc aactttcaca gttaatggag 1920 tgatccacat acagattcag cgcccgacga acattatcga tccaggtcac gccctgcaga 1980 cgtagagact cctcacgcag aggattgacg cccattgcgg ccaggcattg ctggatggtc 2040 tgctcgaaga tatacggctt tgctacctgg atgaaggacg ggtgaattgg cggaggatca 2100 ggcagggcca cgtcggagcc gggagcagtc ctcgagtctc gctgctgttc aggagccatt 2160 ctggagccga gcttgaaaat ttcctccaga aaggttccgc ttgatgattt gcggactgcg 2220 ggattgctat ctggaacatc aagcagctgc tgccacgtga cggtgaaacg tttttccgag 2280 ccggctatac tagcaatagg tgagcgagaa ctaatagatg agatggtgat ctagatatga 2340 aaagatgtaa tttgtatttg cttaatctcg taaattatgt ataaataggt gatggtggaa 2400 tattatcacc acaggeteag gggaactata tacttegete agecataett ettgageage 2460 ctctccatga ttgatacagc accagatcga tatccagacc caaagatcgc atggtgatta 2520 agatggtgat acctatggat gttaggctgg aagcaagtgg gaggtcaagg caacttacag 2580 ttcatacage etgaceegat ecteatacte etcaaeegge tetgtetteg geaegatett 2640 atgatactca ttgaagaaag ccgacccgaa tcccccaaac atcttcatga tccccaactc 2700 atactcactg tgcgcataac aagccgacgg gtcgtagacc acatcaccaa ccacctcgtc 2760 ctctttccgc ccactcccta caatgcggcc gcggctggca ttcccactcc agagatcccc 2820 atggacaaca acaggagtaa ttccctgccc ttttccagac gtatcgtacc cgagatgtcc 2880 atececcaaa agegeeggga caacaatgte tgetgtette teaactaaac teeteaatee 2940 ataatctttc ccatttcgct tttcggacgt cgccaagatt gtcaagagcc gctcatttgc 3000 ataaaattcc gcccacgact cacacgatcg attcggctgt tttgtgtccc cgcaaaacgt 3060 cggcacgggg aatccaaaca gccgctttcc cgtcttcggg tcaatcgggg cgggcgtcga 3120 atggagettt eccageetet gtgeaagaga tggaceacea tgaceageag eteggagate 3180 gaggaactca gtcgcgagga agtagctctt tccaggcttg ccgccctctt caagagggcc 3240 ccaagctatg gcgcggggac agaaacccgg cacggcggac gagatagcgt tcagggattc 3300 gtattcgcct agaaacatct ccttcgcggc ttcgccgtcg gcagaagtct tgacgaagta 3360 cttgcgctct tcattctggc cgtctgtgcc tgggacggtc gctctgacta cgcctgtgct 3420 ggtgaagccg gagcctaggc cggctgtgct gagtgtagct ttggaggggt tgggaatgga 3480 tagggcgcgg agaattgagg ctggtacttc ggacattatg atagtataag atttggtcgt 3540 agtagcataa atttcgagag tgtgagatgg atatggagaa ctaacgactc agggtacctg 3600 aatgatggtg tggtcctatg acgttatttt aaactcttat cgataaggta tttctatggt 3660 tgtggcctgc tgaatagtgc caataggaaa gttacggcct aaaagtatat caaatacaag 3720 cacagtgatg gagtccaaga tattttgtac accataagtg gttcatttcc agcatcaaac 3780 ccggcaccaa ccaggcagag acaaggaatg ggctaattta caagcaacgc taagagtgtg 3840 tcaacgagtt taccaagtgc agtgccgtct tcgttcgctc gcgaacgtca aggtccgggt 3900 catgttcaag gctagccagt cgatctagta ccccaattga acgtagctcg agtgcgcgtt 3960 tccggcaacc ctctcgatcg tgaacatcat cctcatatgt gaggttaatt accacccaca 4020 cgcaattggc acggacgtct cggtggctgt ggttaaagta acccatcaaa taacgaatga 4080 gatcgcggtg tgagactatg agctgccggt accatggaag gcttgcagcg aggtggatga 4140 taacgaacgt tactgcgacc aaaatctcag tggggacctg aagcgcgcga tggtttgggg 4200 actctcgccg atgaggcagc tggatagacc ttgggcgcag tttatcggcc aaggtatcca 4260 gcagcaaatc ctggccgagt tccttgaaga gatagtcaat catttccgat gcaccaggcc 4320 cacatatgac atttcttaga agatcaaagg tttgctcttg cgccgcaatg tcatcctgac 4380 gggcttgtgt ggtttggtca agatcgccat gcaaagcgag cttacgtcgt ctagtggcgt 4440 ctggaaagaa catatctaga ctgactttgg atgatggcac aggatcggtc attttcatgt 4500 cctcatccct ctcccggaag tcatccatcg gattcagcaa gtctacccgt tcgccagctg 4560 aattggcccg actcatcccg cttggagtgt tactgtctgt atcgtccgca gtctccgctt 4620 4627 attagaa

<210> 1842 <211> 2134 <212> DNA

<213> Aspergillus nidulans

<400> 1842

ctggatggag gccaagtgaa aagacagcga agcgacgatg caggtggccc tcggacaact 60 cagagcagtg gacgtgtcgc gggttcgcat gcagttagat ggtgtaagac tgggaaggcg 120 acaggaggcc aggcgggatc agcggggaaa taacggagca aatcagtgtc agagcttcca 180

ggtcgcgggc caggttaaga gattagagga ggactggctc ttgctcttgt ggtggacgga acgctggatt aactctggct ggactggaac gggacttgga gaggggaaag atcacgttat 300 gcgtgactaa tcaaagcaga gaacctaatc tggctgtggc tggtacgatg tctcaagatg 360 caaagcaccg ccacatgagg ctgggctgcc acggcgattg ctgacaaggt gaggtggacg 420 atggaacgat aaaacctgga gggtcgggct agggtcccaa ggtttgcttc tgcagaaggg 480 cagagtcagt gagccacaga tgtccagaag aacaacctgc cgcagacggg accgatctgt 540 gggtacaggc gacgggggtg ggtgtgacca acgggcaaac ctgagtgtag ttctagagta 600 660 gttggtccgg ggggtatgcg ccgtacgcaa agcaggatgg ggattagtgg gtggaggggc acaaagtccg gaggaatgac gaggagtgga gacgaaggtt ggagatagat gagcggtgca 720 780 ccagacaaag cgaggccacg acgctgtaga tttgacgaag agttgaagga ttcgttgttg agggggactt ggtcacacag gataagtcgg ccaggccggg ctgtttgatt ggctgtggct 840 atgcatcatt tgtaagctgc acagttcaca tccataactt agaacttgga aaacacactc 900 agtggcagaa tccgatacga ctactgtacc tacgcccatg accgtcggtt agcgcggcgc ggagtttctc ttccgcttct agtcaggcta actgctagca aggtcggact cgagacctga 1020 cgaaacagga ctctgcaagc gcggtaatgg cggcctcgat cagcaacctg tgaattgggc 1080 agcgagcgaa agaaaaagcg aaaaagaaag gaaaatgaaa gaaagcagcc gatgataacg 1140 aagaaacagg cgaagagttt aaacgggaga agcagcaaaa gggaatgatc aggctggcat 1200 gctgtgatgg agagcctcgt ccgcgatcga tcctggtcat agcacactgg cagtagacgg 1260 agagaactcg gaggagcggc caacgcgaag gatgaataaa acgggcagtc ggctgggctt 1320 ttcgagtacc attttctaga tcctttacta ctgtgactat gaccgtgacc gtgatatcga 1380 gtcaattcga gttcagaatg ctacagccta cgctacgata agcgccagtt gatcacgatc 1440 aaagttcatg ctgaccacga gcgatgatca gatcccctaa cgtcgaagca tcctttttcc 1500 gaagttggac gacatcttcc aagcaggaaa tgatcaacaa tccatcaaag ctgcggagga 1560 tctaggatcc ttttgcgaag aacaagcaag taatatcatg gaagcgcctc gtctgcttcc 1620 ccattgttta gcagtcttga agagcgccaa tcgcgttatc tcgcacgacc actgcttgtc 1680 gactgccagc tgagcatccc tagtggctaa cccagtggcg aaagactccc ctaatgcatg 1740 acaggatgca aggatctatt gagttgattc taggcttgca ggcgctgcag gctagccttg 1800

atgctgtaga ttacggcgcg gcgcttccgt ggcatagcat gttggattta gcagcgcacg 1860 ggctgacgag gccaccctgg acatgacgcc ccaatgcctc aagaggatcg gacgcactcc 1920 cattgaccgc atggtcgtag ctatttgagc tgataagctt cactccttgc tcttccctca 1980 gactatacga agtcgaagta taccagcgac aggaactact ataagccata cattccatac 2040 cgctccgtag catgaatcta cagtactata tatactttgt tattggcgtt gtggttgact 2100 cccaaaaaaa aaataattag aaaaacagcc aaaa 2134

<210> 1843 <211> 2963 <212> DNA

<213> Aspergillus nidulans

<400> 1843

60 cccttgtttc aacttctcag ctgcgaatca aagatccatc aatacgagca accaaaatga acqtcaacaa aaqattttac cgcttcaaac aqtgggctgg ggaaagaatg ggcggcgagg 120 tcaagaccaa tgtctctgat gactttaaag ccttggaaac ggaaatgagc gtgcgccacg 180 aaggtaagcg aatgctggac cgattttgct tgtttacctt atgctgaaat tccgcgtggt 240 ttgaaggtat cgaccgtatc cacaagtcca tgaccgccta cgtcaaatct atttccaagc 300 gcagtgaagg ggacgacaaa gagaaaacat tgccaattgc acacctgggt ggtagcatga 360 ttactcacgg agaggactat gaagtgaact ctgaatatgg acgatgtctt accagtaagt 420 tgaatgtttg tgcgagccca aatcaatccg gaagtctgac tttgttccag tgttcggaag 480 ggcagaggag cgtcttgctt ggattcaaga gtcttacaat cgcccaagcg acctcgggct 540 600 ggctggagtc gttggagcga tctcttactc aattgaaaga taccaagtat gacgaacctt 660 ctggtttgat ttagggcctt atcttgtcta accggttcta gacattcccg aagaggttgg acacttgacg tcttgcgtat gatacttctt ctatcaaaga agcagaaagc aaagagggag 720 gattctcgcg tggaggaaga gctgcggaca cagaaggtca aatatgaaga agctaacgat 780 gatgtgtatc gccggatgct tgacataaaa aattccgagc cagagaatgt tatggatctg 840 caggeettet tgaatgeeca attgaattat eatgageaat geegggaagt getteteega 900 ctaaagaacg agtggcctgc tgagtgagtt tcacctgtgc acaattgagt tgaggggttc 960 tctcggacta atagggctag gcaaaatgca agtcaaccat caactggtca caacgggagt 1020 cgttctcgat caaacacggc ccattcgtac catgaccgct ttgaacccct gcacgaagaa 1080 catagcaatg gtgttgaggc acgaccggcc attaaatcta acacgcacag ttttgccgag 1140 tcacctatca gaaaagccta cacgcaagag acttcacctc atcgacctgt cctgaaccgc 1200 acctcgacat ttgagggctc ttcaccattg cgacaggtcc atgagcatcc ggttgccgcc 1260 caaattgcga cgcgaacgaa tagcgaaaac ctcattacga ggaggaacag cgtacaggct 1320 cgtccgatta gcagggtggt accggaacca acggaggacg ctggatatca cagtgggagc 1380 gtgtctgatc gttcagacaa cagctggact gaatcccgcc aaacgccatt tggcagcacc 1440 gtttcaagaa gaactagctc cagcaccctg aacggattcc cgcacaagaa agcccctccg 1500 ccaccaccac cctcgcgcgc aaagaagcct gcacctccac ctccaatgaa gcgccccgtg 1560 ctcagtgcag cccaggtatg aggagtttaa taggaaattt atctaggagt acggcgggac 1620 tgggagttat gtaggacggg gatagggctt gtacagttga actgcgttgt ggctatcttt 1680 tetecgeaat cacetegegg gegagetttt gaaggeggat cattgeggge tacegaegag 1740 gttgcttgtg ttttgatatt acatactatt gttaattgct gcttaattca gtgctgtcgt 1800 tcatttccca tcggatgaat taaattatgc gaaatgtagg cagtacgcac gcagtatggc 1860 ccaagagttc attactgtag atccacgatt tggagtaaac ggctaatccc ggcaacgccc 1920 tagctaatgg ccacctccta ctattccgga agcggttaat cgactgagtc agcacgcgct 1980 cgtgcacgtg acggcaagga cggcaaactt cttccaactc ctcttcccca acaggccctg 2040 ggtgagcacc gccgaccagc acggaaagtc gcgaaagccc cgtccctcca tcgccattcc 2100 atcaagacag gctttccacg cgctttcttc aacatccacc ctccttttgg ggcctttatc 2160 cccgccccaa catcgctttt acctcccctt cctccccttc ttgctgattc tccttttgat 2220 cgcctaccgc cctgtgccct ccgaccagtc taaacatcac gaatcctatc gccaaggtcc 2280 tgatacaggt cgctacttgt cgcatccatc gacaagacac atctagggcc ttggactttc 2340 gtgattttgc gcgtcttgtc gccttatcat cgcgaattgt caattaccct tacgaatttc 2400 ctttccacgt gtttcgcttt ctccctgact tcaagtgtcg cataaaaccc ggcgccaacg 2460 tgtctcttat atttatgaat agacaataaa cgcgctcgat catgacgtcc ctccagacac 2520 ccccaaataa tgtggccccg gcaaatatga gcctaccggc aaatttgacg ccgcagcaca 2580 tacaagaaac cetteaggta tagtgttget gttttettat atgtteatgg tetaceteat 2640 getettgtee teettgeeaa ttgaacttag eteetettt atttgetget taacetaaaa 2700 gtteeceete etgtttagte getetattet aatteateae agaaatteaa geagatgeag 2760 gaacaaggtg ttegteaaga tgaceegaa tatetaaagg eacacaatet eeteeteget 2820 gtteagegge aacaagettt teagaaggag egacaattag eacageagea geageaacte 2880 eaggeteage geeaacagea acaaaatggt tetteeacee aagaggeegt ggegeegaat 2940 ggagteaaca gtaagaettt ege 2963

<210> 1844 <211> 2416

<212> DNA

<213> Aspergillus nidulans

<400> 1844

gtcctcgtgg tgcagtcaca ctgaagtctc gacggccgcg gcatgtcagg tgtccggtta 60 tcqaaqqtat qaacaaaqcq aqaaaqttat tgttgatqag aqaggtcgtg aacacaaaac 120 cggacatggt atttattaga ataaggagaa ataaggagat cggaaggatt gttqcgctaa 180 atcaagtcta tggaaatgat atctcaggaa ataatggctt atgaacccag gacccaagca 240 300 acaccgatcg ctatgaagca cgcactaaac ccgcacgcag aaccctaatc tcattaacca gtctcagttt gtgtcaatgg agctatatag ctgattcagg gactgatcct ggaaagcagg 360 gacaagaatg tccatctcta gcgacggagc attgcgaaga ggaggatggc tctctaaccg 420 480 totocatgga cacagttcac gacaattgto cagatccact aaagcttotg caggatggat tetetgegea geceatattg cateeggtat aggegagggg ggteeaagge aceteteggt 540 ccagaatgtg taggtcgccg tgccggctgc ttcatctatc cgaggctgtt ttcgtggaca 600 660 tcttagaaga gtgttgcaag agctgcagac cgagattcgc cgacatgaag agcagtaatt ctcgttcggc tggcaaagcg cggtatggca gacgccggag agccatagat ccaccgagcg 720 atgtgcacat ccaaagcgag cggtcatata attctcctca ccaagctggc ccgcgactgt 780 tgtcaagtgg tattcggttc tgattttcag ctggtcatca ccgtccagct cagggtagat ttcaactcga atttgagtag gtccatattc cacagagcac gagtgccagc agaagcgctc 900 ttccacacca ccgaattgtg acgtcaggag tggcagagcc ttctgtcgta tcttcaagat ttcaatgagc tccagcttgt cgcggaaagt caacttcttg caagggcata ggtcaaccac 1020 accggcaaga tcacctagta tgcacatccg cgtctcggca ttgcgcctca attgtcgggg 1080 ggggaaagca gattgcgagt gtagcttcag gcatcttgaa caggctcgcc aacgggcatc 1140 ctcgagtaac ttgatcagct gccatcgagt tgtagcaaag gtatgtccat tgcgataatg 1200 gtggaaaaga ggagcaaaat cgcgactgaa ccgaagcgat ttagattcta gaacggtggc 1260 ggatattgag agaagtetet tgeaggteaa egeaagaeag geetgeggta acaeegttaa 1320 atgtgagata atttccagta gtaactctgt gggaagttca agaaggtagc ttcgcttcgg 1380 tggaccgggc tccctagaac gcgcttctat ggcgtgagat gggcgattct tggtcatgac 1440 ggcccttagt ttaatcccag cacggcgaac actatgcatt ataaagctct gaagtacgcg 1500 aaaatcqqct tqqqtcgtgg tccgagatat aagactccga aacaaagacc ggtgtgaaat 1560 gcgtggcgaa tcttcctggc aaagtttcat gaggatagga gcgtctattg acaaaaattg 1620 gtgtgtgcat gttctgaggg aacatagtgt ttaaaaggca aatggcgcac ttgcaccgcg 1680 tqatqqaqtt cqacatgata agagaagatg gagggcattt tgactctcaa gtactgaaca 1740 cagatggctg tecaettgtt geaaacggca egegegeggt cagtgtggte agegeggtee 1800 aggctgggaa tggctttctt tgtttagccc cccgcatgcg ccgtgctaac agctgttccg 1860 agctcgaggt atctggaatt ggctcgaatt gatatccttc taatttcgga tgaaagctca 1920 ggattgttag acctgttggc gcagtttgag gcgtcccata cgagccgcat gcggaaagcc 1980 ccacaacagc ttcaattggt actatcacct aaacaagtac agagagagaa gcgcctatca 2040 ctacgatgta agcggtctac tgcacatttc aaaggaagaa atatcgcctg accgtcactg 2100 cgtgcaccag agacaaattc aagtcaggcg accggcgtcc cgctgacatc tgttttctgc 2160 ctgaggcata aagagctgtc acatggccat gagggtacta acaagataaa aaagatggtc 2220 tgaagccgca aattcgaatg aacgctaaac gagggtgcga acgtatctca cgaccctgag 2280 aaactgattg atgactgaca tagtccgtgt atgggtctgc ccaagggtga gagatatcac 2340 qtqatcqctt qccacaaqct qacqcaqtac tagaqcaact cttcqagcat ctagggtgat 2400 2416 aaatttatac caaaaa

<210> 1845 <211> 3493 <212> DNA

<213> Aspergillus nidulans

caccegggte geatggaagg egaactggte geettteeet tgaegateeg egttetgegg 60 120 ctatcaatgc tatttggggc acttagagac ccggctatag ctcaccagcg taaacatata tgaagcaacg accgcttagc aagtcttaga tttcattccc attagagtca aggacttaat 180 tacatctata attccatttg aactactttc ttcgataaat tcccattcgt catacccagt 240 catcatggtc ggtttcgata tgcacgggtt gacgcctgcc ccagtcacgc cgttcactcc 300 taccggtgag atcgactacg acgctatcca acggctggga agctggctca gtagtatgaa 360 cggcgtcaaa gggctcgttg tactaggcca cgcaggggag ggcacctttc tgactgccga 420 ggagcaagtc gcggtgatca aggcatttgt caagtcagtt gacgacaaaa tccccatcat 480 540 cgctggcatc accggcgaag gaactgaggt ggcggcacta gaggcgcacg cgtgaaagct gctggggcga aacgggcctt ctgtatccat ctcacggctg gctgcggttt ggataccagg 600 660 acggagcacc ccaggatcgc taccgccgtg tctacgaggt cagcaatctc ccattgattc tcttccagta tccagacaac accaaggcca catatagctt gcagacgatg ctcgatatcg 720 ctgcgcaacc gggtgtcttt gcaatgaaaa acggtgttcg aaatatgcgg cgctgggata 780 cagaaatccc tgtaatccga cgcgagcggc ctgacctgca gattctgagc tgccacgatg 840 agtatctgct acatactgcc tttgatgttg acgggttttt ggttggatat gggaatattg 900 cgccggagcc gctgattgag ttgattgagg cgggcaaagc caaagactac agaagggcca gggctatcca cgaccggctt ctcccggtga ccaagagcgt ctatcaccgt ggatcgcaca 1020 tggaggggac tgttgctttg aaacacgcat tggtggcccg agggattctc tcacacgcca 1080 ccgttcgatc tccgcttcgt ccgctggagg ctggtgctga gcaggagatc catgctgcaa 1140 tcggcactgc tgcattagga aaggttgcat agaccgttat gttccttagt actgtgtata 1200 tactttcagt cagtagcttt atggcaccca atctgtttta gcttagttgg tcggagcatc 1260 cccggctgca gtgccctagc ggattaagcg gagactagac cgaggtcaat gtcggctttt 1320 cctgctgcaa atacataagc agactatagt tgcatcatct ttggggtaat tctctgttca 1380 aagtatgcgc tttctaatgg gtagctttac cgtgattgat aactattcct tccatgtcag 1440 attctcatag ttcagcttgc tctccgttcg agaaccggag aaaggacccc aaagtcagtc 1500 gcgcctgtga ttcgtgcaaa gcaaagaaga tccgctgctc gggtactcta ccgtgcaata 1560 tatgctccag aagaaggttg agttgcagct atgccagtcg atacgctcgc ggacgtccac 1620 ctactcctcc accacacaca cagagccatc taggacgaag tacagatagt gggcgagaac 1680 tgactcccaa tatccagaca aatgccgcag agtcacgcgc aacatctgag ctggtaatcg 1740 aaggccagta ctttgacctt acgtcgggcc tcagctttct gcaccgagct acgagtaagc 1800 tctcggcgca aagggggcaa tatgttgccc atggatatct cgacgttcaa cgaaaccagc 1860 ttcttgcgtc agcaggagac caaccgttct atcagggtga ttccagtgcc gaggcagatg 1920 tgctgccgga tgacgcgaca acccgggaga ggctgtccct ctatttcgat acgtgcgtgg 1980 tcacgtaccg catgcttcat cgccagaccg tagaacggtg gttagccagc atgctgcaaa 2040 acagagagca gggccgctct atcgccaact cgctgggaaa cgcccgtaca gcgagcatcc 2100 tggccatcct ggcaattgca gaccttcggt gcttcaagct caagcgcaag cacagcaata 2160 gcgccttgaa tgaccctcag cttgagtctt gcggtcttcg cgaaagcgac cctcttttct 2220 acgcttcaat gatgcgtacc gagtcggaaa cagggtttcc taccctggaa tccgtccagg 2280 cgcggctgct tcaggttcta tatctacttc agacggggcg catgaacaaa gcgtggtata 2340 ccttcggcaa tgcatgtcag atcatctcat cactgggtct acatcggaaa cagtatcggc 2400 agcataatgc tcttggccca caggcggact acatcgagca gcagtgtgcg aagcgcgtct 2460 tctggactgc gtacacgatt gacaaatata tcagcgttgt tcttgggcgg ccatgcctca 2520 tacataatga gggaatcgat caggaatttc cagatctggt taacgatgag aacacggggc 2580 cagacggacg cctgacctct gatgcgaggg aggagtgtca tgtctcgtct ttgatacacc 2640 atgcaaagtg cgttctcacc cgatttggag ggctttgggt gaggttcaac taacgtgcat 2700 gacagaatcg cacagctcat cgggcgaatc tcgaccgacg tgtactataa aaatcaaaca 2760 gaccatgcag ctgccgccaa tgtcctcgtg cgtgagctgc aagagtggcg cgcggagctc 2820 cctccccatc taggcactgt caagccatca acccttattc caagtttccg gcgcgaggcc 2880 acggccttgc gtctggccta ttgccatgca ctaattcacg taacgcgccc atttctgctg 2940 ggcgatggga agcacagttt tgacaacgat ccggcatccc ggaccaaaat atccgagtgc 3000 ttgtctgccg caagaaatgc tctcgagttg atcggtacga ttgttgatga ccatgagctg 3060 tcccactctt tctggtggac ccagtacgtt ctgttctgcg cacttgcagt tgtgtatgta 3120 tgggagatcc aacggaatac gcatcaaagt cttgaggaca gcggcggcct gacccatgca 3180 teteacgaga cettgtttga actggetgag agaagcaggt cetateteeg gggeggeget 3240 ggttegetge aceteteeaa eeegaactee egetaegget tgattetgga ggaagtaega 3300 etggaggete aacggeaggt gteacagatt egaagtegaa gtaetegtge taeattggga 3360 aeggaaaaagg aggeggaaaa taggeegeat gaggeatgga gegaecaace aaagceaatt 3420 eeaggteeaa atgatgaact ggaeateact acaagegeea ttegeaaege tggeteeagt 3480 ataecgaaag etg

<210> 1846 <211> 5011 <212> DNA <213> Aspergillus nidulans

<400> 1846

cttctcgttc agtcggcact gaatcttctt ggaccccgtc cattttgcga gcgcgctcag 60 catcagecte tgcctgcgct atccgtttct cctccttcaa tagettccgt cgtaacttct 120 cggccttcat tttggctttc gcggctgcat cggcgggatc cagggcgact cgagtctgct 180 ctttcttttc ttggtccttt gcacgggtag ccgctgactt gcgagcttcc ctctgctgcc 240 300 gttgagcttc ttctctggct ttcttcgcct tctttgcttc ctccatagct ttcttttct 360 cttcaatttt cgcttgggta gggaaacgct tcttgcgctc tgcgatccaa gctgcgatat ctgcagatgt ctgcagattt gatgttcgtc ctttgtacgt gatttgcaat gctaccccag 420 tgcctgggcc accggatgcc aacctggttt cctcatcggc gtcatcttcc tcctcactgg 480 actcgtgctc ctcagtcttc ggggttaacc ctagctggtt atgcttccgc ttcttcttct 540 600 tgggttttcg ttgcgaatca accggcgtag cggtttcaaa ggcagaggat tacccgaact agggaccgga ggtggcgccg ggaatcgtgg agctgtcgac tgaggcttgc caaatgctga 660 cgtgtggtcg cgcttgttcg catgtttgcc gggagagctc tgattattat aggtgttgtt 720 ctgacgcggt ccccgttggc tgggacgctg caatcctgga aatgagcctg aatgtcctgt 780 gccctcgaaa ccccagcgga taggagggcc catcattgtc ggctgcaccg atggcgtagc 840 attttgatga gcaggatgtg tttgagtgta tggaggggat tgttgtgtag gtgttgcata 900 tgtagtacca tagcttgatt gatgctgata agccgtgcca ttaacggcag gttgcggata 960 atgcgacgta gaggcgaatg tactcccagt cacggcattc gaaaaagcct gcgaagacga 1020 ctgcgtataa tgcggcgtcg gaatgcctgt ttgttgattt ggcatatgtt gagctgggta 1080 ccctgagtgt gtcatgggcg catatccagc atgagctgcc gcgtagccgc cagagtgatt 1140 ggcatcggag ctcatgaaat gacctcctct acctctattc ccgtagcctc tcccacggcc 1200 cctgaattgg ccaccccgc ggccaccccg ttgaccatgg tgattctgcc catacggcgt 1260 gaacgcattg ttatgagcgt attgttgttg cggcggatgt tgtgtaggag gcggaggtgg 1320 agggggaggg aaggagaatc cctgagggtt catggcgggg agatctcggt cgatcttcag 1380 ggatagaaag catgcactcc atcctcacag catcgtaaag gttgcgacaa agctctgcag 1440 ctcaaaagtg cccttcatga agcgggtcca agcgagtagt tcgcccgctc cgatggcaag 1500 gaatagttgg actggtcacg tgcttaatgg ccagctaaaa aaaaatcgag caggttctcc 1560 ggctgcgatt ggctggagga catggcatcg tgagtcctgc tggaggtttt gggctttgag 1620 ctcgagacaa aagtatcggc atggccagat gagctttaat ctatactgtt tctgaaactt 1680 ctgtggattg aattctgaac atgggatctg cattcaatca aacctatcct ccgctgtgat 1740 acctgaaaat cgagaattcg ggcctgcttt tccgcggtcc cttccaacat catgtttatc 1800 cttgtgagta gaattaaccc agtccagacg gggaacagat gcttaccggt gctggcagac 1860 caccatetea gatettatte agattteece agaggatttt teaaaatata gtteegttge 1920 catcgaggac aacattaatg aaaagtacgc caacaaagta agcccatctc gatgtccctc 1980 aggttcacaa ccctagtctc ttaaaacaat tttgctgact ttactggtag gtcattcaga 2040 agattgggct ctgtattggt ttctatgatc tcttagagtc atcagatggt ctgatcggcc 2100 atggcactgg gctcgtcaat gtgaacggtg agctagccca gtctccatcc cgatctttca 2160 tgatgttcta gccgactgac atatactaca gtgaagttcc ggcttattgt gtttcgccca 2220 tttagggggg agattgtgct gggcaagatc tcaagcgcta ctgaaaatgg cataaaaagt 2280 aacgatgggt cattccgtga tgacgctgta tgctaattca ctggcaccag tcggcgtaga 2340 atttttcaac gacattttgg tacctccaga actcctttgg atggcgctag attgtgagtc 2400 tcacacagtc tttgcttggc cgtggctgac gtgaagcagt gattaccagg accaggtttg 2460 gatctgggaa aacgaagaag ggacgttcta cttcgatgta ggagaagttg tccgcttccg 2520 cgttgaaatg gaagaatggc atgaccagat tcccaatgct cctgatcttg gagatggcgc 2580 tccaattgac cgcaagcctc cgtattctat tattgtatgt acagatcact ggaattctgg 2640 aatatgccct tctaatggaa tacagggatc tatgcagatg gctggtctgg ggccaatatc 2700 atggtggtag agagtgtttt tgataagatt tgtagagtaa cgccacggaa gcaattgtgt 2760 acattggtat ctgtgtttga atgactgtat gacccgcata ttagactacg aatgattcat 2820 attatatata ttgtacagcg aggtagaaca ctcagctctc cctcgggttc ctacatacgg 2880 tgtgtcgagt gaggctcgaa aaatgacgtg ctcaagggcg ccgaacgcga cacggccggg 2940 cctcaacaga tgatgaatgc gccaggaaca ttcttttca aggactaatc tgagcgacat 3000 tgcattagtg cgattttgat gtatggcctc ggttatcgcc ggaacgagat tggacagtag 3060 tcacaataat aacagtcaac gatatacaga ctcgtgttag atagtggagt cgagtgtcag 3120 tcatcgcttg attgcgggaa gcgtggaacc ggatcgagct actatacgct gtcctgagca 3180 atgcaacgta aaagaaacct ggtggaggaa aataatccgt aggcaggcaa attccattat 3240 aaatgctgag aaccttctcg ctggaatgcc ataattattc agtttatctc ggtgacgaaa 3300 agattatcat tacaaatcag cggtcgcaaa tactttgtag tacatataac ctgaagccgt 3360 taccagccat cgagcgctgg acatcatttt gttatcgttt gacacatctg ctggccaagg 3420 ggtagaccgc cattgcattc tttagcgcct cgatcccttt attttctta tttgagagct 3480 ccttggggtt tcttttctca gtcccgtgac gatgacgatg atggcgggac atccagatct 3540 ccctccaac ggccagaacg gcgactcgaa cacacatcag cagcgccaat ttgcgactct 3600 ggccgtccat gctggagctc ctcacgatcc caccactgga gctgttatcg caccggttag 3660 tetgegettt tgagaettee cattttgeet ggaecagege tgaetgtgae agatateeet 3720 gtctacaacg ttcgcacagg aaagtgttgg taagccggta gggctgtacg aatacactcg 3780 aagctcgaat cccaatcggt cagtacaaga tttcaaatta aaaattcagt tgaatactga 3840 cttcagccag agacaatttt gaagaggcgg ttgcttcgct cgagcacgcg aaatatgcac 3900 tagcattete etceggatet gegacgaegg caaccattet ceaetegtta geteetgget 3960 cgcatgtcgt ttccgtctca gatgtatatg gaggaacaca cagatatttc accaaggttg 4020 ccgcggcaca tggcgtcaat gtgtcattct cctcgtgctt ggaattggac gtggagaagc 4080 tgatccggcc aaacgagact aaacttgtct ggattgagac tccttcgaac cctaccctag 4140 cgctggttga tatccgcaaa gttgccgcgg ttgcgcatcg ccatggcgtt ctggttgtgg 4200 tcgataatac cttcatgagc ccttacgttc agaatccatt ggatcacggt gctgatgtgg 4260 tgattcactc cgttacgaag tacattaacg gccattccgt aagccactt gtctcqgtc 4320 ctttcacccg tgtgctaacg atccggtagg atgttctgat gggtgttgca gccttcaatt 4380 cggacgaatt gaaagagcgc tttacgttcc tccagaatgc cattggggct gtaccatctc 4440 cattcgattg ctggctggct caccgtggtc tcaaaacact gcatttgcgt gcgcgagaag 4500 ccacagccaa cgccacggct gttgctctag cactcgaatc ttcacctcac gtcatatctg 4560 tgaattaccc tggactcaac tctcatccga accgtgaaat cgccgtcaag cagcatcgca 4620 agggcatggg aggcggcatg ctgagttcc ggatcaaggg aggtcacaag gccgccatc 4680 tgtctggaag tcctcaagc atgacccatg ctgagaatcc caaagaagag cgagaagctg 4800 ctggtgtta cgatgacttg gtccgcatga gctgcggaat tgaagagtg tgagagcctg 4860 cggctgatac aatgcagga cttgagagg ctggggaat tgaagagtgt gaggacctga 4860 cggctgatac aatgcaggca cttgagaggg ctggggaat tgaagatgt gaggacctga 4860 cggctgatac aatgcaggca cttgagaggg ctgtggctgc aagccaggcg ctggagaacg 4920 gaagtgcttg attaagacac aagtaaactt gacgacggta gagcaataga gccttttctg 4980 ataaggataga ctcatgtcga atacgaagtc a

<210> 1847 <211> 2199 <212> DNA

<213> Aspergillus nidulans

<400> 1847

gcaaggtaag ctttcacgtc tgcatgtctg ctcattactg atgatgaaac tatagctgcc 60 atgaggette gteagetegg tteaacgeaa teegtaacet teategeace geeagaagtt 120 catcagagca tattgcacgt ttgtaataag acctcgaaag ataaactgga ttcgtctgac 180 240 gtcgtcgctt ggctgcttga tcagacgtgc gcagtcaacc tcgagctctc gcctttgtac tttgcccaag gcaaagactt cacttctcga ttgcaagcag cgacagcgca caaaatgata 300 ttttccaatg ttgaacacag aacagcctac ctcagagttc tgcagcaacc cgaacagcaa 360 accetegage aactatacga accaacetae egegaagaaa etgeategte gttatetgte 420 actacctttg cctctgcggg taaagtgggc aggctcatgc aagcgctgga gaagcgacga 480 ctggagtctc ataagttggc gtcggtcatt agttcagctc ttgagcaagt agaacaggaa 540 cgcgaagtgg catatgagat tgaggaggaa agagaaatac aacgccctag tcagaaaaag 600 gccctgcgct ttcccggtct gcatgagtcc atcttgaatt ttgccaaagg agaacccctt gggtcttggg gcattctatc agcgtctgaa tggctggaaa agacgcacct tggggagaag 780 tacaaaatcg aaggctcctc gctagtatcc catctccacc tttctgcgga gttttcaagg accgacaagc tgaagaattc agagaaaagc gatacctaca tacggcccgt gaattggttg 840 900 ctttataata ccgttactga gacagctctg gtgattatta gtgaggaagc agaaatccta atcccaatca tgagggcttc tacttctcga accactcatc tcatcctcta tgcagcgccc 960 tggaccaaat caatgctgca ctttaataat ctgacttact attcgctacc cagcctccgc 1020 gatggctgga ctcccccaac ttggctcccg tttgagttag gtattatcgc aggaagactc 1080 tactttcctt tctcagagta cgaagatgcc tcaaaccctc tttattcgct cgcccgcaac 1140 ccagacggtg aagatgaatc gctggattcc tgggccaaga accaccttaa cttcttgcag 1200 gaatggctcg caatcagtcg tcagggccag gacgttaccg ataccccgat gggctacatc 1260 tgtcaaaact ggccgctgcg aagggagcac cccttttttg ctacaaggag tgcccaggag 1320 ggtatgaatg cgcctggact ggagtgtctt cgatttacga tgtcagatca ggaggaagag 1380 tactatagta gtgatgaaga tttgatggaa gttaatatgg gcggtaatgt tgatgatgag 1440 gtacatgggg aaaatgttgg aattgagtga tggacttgga ttgcaaggta ttgagtatcg 1500 cagtgactag tactggctgt gtcatattgt tcttctagaa tgtttatact gtatttcatg 1560 cgcgttgtgt acgtagatag atagtgaaag agaagttaga cgcctcctcg tgagggggct 1620 gtgtctagat tttccatctt gtgcctccgt gctgtaattt aactccagtc accatcagct 1680 gtgctagtgt gcaagtagaa ttcgcatgac cctctctata gccaggctga gcaatctgtg 1740 aagatcatta gagctacaga ccagcaccat cgagttgatc cactgatgga gaggaaaccg 1800 tgtcaagata ttctaacgta atgtgctgag atcagagatt accataactc tatatctgca 1860 ataatctgtc agattatgat aaaaagtgca actggctatc tcaaggcaac ccatggctga 1920 tcctgactcc aataaaattt cacaatagat atgttcaaga tcccgtcatg agtatagacc 1980 tggcatgaag aaattgtttg tcttatatac cgtagcaact gacaagctgc agaagcttcc 2040 caagctgaaa gaggctgcca cgaagggcaa ggaaactatg gtcaatcatg atcggacgga 2100 ctttggctaa acaatcgaac tccgtttgat tttcctgact ggatacgatt cgtgatgatg 2160 2199 ctgttgaatg aaaactaacc tggtttcctt gctagttca

<210> 1848 <211> 4770 <212> DNA <213> Aspergillus nidulans

<400> 1848

aaggttgtga atatgagata gtattagttg tagaaaacgg ataaggaata tattatttaa 120 gattaatgag taaataatac ggagaaaaat ataagtaata gtaacagtat aaaatagaaa aaaacataga acatttaaga tagagatata taaaataata gataaattta ctacaattga 180 gaaactaata attagacaga tttaatgaga gagatataaa ataagaacaa ttgggaacta aaagcgatac catggagagt agaaaaaaaa gcataaatta gatacaacca cggatagagc 300 atatagtaaa ataatgagta tagcaatcac gaatgaagaa ggagaccata taggggatag 360 ggttaccctt ccaagggttg attctataaa agtggatcaa taccaaggtt cctgccccaa 420 acaaacggac ggcgaaagac caaaacaaat gttgcattaa gttgcccgtt aatcctattt accaccatgg atcgcatctc tcgtgcttgt ttaggtcatc cttcctcaaa cacgactcga 540 ttatattcta gcattagcgg gcgtagtgct ttttctttgt ctttcgaacc tctgaccatt cgtgttcata tttcattact ttaagtcgac tagagcgcgt ttctatctat caaacggaac 660 gagacgtcta gtttaggatc aacatgatac caggtagata gatgtgcatg caatgattca atcattcatt cgtatactcg taccagaccg tactatacca gataacagcc caagatgctc 780 840 tttctaaaga catatatggc ccagccaggg ttgctagatc aggtctttct gcgtcatctc 900 gtctcgtaaa gaatcaataa caggcgaaaa acggccggat tgggagatag caacacgcaa atggggtaga taggtgaatg gaatgccacc ataaacaaca aacgggtaat atgcagagaa cgaaaagaga atagaatgga atagaatgaa gagaagacaa aaagcgaatg atatgacaag 1020 gcgtctagtg gatatcaata actttttccc ttcctccttt tagcgttgtc cttataaggc 1080 aactccccac acccctcgcc ctccacaaac acctagccaa tcgcgcgggt gaccagcact 1140 tgtggttcct ccctgcggcg accaactgat gtttgagatc tcgtagtcac attgccatgc 1200 agctgcgggg ccacgttcgg tagttgtgga gggggcacct gggttgtgga cgccgggtgg 1260 aacgggggtg gtattgtgct ggttgatgag gtcccagaga agaacgaggc agtcatctgc 1320 gccggaggca agaacaccac gccggttggg agaccattcg acggtattga ggggcgctga 1380 gtggccctta agttcgagga gagcttggcc tggttgccgg acgtcgagaa ctcggactat 1440 gtttgaatct tgggagaatg tcgcgagaag gtgggcatcg tgaggcgagg ctgcggttat 1500 gagtatagtg ttcaaagtgc tttgggagtt ctggggctta ccggaaatgc gcagcagtgg 1560 cgqgggccaa gtggtagttg gtgcggaggg acttccattg ccagggctca tcactaatgg 1620 catggtetea gegteaaaaa teaagaagea ttgteatgta tagggettae atttetegtt 1680 cttctccgtc ggctcgtata tgatcgtgct gtgttccagg ctccggagat caaacatgcg 1740 cacacttcca tcagcgccac agctgacgaa aacgtcaacg ctgttggcgc agaaacgcac 1800 gtogtacact teettgtegt gtgeaatgag etgegtettt geegteaatg tgggtatate 1860 ccagatagtg caagttgtgt cgatgctgga agtgataatc aggctgggag atatcgtatt 1920 ccagtccaga gatgtaatag gagcggtatg ctcgggcgat ttcgaattgg aaagcaacgc 1980 cagaggegag agtttagetg caggeatate tetetgaeet gaeggaegtg tgatagagtt 2040 agagetqtqt tqaqqetqcq aqtttqqtaa tqaccataac cqqaqatqat ctccaqaaqt 2100 ggctagaagg tcagtggatt gcttctggga cgacggcggt tcccaaagaa tqcqtgtaac 2160 aggatatgag tgggtggcct cagcggattt cacgtattcc agcttaagct ccccggcact 2220 ggcatcagga gtatcagggt cgggatatgc caggtgagtg tccaggattt gtatctagat 2280 cggtggttag aaataggtga caagcgtatt aaccaccatt atgaataaat cttacataat 2340 tatgatggtc ttctagatag cttcccagag cgatttttcc gccaaaggaa ccaggatttc 2400 ctgaaatcgg ccacttgcac cagtcaacag catagatggg ccaaggggta atgtagttgc 2460 tgtttgtagg cacctggttt tcgacacttt ttgaagcagc tgcacccgcg tttgtagcat 2520 gatcaccgag aagatccccg gaaggccgaa tatcagccag gcccagaggc gagtatttag 2580 cgccctgggg agttggcggc tggaatgcag cattcggaga cgacccatgc ggcctgtatc 2640 ctgccgggct cgacctggag tgtccatggg aattcgccgc attggaacgc ggagtggttg 2700 actggggctg cggttgaggt tgttgctgga tctgtgtaga taaatgaggc aacgttggaa 2760 ttgtggacgg ggctgtattc atggatactg ttggtggtcg attggcagaa ttgccgggtt 2820 ggagagagcc aggaagcgtc cctcctgtaa cgcccccgct tgcgcctcca tattggttag 2880 actgggaact tgaagaatgg atgtttatgg atggaagatg tgtatcgggg ctcgtagggt 2940 attegtggga cattggctgg cgcggatgac cgcctgatgt agagtttccg gccggaatgt 3000

gaagctcttc cggttgacgg ttataaatag tcgaccgtct ggagtcgaac ggctgcgcgg 3060 ggtttgtcat cgcgatggcg gttgtagaag ggaggatagt ctggaaaggt aatcgccgca 3120 ccactgcaaa gcagcgggct ctttacagcg caaactcgtc ttggtcgttt ggtcaacacc 3180 actgtggccc tggttatagt tgggtccgtt gagagactcc ccccttctta atggatacgg 3240 gcagcaatcg gcacgcttgt gaaagcactt agacgcgaca aggacgcgaa cctggttgaa 3300 gccaaacgaa ggaccttgca gattcgacca gattgcaatt caacaatgaa gagtcggata 3360 cgagtcaaag tccaacgaat ggcgtgcagg gtgagccaag ggagacagga agtggaagag 3420 cttcttaggc tggagttctg gatctccacc tgagctagag tcgagtcgtt gcccgcgatg 3480 ctgagtcagc cgtttgcacg ggacggtaag attgaactca ttggtattat cttacccttt 3540 aggtacagec teegetteet eggetgettt tegtegtget eggatgetat etggttaatt 3600 ctgattccag cctatttcta gttctttgct tcctcttact ctcataaagg cctgatcgtt 3660 tgtgcattct gagtccctca ctcgcagccg tcattccatg acctcatttt aatacatccg 3720 tatcggtctc gtttggtgag cctcttcccc tccttatctt gagcttcccc gcgatgcctt 3780 cagatogoat caccocacca toggotttgc ttctactgcc gcctcctcca attgtatctt 3840 tcgatgaatt ccgaacagtc tacgagccag tattatcttc ggtcttcgcc aacctcttaa 3900 atgcgctcaa tggttcaaat cgcaccgctt ctttggatat tgcactctca ttgcctggtc 3960 tcctgtcgcc atcatgtcag ccgccgacga gagctttcgc gagccttcaa cgcatagtgg 4020 aacatatgta caggeteatt ggggteattt ecattgaaeg gaaaattgaa atggaggete 4080 ccggtggcat tgactcgcgc gtgatcttgc tggatttcga ctctgtccga ggaacaccag 4140 ctacagctgc taactctggt ctggtcgagc gcaacggccc gattgttgat ttgaaaactt 4200 tggctagctc cgggcgcctg tgggataata tttactatcc ggaaacctcg gtaggccagg 4260 agctggcgac ggcgtttagt aatatctata cctcaaccaa agaccccaat ggcggactgc 4320 cgcagtcaat ttcgggatcg cctcaatgga ctccgggtca atctttggtg gattctgcgg 4380 gatcggtcgg atctgcccta catcactcag tcatcttggg aggcaccttt gaccactttc 4440 acatcgggca caaacttttg ctcacggcca ctgctcttgt cctgcaacct gcgggaactg 4500 gcccgaccgg ccagaatagg accatcacga tcggtgtgac gggcgatgag atgttgaaga 4560 acaagaagta cgctcagttc ctggagagtt gggacgagcg gtgtcgaagt acgggcgcgt 4620 tcttgacctc gatcatggac ttcgggcctc ccgaaacaga gcctgcccac attgagcgaa 4680 tctataatcc gggaccaaac gggagacaga tagtgatgaa gatcaggcct ggaataaccc 4740 4770 tgaaaatggc gcatatacat gtaccgtagg <210> 1849 <211> 2353 <212> DNA Aspergillus nidulans <213> <400> 1849 aagtagagtg aaagtaatta agtgtaggaa gatgataaga tagagtggta acaaatgtga 60 180 tggaaattag aggatagatg agtggtgaag tgtgaaaagg aagagaaagg ggggtagaga gatgaagacc aggaatgatg aagaggaaga gaaggtggga acagaagaag tagatataga 240 300 gtaaagagga gactaataag cgaagtgtag atagagaaga gtgtgaaaaa taagttgagt 360 aataaagaga taatagggaa tatagagatg aaaagagaag gttgaatagt gatagcattg aaagagaaat gaataggagt aaaaatattg aagtcttaag agaagggaga ggatagaaag 420 480 aatgaggagt atagaaaagg ataagaaatg atgatggttg aaagaaatgg attatatggg 540 tagatgataa gaaaaggaag gagagataag tagtgaaagt ataaaagggt gaagacaggt aactaggtgg aacagggagg atagaaagag ggggatacat attagaagaa agataaaacc 600 ctataagtcg atttaagatc aagttagacc gtggtttaag aagtcaaact agaggtcagg 660

aaagagaaat gaataggagt aaaaatattg aagtettaag agaagggaga ggatagaaag 420
aatgaggagt atagaaaagg ataagaaatg atgatggttg aaagaaatgg attatatggg 480
tagatgataa gaaaaggaag gagagataag tagtgaaagt ataaaagggt gaagacaggt 540
aactaggtgg aacagggagg atagaaagag ggggatacat attagaagaa agataaaacc 600
ctataagtcg atttaagatc aagttagacc gtggtttaag aagtcaaact agaggtcagg 660
ggggacataa tgctcctcaa gagaccgatc aaagtattat ggctgttccc aatcctcaaa 720
tgctgatttt ctacgactgg atatatggaa gatatgctgg cgtctcaaaa ggattctgct 780
gctgagcggt cgttctcatc tctaatgaat ggcgagacta tatagttgtt gggcttagct 840
gcatggcggc tgctaccacc cagcagaggt tgggtcagtt atgccgcttg aagcacgcc 900
ctgatgtggt gtaatgcaaa gtgtctcata gcggctctat aactagacgt cgcaagcatt 960
aacctgaagc cagaatacca caacatcttg ccaatcgtag aacgagaata attttcgcc 1020
cttgaactaa atccgcaata tggacgggta ctgagaatcc aatacctcgg ccgtaggaat 1080
ggaaggccga gaatcacgac gtaatcctgg gctagtaagg ccggccacgc acactccgcc 1140
tctccagagc aatgggacgg ctgcttgctc tttgcttcag ctattgtcct agagggcagt 1200

gccagatcaa tggtatgctc tgatagtcag atgaagcaag ttcatcctgt ctgtcaaaga 1260 tcaactgcgt ctaatacttg ggcccgagcc gtgcagtcgt tattccaaga gggtatcaac 1320 aagtaattat ctctatcgat agcataaatg tcatgtagct tgtgcggtag ttcgaggtca 1380 aggctggcgc tgtctgtcgt cgatcattat cgacgctttg agcgatcttt cgcgcttgga 1440 cagcgacggt ctatggctga gacgcctggg caacgaattc actaagggta ggtctcgttt 1500 ctggagagtc agccctccat gtctgccata aggtcggcga tgttgccgct cctggcgtaa 1560 cccctctcat tctgttgagt tgatacgtct cgatagtcaa ttcttgccga gagagactaa 1620 tcttcatctt tctgctttgg ccattacggc tcaagaaatg caactctccg tggtgtggat 1680 aatcaacgtc ccaggatacc cgttctttgg cttccttgtc agctgtgtcg cggcattgca 1740 gtggaatcgc cgcggctata tcaagcataa tgacatgagt aagtattgca gaaacctcat 1800 cctggagtcc gacgtggttg gggggctgca cgtcagggta ttgtgggaaga ttgactgaga 1860 qctcataaaa tgtaccaaat ggcggcacag caaggttcgt tcggatttga atgcggaatg 1920 agctctgtgg cgtaaccaga ttccctgaga atgtcgacaa aaaaggcgca aggaaaaccc 1980 ctgccactgc ttcaaccttc ggaacctgat tgcttggctg tagcgtgcca attgaagaga 2040 actgagttgc cttgaagtca cagggaatgc cagcggactg gagcacaccg cggaggtcgt 2100 ttatgagcga ctctaaccat tggatatgag acttgtgctg taagtaagcc ataatcggcc 2160 gtagaatgtg atattcgggg accggtcggc gcttcggagc tagtggggga gggggttgtg 2220 tcctgcgacg aagattctga cggtgggcgt atgtaagaag tatacgaatg gagtgagcga 2280 cagcatcggc aaacacgtct tgctcagtgg aatcagctgc atcggggtga cgatcctggt 2340 2353 aacagtcgac ccg

<210> 1850 <211> 2475

<212> DNA

<213> Aspergillus nidulans

<400> 1850

ttgccagtca tgtaactgag gaatttcata tagctcggcg gtgcaagcat tgcacaccag 60
tggtactgac caccagaagt cggcgcctt gcactgtcag tctccacttg caatgcgagg 120
ggggtatata cattgaggcc aattcagata ggaccgcaaa gcagcacgcg gtgcctgtcc 180

aggcgaagat gaacgcatag acggctcctc cgggaccacc actagatcag acgctgtcaa ttgcttgtct tccaccacgg gtaccgggtt tcgcgttact gactttgaca gaggtagtag 300 360 caaagtgctg gcgagcaagc aaagccatta gccgaggaca taatgcacgc gagggggagc tcgtacttga atatcccttc ccatgtcgca aggatagtgc agctgaaacc gagggtggat agaattccga acgttcgctg ggcggaaatt gtaagagcag gcaatgagag caaagggcag 480 ateggteetg gacactetae tetacettea aaacegattt etteeceaat egegeeagtt 540 600 cgctgacgtc gcggtcctgg accgtgacgc tggccgcgac cgcaccatgc ttgagctcct 660 gtgacgccat ctctgtccac ggcctgcgag tcgtttacct acgcatggcc agacatgccc gggcatgcct caatttttaa gtcaaagggc cggctcgcat gagcgcgagc atgttagcca 720 ccttccgtcc aggtcttagt cgcattaata tacaaaccct gtcatcccct gtctggtcca 780 ctgtgtgctt gacggccagt ctcgggttga caccaagctt agcgcaggct tccattgctt 840 ctttggtctt gtccggctat cggcgccggc tgcaacgcca tcttggccta aaagcgcgaa tggcctaggt gggtgaatca tacggcatgt tacgcgtact gggccagacc gctggcgtcc tggaatgaca cggtctttac ccatcggaga tttagctaga tctaaacctc ggtggctcgg 1020 agaatttgac ttacttatgc tctgtatttg cttctttatc tcttgaaagg gtatcttagt 1080 actacgaagc caaccgagcc gataagtatt gcgctcaagg ctggccacgc ttatagggca 1140 acacgttaca ctgattttta ccaccgtctc atcctggccg aattctctag cactagtctg 1200 cgccctaaga gtttgcttgg ctatcactcg ctcagacccc ggtcgatcag ccgtcctggc 1260 gcccagccgg tgcccactcc gttacgcgcc gcgtcttggc cagcataggc gatgcgatcc 1320 tttcatttag tctgctgtgt gtgggctatt agacgatcgg ggcggggccg gtctgtccag 1380 agtacaggac agggtcccga gtggcagtct tttgtgaatg attccggcac ggcgcagggt 1440 gggatccttg tecetatgae atgatactge tttateaatg eteategggt eggtettaet 1500 cttacttttt aacattaaat ggtaagcaat tcctcgtgcc gatgccatgc gccgatgcca 1560 ttcccagtta atgggcctga ccagcagcca tggggagatt cgctaacatc gacacccgag 1620 acccagacgt tttcgtgacc acctggttcc tggtcgttgt tgctgtgctc agtgtcctga 1680 ttcgggtggc gactaagtgc agggtcttcc ggcagttgac cagcgatgat tatctgataa 1740 tcgcagcttt ggtacgtatc ccgcactggc aaagggaacc cgaggatatc tacccagtga 1800 tetteagtat ettacacagt etegteacag getetttgca etgeacagte eggeegate 1860
teegetgeag tagegeacgg geatgggac egatecacga eegetgeaag tegeggatete 1920
gecaggtea egaaggtata tatacgggee attecatege egageecete atcetgatat 2040
egaaggeetga etatactgag acegetgeea gegeeagtae getgeeteta eteetgatat 2040
egaaggeete egeetgeea ageteeteget eteaacate atceacaact egaeeceagt 2100
geacagagac eacetgeegg eggetgeet getggeegte ategeeette eeggeegee 2160
teggtateate egeactgeg eggetgeet etgeeacat ecateggat acetggegea 2220
gaaatgeett gaeetggea geaacgeeg eggeeaateg ageteegtata acacecatee 2280
tegeogatgea etgeaactt egeetgaeegt egegaatett egeetaaag egeetggee 2340
tatteetgt eegeggegaa eategeeace gatgeega etgetegea etgeteete 2400
etgatettt geatecagge eggeatggaag aagaagetea egeteecag eateteete 2460
ecagagtatt egtag

<210> 1851 <211> 3136 <212> DNA

<213> Aspergillus nidulans

<400> 1851

60 atcatqcaqa aatqaqacct atgtgacgaa aagttagact tggtggttac gaccctgatc ttcgatctat tcccctttag cttcatgagc tgtattttat gcttttttt tttctttct ttttctttt tgaggctcta gcttctgtac ttcttagttt agcgtcttct ctccttcttt 180 ccggtccttt aagtgccgca tggacgccag aatccgtcct tttgtctcta ttcctgcaat tagacttata tattctatca tattccttcc gttttatatc tatatattcc ttttttgttt 300 tcccattact tccaagtctc tctgatcttc atcctttacc tcccgcttgg cccaggcatg 360 aaccgggatc acgtgcccat gagtctggga agctacaaaa gccagccagg cccaggccaa acctttgagc ctttgcgttg ctttctccag caggataccg gctttctttc tcacctctgt 480 acttttagtg tacgatcatc tctcttattt tattatataa tcaatatctt tctgtaccat actattttcg ggttgattcg aaagctcctg cgtttgcagc aatccgcagc tctgcaactt accgatecet ttactaatta teaaateetg attatteaat gtgagteete eatgeeagtt 660 catcagatta gccttcatta cagctgttaa acaatgtatt ctacttcaat tctttgggca 720 gccgagccgc ccgaagagtg attgtatttc ttcgttgcac ttcctgaact tgcgtgtttg gcgcactttg actgacgtac ctagagcaca gacggcggcc gagttaaccc ggatagtgcc cctccagcaa caatgttcgc ccgaagcctc aagtcgacaa taaccccacc tttctcgtcc 900 ttctcttctc gtcccctctc ctccgtcttc aattgcagtc aatcctcttt catctctttc 960 cgtggcttcc accagtcttc tgcagctatg gctcctcagg ttttcttcga cgtccagtac 1020 gctcctctcg gcaccggcgg taagtcccgc gcatgcatac caccataata tttacccctt 1080 cttctcacat ggatgtcggc ccccgcatcc gttgctcgca cgccggctct caaacctact 1140 cttttcatga ctaattcggc ccttactggt caattgcttg ttgctaacgg ttgttttgcc 1200 atgccatagc gcctaagacc ggccgcatca tcttcaacct gtttgacgac gttgtcccca 1260 agaccgctgc aaacttccgg gagctgtgca agaggcctga gaaggagggc tacaagggct 1320 ccaccttcca ccgtattatc cctaacttca tgctccaggg tggtgacttc actcgtggca 1380 acgtgagtcc tctttgttcc tgcaattctc gcggatcttt tgttctgaag gctaactatg 1440 agcactacag ggtactggcg gtcgctccat ctacggcgac aagtttgccg atgagaactt 1500 caagattact cacagcaggc ctggtctcct ttccatggct aacgctggcc ccaacacgta 1560 cgttttccta cactcactac ggtaacaaaa caaactaata acaccctgct ctagcaacgg 1620 ctcccagttc ttcatcacca ccgttgtgac ctcatggctc gatggcaagc acgttgtctt 1680 cggtgaggtt gctgatgagg agtcctacag cgttgtcaag gagattgagt ctctcggtag 1740 ccagtccggt gctccccgct ccaatgtcaa gcctaccatt gtcaactgcg gtgagctgta 1800 aacagcgtga acgtgtttaa tgaaatatct agcttaaatg gaattcctgc ggatatgagc 1860 tgattgcagc tgtcgcaact tggttacgct gtgaggccat ggtacaatat agccctttcc 1920 caggccagtg taatttagag cgtcgatata accagttttt cactcgtgat ggattcatgt 1980 ctttgcttgt ggtcattgca ctgtagttgt cttttgtggt tgaaggaatg gagcagtcgt 2040 tgaaccccgc tttacggaat tatatggtgt tccgttactg tttctttctt agccctgaca 2100 tccaggccta agtttccagt acccatggat atcattcgac gtgtgttcta gcttatcaaa 2160 actaccagtg gttacgatac ggactcctcg cttggagaac aatatggcgg ccttataaga 2220 ttaacctcta tctacagtga taaccgtaca gtcatggcga attttcgtgg ctcattagcg 2280 acattgcagt atcggcaact gcctatttac tttggtaaaa ggtgtttagc tattatatga 2340 ctattatgag aactaaagtc ctccttgttc tagaggaaag gttgccatcg gtatggctta 2400 ttggatctga attatatgcg tatgtgaaac atcaaccgca gcatttcgta acagccgttg 2460 cgtcgttcct gtttgtttaa cgctccgtta gcgataattc ttaaggctca ggtctcggct 2520 atctcgactg acatcgaatc gtttgatttg aagccaaaga gatagcagag aaagacgggg 2580 cagcgagggc aataaggtca acgtactcct taattccacc cccaatgtac tcccacgaga 2640 agatgaacga gcccaggaag gctccgatga agatacaaat aataatgtac ccgttgaagt 2700 acattgccag caacatcaca aagtacgcga ccgcaaactg caacatatgc agcagcgcac 2760 ggataaactg ttcaataagg cttggacgga cgcggaaggg tgctgctgaa ccgggcccag 2820 aggctgctgc tggtgccgtc gaggtgttgg caggagtctt atgggccccg gctccgttat 2880 tgccaatgcc aattgcgctg tcagattccg aggctggtga tggggtggct gcaccaggtt 2940 gggtttgcgc ggagggtaca aggtattgag cacgcatctg ggcgcggtgg atgatgaagg 3000 cgtcgtattc gcgggcgatg cggcgcagaa actcgaggac tatgacgagg cagatgacgc 3060 caatgcaaga gcctgcgaac atgccgcgcg agcgaaagtg ccagctgcgg gcaaggaagc 3120 3136 ctgtttttcg tagacc

<210> 1852 <211> 1852 <212> DNA

<213> Aspergillus nidulans

<400> 1852

acaagaatga ggttgtacac cttgaaaatc cacataatcg acttcagatc ggcatatcaa 60 agctacaatg ttcactgtaa gctaccgcaa ttcccgcgaa cgaagcacct tcaatcgcgt 120 tgtctgcagc gccagcgcaa gtcttgccgg tgcattgcca taatcgaacg aatgcataaa 180 atggagaata atcacgaccg aaacacagct catcctacat gagacggggt taaacatcac 240 tcgtcaccct cagaacagaa gtctatacag ccctacagac ggctccgctc cgggttgaac 300 cccaggaaga tcggcatgga gtaccgcgac gcagggtaat gtagcatcac atacccggtg 360 ccccgtgctc ctggcacatt attcgacaag cgctgcctct cagccgattc aagttccgat 420 gtcttgttat cgtttatttg ccgtagtgtg gatctggtgt ctgggtaata cataatttgc 480 accagggtgt tcatgacgcc gtcaaagtag tcctcgtcta ggccaggagt aagtgcaaat 540 aaccaatcac ttctgtgccg tgacgagtgc tttatagaac tcgattgttg tttttcgaac 600 caggggaggt gggatcgtct catccagagg tattcttggg acttgaaggc agcaatcatg 660 tttttacttg aagaggcaaa gagtgggtaa ttgctgggtc actgaaggat tgtggcggac 720 ggagaagggt tttttggccc actccacaat tcttcagctt catcctttcc ggctgtatat 780 gctagactga agcagaaagg ctgatttgtt gagagcgggg actaggaatc aattaaatgc acctccactc actagcattg atctgcgaga ttttctctgc atgcgcacaa ttatactcaa 900 gacctggcat ggcttattac ctttgtctcc agtgccgaat cgattcctcc acatttgttg aaggagaact cagtttetet getgeageea taetggaeae agatgtttee geegeaagge 1020 cacaattgac agtgtaaggt taattcatat ctcaatgtgt gaggatgtag ccacaatact 1080 gaaacgcacc ggtatgaaaa ggcaggagag ggttgcagag ggtagcggcc ctgtattgag 1140 aattggacat ttgatattgc ttctgcagcg gttaccaagc atatatgaat gaatacgact 1200 atctacggat taccatgtac gagaacccgg ctgctgatat cgaaaatata acttgggtta 1260 gtatctttag tatcgatagt gtgttggaga caacagaaac gccgagtttg gccaagaagg 1320 gcaccatgcc cagtctgggt aataagcgag agagagataa agtgctctcg cagctttcca 1380 accaagtata ttcgctggag aagatacggg gccctgccat tatctcagta gtggcgaggc 1440 aaacatagtg gattctccca agagatacat actacctaga aaaacatggc ttctatacaa 1500 acactcaggc ttccctgacc agcatccatt tctccgaatg ctaggcattg attgggagta 1560 tcagctatga tctgctccaa gtcttccact ctggattgtt cgtccaatcg tcgatagaca 1620 tgtacctatc cccaggcgac gaccccatcc atccaagcct cgaggctcac agaaaacaga 1680 cctagtactt ggcatttgca acgttgactt acagcaagca gcacgtgtcg ctgcatttaa 1740 atttcaccag tcggactggg tatctgagaa gcagtgactt gtagcgccga agcccaatat 1800 ctagccaatg caaggtgtcc ggagcacagt gctggcgtcc atatagcctg tc 1852

<210> 1853 <211> 2465 <212> DNA <213> Aspergillus nidulans <400> 1853

60 tgtttcttcc ttcctccctg ggttgcgtag aagcagtctg cttaattagt cttgtgataa 120 qaaaacaata tgacgtccat tacttacgaa gttggctcct ctgtaatagt ctaatcgttc 180 agagtgttga tggacgatat cagtggcaac ctcattcaaa aacgctctgt cgtgagaaac aactagaaca gtgcttggat atccttggag gtaatttgat aaaaaggtga tagacggcac 240 300 atccaacatg ttggaaggtt ctgcgacaat cagccgttgt cgtcgttagg tatcgttttg 360 accaaccgtc taaaaggagc aaatcgggct cgcaaaacag agctctagcc agagccagac gcatgcgcca accaccagag aatgtcctgg tagcatactg ttggcgttca ggggagaaac 420 480 ccagaccage cagaatgctg gctgctcggg attcggcctt gtccgactcc atttctgcaa 540 gettegaatg gatategtte agegtgatat egagteeete tegeteatga tegageetag etgegtetgt agaegtatet gecattgaag ategeteege tteaatgget gegagttgtt 600 660 ttgagatttt ctacaagagt caactagctg taacattgag gatccgtgaa aactgacctc 720 ttggtccgca agtagccgct tgcgccacac atccgcatcc aacaccgctt gaagggcagg agtgtcatca ccagtaatct agattgttag cactatcatg aataatacga ataaacaaca 780 840 tacctcctgt tcaacatgga gaatcgaaat atggcttgga atggctactt ctctgcgact 900 caaagcgcgg agcagagtac tcttaccgat accgttctga ccaacaagac catatcgacg gccqtaaqcc agcqtaaggg aggcttctga aagaatgcgg tggccaccaa ctgagatatc aatgccttcg agtttgatat ccttgctctt tgcctgggag tcggagccca gttgaagggg 1020 attgacagec atgaagaact cttcgtacga catggttgca tcgggctcgt taagcagacg 1080 agatgettea tattgeaceg tttteatetg ettettttee tgtttggeae ggatettgeg 1140 ttccgccttc tccagcttct tgcggtcgac gcgagattcc atcttgcgcg taccaacaga 1200 ctcgaggtca acatttcctc cagcaagacc cagagtagag gacaagtttc actgagaccc 1260 aacattaata geetggtega gettetggeg geaaagggea tgtgeetgea eteegaateg 1320 acgccatcgg aagcactaag ggaagaaatg aacttctcta cgagattgcg aatggcctct 1380 tcattttgag cggagaagtc cccagaggca gaaactaaca gctccgtgac catgtcagcg 1440 gettetgeca eeggagatgg ageattegea tetteaacat aggeeettga egegtgagte 1500 aaataaccct gtggttgtgt tagtctgaac tcgggcgatt attcgtgtaa gcctgcactt 1560 acgacggagt actcagtgat cacatggtcg aggccaggaa tctgagattg cagttccgcc 1620 tccatgtcgg ttcaaaactt gcactcaaaa accttagatc ggcaatgaca agggtatgcg 1680 tatettteag caecteteaa tgeteetata teatgtgttg aggtaggegg ttacagtett 1740 ctttgagtcg atttggtgtt gcaagacttt gaagtggcgg aaatgtggag caccggcaat 1800 tctqcacaaa tqctqqqcca acaactacaa ctacacacgc ggaagaatgt cactattaga 1860 caatacttta actaataatg gctgtgccaa tagccactac aaaactattt tctatctctg 1920 cgagagttga ctgctcgttt tcccagcgaa tattgtagat cccatttggg tcacatgata 1980 taaagatctc acgtgataat acatccttcc gtcgcacata cgaggtagta ctgttgggcc 2040 togaactcag taacacgtca tooggtogoo gatotaacto aacegeactg tacgeacgte 2100 aacgctaqag aatatggtac ctcaagaaaa attccgcaga gctgcgctac atttgggtac 2160 caaacgqtca qtqccatacq aaaqcaqaqa ctatccttca taggctacta cattqatqcc 2220 tecateateq caqagaqtqe etagacaace aaaaatgace attegteaag aaagacegtg 2280 ccatcctage tragtgetge egaatatatg cacaggegaa teggtggtgt tegtrageaa 2340 qqtqatqaaa ccqaqqqgta qcaaqcqcca tgcattgacc agccaggacg gagaacgtct 2400 ctgcatgttt cgtcgtttga tgtcaaacgc caaagcggcc gcccgatcgc agagtgcgaa 2460 2465 agtat

<210> 1854 <211> 3266 <212> DNA

<213> Aspergillus nidulans

<400> 1854

geatacaatt gaccetcace gtettegacg atgecattga ettetacece ttgetecact 60 gegtetteat tttegtetac aggegaaacg atgatgattg atgggtttgt gtegggagtg 120 aagaagtgea agttgteggt gagtgegacg taeteacgaa gtateaggte geegteateg 180 tegtacaett egeceateag gteateteeg gtateeagga acetgattac aatgteetea 240 aategeteae gggetgeege gttgttggeg tagteagagt egaggaagga gatgttteg 300 etgegtatgt tagetgateg teggggttag ggeacegata ataagaaggt eeacgtacaa 360 gaaatgggea aagtataeag eeetteetega egeaaceaga agageegtge aceeggaaca 420 aceateeagg acaateteta egggeteate eeecaacaec tegaattgeg etgagtteee 480

ggggttaagg ccgtagtcat acacggtgag tgcattgttg gttacatagt tgtcgacgcg 540 600 qtcqatcaqq tactetteca ttqcetcatt qtcagccggg tagacaaact gacgettgga 660 taactttggc ttgatttttg cagattcccg ggtaggtatg gggccttttg gctttggttg acqctttqcc aaccgtggqa tgtcaggctg cttgggctgt ttgcattttc cacggcagta 720 780 acqqtacqqc qttqttqccc qqcggqtaaa atggttqctg tqctqtatag ttagcgagta tccagaattg attagaatat tttaactaag tggcacctct caagactagc accgaaacca 840 ttgacgctga ccqtctgcac gctgtccaca tacgtgaacc tgccattctt gttaaagaga 900 qqctccctqc ataagataaa aggcagggag ctcaaaagaa gaacgattgt aaaaaagggc 960 aagatcatat tgcqccqctt gctqagtaca tcctgtaact ccagagacag actgcaactc 1020 tcatacttat actcatatct acactactct acgacaccgc cagatcaaca ggaacgtcca 1080 atgcactctg atccctgcat agaatgttgg tctatactga aggcaatgaa gccagcgcgt 1140 tgcatttaga tccttcggga tgaccgatcc ttgtatccat atagaggatc aggccagacc 1200 cattagetgt tetggtgteg gtgagtgata teccaggatt ttetttgagg tttattgget 1260 atagtgatat agtggcagct gaacttgggc taagacaatt cttaaagtac agaaatcgct 1320 catgatacct ggacatcggt cagccgcgac gcgatatccc agtgtgcccg aagaaatgaa 1380 gttttctaga acatcgtgcc ctgccaaacc ctacatataa gtttccaggg tatgttctag 1440 cgagccgtgg ctcgctccaa tgaaaacacc ctgataatgc ctcttttctt cacagccgtt 1500 ccacagecaa teettgtegt gataeggete ggetattgtt teecaagaat gecacegage 1560 ttcagccgca ccttggccgt atagaaaata gtcaggcatt gtagggctga aagacttgga 1620 ctcgctcggc cgacggctgt tctacgtgac ggcttggcat tatattcagg atgcattaag 1680 atttggagcc ggagtgtcac agatactaag gatgtcaccg tatgattcga ttgcataaac 1740 tgttcttccc ctaggctttt aagagagata ttttcttcag ctagacagtc ttatgccttt 1800 cggggtcgtg tttgggataa gctagggtgt cgctataccg ccacgcgcga ccatatcacg 1860 ccaacaaaca ccatgcaaga acctctgctg ccatattttc acatgagaca gattattagt 1920 ctggcttgaa ccgctgcttg cttcgtatgg agcgaggatt aacttgaagg tcggtgagga 1980 agtgaacgga ttcggttata accacagttg agatgctcgc gtccccgctt acaagggcgt 2040 ctttctggaa acttcaatgt agagaagagg cttccgtcag aaagggaaaa aaaaaagggg 2100 agtctgtttg cgtggcagga cagtggggca accagcagcg gctccttctg aaaactaaat 2160 acacacccta acatgccata cgggttagga aaggccaaac agtgctacga cgaggggaat 2220 gagetteacg gteaacgagg gttettetta tttataacgg cgategeece aagtgatggg 2280 ggccattgac cgactagacg cgagatgtaa catcttaggt cttcgatctg gttgaagcta 2340 tqaqaqcatc ttcqaatgaa ttgacqcaqc aqcaqaqctg gccaqcqatt caacqqcaat 2400 qqcqtqqtcc acqtttcaag agatcctcgg tgaaggcgtg gttgtgagtt acgagggctt 2460 tetectggae ateaaataet eaggggaatg tteggettgg tagegtgtgg tttgeteetg 2520 ctttagttgg caagttttgc acagaaacat agggcttgag cgccgcaggg gacagggata 2580 gaggcacqtt ggcgaggtaa agcatttgag gggtgaaaag agtaaacgct ggtaagcctc 2640 qqtqacacat cqtcqqagtc acaattqtgc tagagagtat ggcgaggctt atgaggaaca 2700 tagttcatct gctgggctga gggaggtcat ctacaacctc tggaaacggg cagctcgcag 2760 aatatqqtaq ttqqaqaaac aqqtacqaqq qcactatttt caqaaqcaat gattqcaggg 2820 gcagttattg gagggagagt atgattgacg atgatcattc ttgaagtgcc caagtgctgc 2880 gatcactggg caaccgggcc ggcctctaga gactccaaag ataagtgttt gctaaggcca 2940 ggcaaccaga tcgggatcgg tatcgcgggg tacgcaatgg ctgcatggta aggttgtttg 3000 tagtggctta gccaatgaac ccctcatttg gagatattta agcaacgtga catcgtcgtg 3060 ttgtagcctg cgccaacccg caaaatgcac tccaagatcc tctggctgag gagcccaaca 3120 atactcaata accaggtcaa gcgatcctct agcttcctaa ctacgcatca tggctttcaa 3180 cagogttccg ctaccgtcaa aaagacgccg gtggcggtct tgccgacgag agcctccttt 3240 attcgggatt ttactttcat atgtcg 3266

<210> 1855 <211> 4357

<212> DNA

<213> Aspergillus nidulans

<400> 1855

agettggetg gttaacccaa tteegttgea gtegetatge ecceaatttg agecetatat 60 tettaacage atttatggeg ceattttage cacatettet tgeeetttaa gggggettag 120 gegaeettta atgtettegg cateatttga egggttgtga acaetteatt tgeeagtatg 180

240 tgctcactcg ccctatctca gctcaagcac agagagtcga ccatttgatg cacatattgt 300 ttqtqcctga tgcagcacag aaacctcgtg ttcattcaga ggtctctgct ttctgaaaat gctccacaat tttagcaaaa cgacgccacg cgatataggc cataacctgt tccacccagc 360 420 gggtgtgccc acggcacaca ttgctctccc gcatccttct gctccattcc tccaattaat 480 gggttgctca ttggagggta attcttgaat ctggggccac agccgggggc cgcctcatac gaggtaacat cggtggagta tgcaagaatc ctccctacgc cggccgagac gggagatgat 540 gccactagca acccatacag aaagtgcgat tggcgaacac acttctatac atagcacggc 600 cagaagetgt gtccttgata gaatetgatt geatgtcaac cttggctttc cgccgaaaac 660 tetegtaete getttaegaa ggaetaeatg ageetteeet gatetgtggt acaggeagee 720 780 aagagcaagg tgggctgaag gaactccgca tgacgccctt cgtcggcttt tggcaagccc aattttgccc acagtccgta cccaaaaggg accagcaaat gatatgctca agtcaagcac 840 catgggttaa ctttctggac tctagcttta cttagctgag ctgcacctgc cctaaatagc 900 ttcaccgtag catgggagtt cgtatctatc aatagaacaa gcttggatgt acacgaaaat agacctatgg cgagcaaagg gtgttcgccc gcatcaagct atgtgaccga gcttgccgaa 1020 qtttccttqt catatatctt gactatagcc caagggagca tctgatgatc tgcctacctc 1080 ttcccttatt agtccctgaa tcatcttcta tgctccctag cagaaataga catgaacgaa 1140 acttctgact tctgcgccat catcgatgat tcttggagag tccacgcccg ttcctgtcga 1200 ggcgggttcg acttcacact tctctttgag gaattggcgc tatgtatcct gccaattgcc 1260 tttgtcatta ccttatcccc cattcggata tacactctct tgcagaccga cagtaaagtt 1320 ggaccatcaa aacgaccaat attaaaaaca gtacgtgctc aaacagctct cctttgtctt 1380 ttcaacgccg actaacgtgc catgcagtca ggatggcttc tctggggtgc cctgcaattc 1440 ctgcaggcaa ttatatgggc cctaccaaac gcccgaaata ctcgagcttc gattgctgcc 1500 agettgetea tgggatgtgg ategeteatt etgtgtgttt tgteataeat ggageattte 1560 cgcaacgttc ggccgtcact cttgctcgag ctctatttgt tggtcaccct actcttcgat 1620 gtcacaagga cgaggactet etggetacge gatgataatg actacaacaa getcatggca 1680 gtcattgcca gctttgccgt cgctgtcaag gttgtgcttg ttgtgctcga aggctggcag 1740 aagagageta teetgaaaga caagtaeega geetaeeete cagaggeget egegggaete 1800 gccaaccgtg tgcttttctg gtggcttaac ccccttttct tcaagggata tttcaagctc 1860 cttcgagtgg aggatctgta tcccctcgat aaaagactcg agtcagcacg attgcgtgag 1920 ttactcqaca qacqatqqqc caaaggtact tgaaatattg aattcatctt gtcgttgagt 1980 gctaacagac tttgcagaga atcggacagg caaagcttcc cttctgaatg ttgttttcaa 2040 gactttcaaa tggtcaatac ttgcagtggt gcctccgagg ctgtgtctga ttggattgac 2100 gttctgtcag ccactccttc tccacagage aatggagete tctgcagaaa aggtaacaat 2160 cgagtcaaca catgttggat acgggctcat tggtgcttac gtcttggtat atgtcggaat 2220 ggcggtatgt cgagaaggca gcttcctttg ctctaatttg agggctaatt gtgataaaat 2280 ccagattatg atgagtcaac aacagcatct cacgtatege gcaattacta tggteegegg 2340 egeagttgta teettgatet ataaaaaage eageatgete acaateaaag atgetgatee 2400 ggctgcgtct atgaccctca tgagcgcaga catcgagaga atcgtccagg ggtggcaaac 2460 aatgcatgaa atctgggcga atgccactga gattgcactc gcaattattt tattggagaa 2520 acaacttagt ategeetgtg eggtaeetgt gggegtgtet atetgtatgt teetgegeae 2580 gtccagtgga cggcctgaac caagatctat actaatctga ttgtcaatcg ctagtcgccc 2640 ttgtgtgttc cttggttgca atgtctggcg tcatggcaag gcaagccaag tggctagagg 2700 caattgageg gegeatetet tegaetgetg ceatgettge ateaateaag ggtgetaaae 2760 tgcttggcct caagccgtcc ctcatggcct caattcagga cctacgattg caggaactta 2820 ctatttctaa agccttccga aagcttttag tatggaacat ggcatttggt gagtaattcc 2880 caagcaatca gccgtccatc atcgcgcatt cttgctaaca tgtgccacca gcctggatga 2940 ctcgcatctt cgcccccatt gtgtcttttg ctgcgtacgt cgccatctca gaaaacgcag 3000 ggcgcgggtc ctcgctcgac atcaatatgg tttacacatc actttcgctc ttcgctctcc 3060 tggcagaccc attettgtee etggteatgg egeteatggg gtteettgge teaattggtt 3120 ctttcacacg aatccaggaa ttcctcaaca aagagactta tcatgggaac cccaatacct 3180 cccactggag ctctgtcact agcctatccc cgtacaagga gcgtcatctt tcatccgata 3240 cgtccagtac gctgggagtc caagaagatg agacaacagt tgagatgaaa cttgccctcc 3300 catttcttga tactctcatg gtggagagtg caagctttgg atgggatccc aaagcagacc 3360 caaatctgca ggatataaca ttgacgttcc ccggtcgaag tttctccatg attgtcggtc 3420

cctccgggtc tggtaagtca acactattga aggccctgct tggtgaggtc ccgcggcttc 3480 agggtaaggt gcaggtttcg tccgatagca ttgcatactg cgaccaaacg ccttggcata 3540 tgaatggtac gattcgggag agcattattg ctatgtcaga gttcgacctg ctatggtata 3600 ccactatcat aaaagcatgt gctttagagc aagacctagc ccagtggccc caaggtgacc 3660 aggctattat tggcagtcgt ggtgttgccc ttagtggcgg acaaagccag agaattgtac 3720 gtttccactc ctcgaatagc caccaaggac agatatgctg ataatatatc ccctataggc 3780 actggcaagg gctatatacg cccggaaacg aattttgctc ctcgatgatg ttttcagcgg 3840 tetegatgea gecaeggaga accaeatttt etgeagettg ettggagtga etggaeteet 3900 gegggaaget ggeactactg ttgteetege tteatettet gteaagagag teceataege 3960 cgaccacatc gttgtgctag atgaagaagg aagactgaca gagtctggct cgttcggtga 4020 cctcgctgag caatcaggat acgtctctag tttctctctt ccagctccga actgggactc 4080 taaagaaggc tgattggagc gaggagaatg tgcacaagca tacccgcagt cttgcaacct 4200 acctgttcta catacgegee gtgggetgga ttccaaegat aatatteete geggeeateg 4260 ccqcattcqt qttctqcatt tccttcccaa qtaqqttqqq ctttatcctq qtqctqqqcq 4320 gtattgccta cgcagtcttg caagtatctg gtttgaa 4357

<210> 1856 <211> 2241

<212> DNA

<213> Aspergillus nidulans

<400> 1856

gacctaatcg tactagatgt tgcgatcaac ccatctgctc cgaatgttt gtgcagatta 60
aacgacccga tcctcatcct ccagagcacg ccgactcgga ctcgaacgct ccaaatccag 120
caggcgaaac ggaaaggcag gacgttcaag atattcagct tgtctctgaa ccagcagcat 180
gcccattttg tgtccagcca gaattcgggg tggcatatgt accccctct ttccgtagag 240
gactagccta cgcctccgat tcgagtggcc ggccaaacat aggaacacca gtgtcatcta 300
catcgtcgct atcttcggca actactccta ccactggtcg acggcgtgca acatcattat 360
ctgcaacaga tccgagtgtt ataactacag acaaggtgcg gccagattgg gcgcagaaac 420

tggccaatgc tcgtgcacat gcggcccgaa gatctgcggc ggctaccgct ttacataccg 480 540 cggcttatct aatgaattct aatggctccg gaggcgatac tcgaggattt agtatgagga gaggtgttat gcggcgcaat aacggtggac aagactcccc gggtacacca ggtagaagcg 600 660 gatcgccagc gctacaagcg ttcgctttct tgacagatag gcgcgcacca tctggacaag 720 aaacggactc ggctgaagag ggcacaagca atcttgctcc ccctcggaac agttcaagaa ggtcacgcat ggatgacttg gaggagatga tgatgatgga agctatccgg ctgagtctgg 780 caagcgaaga agagaggcgt aagagagagg agaaggaatt gagaaaagag gccaaaaggc 840 900 gagaaaaaga agccaagaaa gcggaaaaaa tggctcgtaa agctggctta tatagcaaca atgcgagtag ctcggctctg gagtcaccat cagattccag actgcccaag gttacaagca gctcttcttc tatcatcggc gaagaaagaa ctccgccggg taagggcaag gcagtggaaa 1020 gagtcactcc gtcccagagt aacgtcgacc tgaccgaaac tgctagctct ggtgatgtac 1080 egageagttt ettagageet caacaacete agteateete gteectegge eegeeggtae 1140 ccaaggagee ttecaageet teacacetge gteatgtgte cagegettee teateattet 1200 egtetetegt egagteeatg teegaggage etgggetete ggeecageea caegaaggta 1260 ccaqctcatc agcggaacca ttgttcaact tccgcagtct agccgccgtt attggcgacg 1320 aggacaaatc agatgaagcg gcggaacatg ttgaagacac tgcccctcac acgacatcag 1380 aagggtcaac ttcgagcgca gcgaacctga caaccgctcc ggctggtgag tcagctgtgt 1440 caacttetag tacggccgtg gaaaaaggcc ctacggttga agaaagccaa gaatgctcgg 1500 tcaacaagga gattgagaca cggtccatgg aggtcactga tagcaggaat tcggagacca 1560 catcatgaca ttcagctatc tttcagtctt atcttgaacg tgcttgactt ggttcaccag 1620 cggtgcaagt catttcagtg tcattccttg gattttcctt gacggaaaag cgagtttat 1680 ttgtttcttt gtgcgctcat ttgacgactt tgttgacatt ggcataacag gatcggaggt 1740 ctctttcctt atatacaaca acctatagat ctgagttttc ttatattttt gtgtgtgtac 1800 catcggacgg gcatccagac tgcatatggc taaggttgtg ggtgaaaggg ttggtctttt 1860 ggaatagagg aatgcaatcc atagcgttca ttgagcacaa atttatagtg ttcaactctg 1920 gtcataaatc tagctttgac ccgtactgtt aacccaagcg tgattctaga aggtcctcaa 1980 gctaccacca tgtcccgcaa ccttgggaaa gaaacacaat aactttacgt tagtgaatca 2040

ctcatcgctt acaagggcat gggtacctat ctggcctaga taggtaggct cccccactg 2100 ctacttttgt acgtggctgc tcttcctagt accgcaagca gttccttctg aagctggttt 2160 ggagtggaat actagagcag cttcgtctag ctcccctct ttctttcta tttctattt 2220 ttttcttgc cctttgattc a 2241

<210> 1857 <211> 3459

<212> DNA

<213> Aspergillus nidulans

<400> 1857

tgtctcgcag attccctgga ttgatcacct gctcgacaaa aaccccatcg tccgaattqg 60 accaaagcca acattgaccq gtgtgctcta cgccttcaag gtagttgccg agtaccaagc 120 ccaacttaac tcgaacaagg ttaagcctgg caacgtcgac cacactctag acaaqtacgt 180 ccageteaag aagacacate eggaegtggt caacgatgte cagategtea actggttgat 240 gctaagcatc ctcgctggag gcgacacttc gtctgccaca atgcgcgcaa ccgtatacta 300 cctcgccaaa aacgcggacg catacaagaa gcttgttgca gagctgacca ctgcgaatct 360 aaccatgccc gctcagtgga aggatatccg cgagctaccc tatctcgacg ccgttattcg 420 agagagcatg cggatcaatc ccggaattgc gatgaacttc gagcgtgtcg cgccggaggg 480 cgggtataca ttgcctgacg gacggtatat ccccgctgga actaaggtgg gcatcaaccc 540 agctgtcacg aacagggact atgcaatttt tggagaagac tcagattcct tccggccgga 600 tcggtggctg aaacgagatg gtgagagtga tgaggagtat caagagcgtc ataaacggat 660 gcatgatacc tgcgactttg tgtttggagc tggcgcgcgg gtctgcatgg gtcgatatct 720 tgccatgttg gagataaaga agctgattgc gactttgtac agcacgtttg atgtaaqcca 780 ttttgctctc tggggatggc tgtcatatcg ctaacactcg gcagctgcat ctggtcgacc 840 caaaacatga gtggacatac cgaaatgcct ggtttgtgta tcaacagaac atgcccatga 900 taatcactcg ccgtaagctc tcggcatgaa actctcggta aggacggacg aaggttgagg 960 ategagagee titatataet aegaacatee etticatgig aeteteetta taaatigtaa 1020 ctcagatagt agaccttaag cctggcctat ttcactagta gagcactgca aggaaccaat 1080 atcaaattca aggcaccggg caaggtggaa actgtaatct gtactttgct catgcagcta 1140

tatatgtgcc atgtggtcta ggaaaccgtc cccgcgattc tctaggataa ataaatacca 1200 acgcttgact aattacgcat ccatcccccg ctgcaaggac gattccagat cgttgtggtt 1260 gccgcctacg gcgcctgctt cttgaggcct aggctcttct tgcctccaca ctccctgctg 1320 atgctcggga atggggatgt tgcctatttg ctgttgttgg gcgagagatt gcgcctgcgg 1380 gggcatgcgc accgattggc gaaaacggac gacttcctcg tagatcatgc ggcgcatctc 1440 ctgcacatcg tcaaccacct caaagtggaa gtcaaaggtg gtggggcagc taggctcatc 1500 ggatgcgtcg tgccaaattg caaggtaagg gtgttccaga gcctcttcca ccgagatacg 1560 tgacgaaggg tcgaaagcaa gcatgcggtc gagtagatcg agagcatcgg gattggcgtt 1620 cgggaacagg cgctggaagg gcaccttggg cataaagggc aagttacgca catactcctg 1680 ggcacgtggt gagccaatgc ggctcagagt ttcttcgttc ggagtgccca ggtagtgcaa 1740 gatetggttg agetggtega catagtegeg accettgaag aaggggegge cacetaacaa 1800 ctccgccaqa atgcaaccta cqqaccacac atcqactqca tcacqtcaqc ttqqtcaaaq 1860 ttcgaaacag cgcgaaggca catactagct tttgtgtagc tctggaaact caacatgatt 1920 tccggagcgc gataccatct tgtcgcaaca tattcagtca tgtaaccggc gttctcctca 1980 gggtcaattg agaaaccacg agccagacca aaatcacaaa tettgagete acagteegca 2040 ttgaccagca agtttccggg ctttagatct ctgtgaagga cattggcgga gtgaatatac 2100 ttgagtccac ataggatttg gtagatgaag gattggtagt gcgcatcggt cagtggctgg 2160 ccggatcgaa taatagcagc taaatcacac tccatgagtt ctggtcgaat aagagtatca 2220 gtaaccagtg agegacctat aggegaccaa tgctctaacc ttcqtataqa tatqtctcat 2280 tgaagttgtc cggtcgggga atatccatat catagagaca ggtaatctgc acccaggtca 2340 gcctcatttg tcccgtatgc aaaaggcgct gatacgacat acattgcggt ggcctctgaa 2400 gtgttggagc agcttgatct ccctaagggc gcgcttggcc aaaatcttct tgctgaaqac 2460 gttggttacc tttttgatgg caacgccctc ccccgtctgg acattcgtag cggcgctagc 2520 gtaacaatat ccgtcagtac ttgtgttcaa gttgctgttt tattgctttg attatgatcq 2580 tagetgtate caaegetace ceaeactate aegataaega egaggttgag gaeaeteaag 2640 cataaagcag aatgccagag aggcacatac caaacaatgc cataagcacc ttgacccagc 2700 teettggtga cagtataacg gteatcaaca atgaagteet gattgaagae ettaaagaet 2760

ttccgtccct gtacttgtaa gtcagacatg ccgggcgcgt gagactgaga ttcgaatcga 2820
aacgatcgac cggcaacggc gaagggcagt gttgaaacag cgatcagatt cgaaacacgt 2880
caacgacaac ggtaagtgag agtgggcggg ctcaacggat gaatggtttt cgcaggaaaa 2940
agggatggaa cgacgaaaag gtgattttt agcgcctaaa ggaagagctg aggcgtcgag 3000
tctaggattg cggctgcagc gcgattgcga ctgttgagtc cgctggtgtg gacggctcga 3060
tgccccgcag tgtcacggag ctgctagcta gctatggtca gttcttgcgg ctgcggctga 3120
gactagaccc gtgagggagc attacaatga aaggttctag gaagaatgcg caaagcagag 3180
attttgaaca gcgagagtca ttcaggggaa aagaggagag cccagggtcg actctcggtc 3240
gataattgga gacagaaggg aagcgctaaa ggtgatggaa ctgcagcagc ggacaaaggg 3300
cctcaggcgg gtggggtggt tgctcctgga tagtggcaca gtgtcttagg tgtgggcaag 3360
atagttccct tactgaagga gttactcaac aacaatggcc atcagctata ctgcacagct 3420
atcgtcgtgg tggtgaccat tctgttagtc aaagcaaaa

<210> 1858 <211> 3231

<212> DNA

<213> · Aspergillus nidulans

<223> unsure at all n locations

<400> 1858

60 acctactgct ctcagcatgc ttcgccgcgt cgactgcggc gtctgcgaaa acttcctctt eggegteget gagagaegte ggaatetgte tecatgaget teaacegtea eegaceetee 120 qatccacctt taagaaqagc tcgacttctc caaattgtct agctgtgagc gcctcacatg 180 tatttgctgc gcaagctgaa aaagcaactg tgcacgttta cagcagggag aagggtaatc 240 aggaagetae tgtteeatte ceagagegea ttegeageat tgeagtegea ggategaaaa 300 atggcgatat cgtggttcta ggtacagagg gtggtcgtct gattttgtgg gaggtgagta 360 agtecettgg agtgettgga tacaactgae gatgeetete aaggtttgea egggaegeea 420 agttgctacc actgcatcgc atttacggcc cgttacctcg gtcgtcgtcg atcccagctc 480 aaacttcatt ctttccggct catcggacgc cagtgtccat gtttggtcgc tagttgatct 540 totatotttt acaaagooto catcagggog caaccagcag cotocaaatt cacctattog cacatteteg aatcacegtg cagcagteag tgctattgtg gtgggacaca gcaceggtag 660

atacaacatt gctatctctg cggcccaaga caacactgcc attgtttggg actatcggac 780 cggtcatgtt ttgcggaatt tcctcctgcc ggccagcgcg atctcccttg cccttgaccc ggttgataga gcattctatg cgggttatga agatggcagc gttcagtcgc tagacttcta 840 caaggaacaa tccattcagc atcctcttca caatccgtca ctacaggcta ctccagcaca ggcctcctct gaagaccgct ggctcccacc ttccgctgac agtggcgcag cacatgcgtt qaccetttet tacgaeggta tgaetttget ateaggeeat gagaatggea aagtgtaete 1020 ctqqaatqtt ggaagacgaa aatatgcatc aacagtagcg gacttcacgc atccggtcac 1080 aaacattatc atgctacctc ttgaaggcct atatcaacag gcgacaaatt taaagagagt 1140 agcgcataca ataatcaagc cgaaatacga ccatacgctt ttagagaaca cgcaggctgc 1200 aggtactgtt cctgcagact atgagtttaa cacccatcta cttcgctcat cctcgcctag 1260 tgaagcgcct gctgagtcag actggttcat ggacgccttt actcactctt cttttcccgc 1320 atccttgata gagcaaggtc taagtgagct aactgctatg tccttacctg gatcggatac 1380 tgtctctgcc ccgtcaatga acgtggcaat ggacgttgat acccccggca aggattccca 1440 aattgcctcc ttggaaaacg aaatcgctac gctcaaacag aaagtctcag tcagcgatgc 1500 ageteggeaa tecageactg aegaaateae gaaacteegt teaaacettg eeaaceteea 1560 cgatcacatc aatgaactca aagcgaagca ggagcaatca cagcgggata ggatacggcg 1620 acaagcccgc agagaggagc gggcaactcg tcgacgggaa gcctggttcg cggcggagaa 1680 gaaaggcaag aatggagacg ctgtgctgcg tcggatgaaa gctgaagacg agtctgagac 1740 gagcggcagc gacgatcaga gcagtgatga gcaatgaaac aagactcctt tttttttcat 1800 tctacgtatc gatgttcctc atgtctctat tacaactatt gttatattca ggatggtctg 1860 gcatgtttca agagggcatg ggtcacattc cacggcgcaa cgggctaaaa gtttgaatcg 1920 aggatagagc ttcaaggagc acttggctag catatgaaca gtaacaatta atgttgcata 1980 cagtcaaatt cggtaataac cgtggcacta ctctgtacac ttttaccacg gctgttctac 2040 cactetatee cegtecaget egagtecaga etetggatae egggetgtae atteetgage 2100 tgtttcagtg gagctattcg gggttcgcga aatcatataa tagcatcatc tccatatgct 2160 caattagttc caggaatgct tcgaacccta accaagaccc tctcttcaag ccataaattt 2220 gacggtgttt ggaggttcgg ctgttccagg cttcagtagg gattcattga agagccgtca 2280

agtoctatac acatagoogg ogatacotca gtgtatotat aggotattat atacagtaga 2340 aaaccatgat cgaagctgaa gagacaacgt taacctctaa tacccgctcg aaccctcatc 2400 ttgtacctgc tcgccctcca actcctgtac aatcttaacc cccgaactag ccccaatgcg 2460 ctccgctcca gccctcaaca tcttgataca atccgccgca gagcgtactc caccactcgc 2520 cttaaccttc gtccccttcc caacagcctt agcaacctca tacatcaacg ccacattctc 2580 aacagtcgcc ccagccccat taaaacccgt actcgtcttg atgaaatccg caccagccaa 2640 gcacgaaata accgagccag caatgatttc gtcacgcgtc aattgcgagg tctctaggat 2700 aactttcagg ccaactggcg caggggcagc attccgcacg cccaagatat cctcgtagac 2760 ttcaacatac tgctttgtct tgagcagagg gtacttcagg accatgtcga gctccgtggc 2820 acctaacgag atagctttac gggcctcgtc ttccttctca gaggtttcgt acatgccttc 2880 atggaagcca acgacgcagg cgacacctac ttctggcgca gaggcgaagt tccgccacgg 2940 cttgctcaac gtgggctaag cggacgcata ctgttgcaaa ttggtatttg aggctttgtg 3000 tgcagagctc ggttatttga tcntggagtt gctgtcaatg ctattnggat gtggtcgatg 3060 nnntgcgttg actttggttg ggcgtggagc ttgttcttgg attanggatt ctgggtagtg 3120 aggcccagat ggaggaaatc aaagccctcc attctggttg ggtttgggga tagacatcgc 3180 gtgctgtagc tgtccaggtc tctaactcag gcgagagaaa gtaacagcag a 3231

<210> 1859 <211> 5196

<212> DNA

<213> Aspergillus nidulans

<400> 1859

ggagctteet ageaatattg gatgatagee accettttt tategattea aagattetge 60 accaatggga caggagtaca tatgttggge egttegaggt aaegttgaga ggaaagaegt 120 ggegtteaag gtgatageea gagaaacagt actgagegag geagaatate ttttaegaee 180 atcatetggt gttaggtete aaatgeaata agtacacaaa aaaataacea egggagtttt 240 attaageege gtgatateeg attaegtaet tgeatattet tgacatattg ettgtggggg 300 aagaaaaace tetagagaae atetagagga eaegettetg eaecatttgt atategtgtg 360 gtgacgggea tegeaaaatt agteggagat teattetata eaeateeeet gggtaegtae 420

tacgcaccgt tgagattatt ctgccttcaa caccagtagt tattggaagt cttcctgtaa 480 ggctgggggc tgagattatg ggaattgagg aactgctttt ataagcttaa caagagacta 540 600 caaqaqctca ctttttcctg gagcccggtt tacggtaaaa ggagttggag aaacaaaaga atagagaccc aacgagtact ggcatcacgg gaattgacct ggcaagagac gaatcttcgc 660 agaaaggtta taaggattgt tgacctccgc tactatctca tcaaagaacc ccagtcgcac 780 catteccace taaqcaaqqa aaccetaatt gettetgtet acaceteetg aacatgggat 840 cttggtcgat atcctcatca ccaacttcga gtttgcgaag ccgtgctttg actacgatgc 900 tgggcttcag cccaggcgca tacagtgccc gacaggccct cgaagagaga aaatggattg tcaggcattc gataattatt ggatgcagtc tccagagacg cgttgtacgg tggggtctct cgtgcataga gcatcattgc aattgcccga gagagaaaaa agtctccgga gagaagaccc 1020 tcagttgcag ccagatctga ttttcgcgtg gtgtagttta gtctggctct gtctaggacg 1080 gcgctgctat cctcaaagac gtcatgtaga aggagcagag gccatgcatt tcccgcaatg 1140 ccatgacaca aacctccgcc tttcgagaga agaccctgct cccacacgcg atccgtggca 1200 agacatacgg cgcggttcca gttcggttcc cagtgctcta gaaccagctc cgtgtgcttc 1260 aaggcgcaac caagaaggcc caggatggcc ggcgccccat gacacatctg gaccagcagt 1320 gactggcgag atgaagagcg gagtgggatc ttggttggta gatggccatt gtgcgcgata 1380 caaatcctgc atagcgcgct gatcgttcct ccgatctccg gcagacagtc atccagttcg 1440 tccaagttgc aagcaagaag aaccggtatt atcccgcctg cttcagtcag taactgaagt 1500 ccgaaggtct caaaagtact tacacaatcc atgagccctg cagaattgca ctgttagcga 1560 gggctaaccc ttccggcgtg ctacttacca tccaactcca tagtacccag gcttccatgg 1620 ccacattaat ggaagggcgt cgactttgcc atggctcctc ttatactttg cagccccttc 1680 tctgccagca tcaatgattg aacggacaat ttcaggaatt tggctaatta ttggttggaa 1740 aacttccatt tgcgcatgtg gaaggtcagt cgccgctgcc ctgatattca gaagcgccca 1800 cagcagccca gcacggccga agagaatctc atccgcgccc aggtcgtggc catggtagaa 1860 ggcagtggaa ccatgactta gtgccaaatg taccgcatta tcaaggcact caatatcgtg 1920 agcggagata gtttcaaccc tcccagtggc gcatttatgg aggatcctca gtacaacagc 1980 agcgattggc gatctagatg ccagaggtga gagacctcca atccgcagag gaatatctgg 2040 accacgagtt gggattcgcg ctctggctag acttaagaag tctggcaggg agctagcatt 2100 atcttctagg acacgctttt gttgtgctag acgaaggtat gcatcagcaa ttcctataaa 2160 aaatttaaat gaagggaaag atacctaggt ctccggtata caccccgcgg ccatcatact 2280 cgttactcgc tggagcagta gattcaatga cattgacgcc gttgcaaacc gcactgctga 2340 ggacctgaag tgtccggcgt agagttgcct tctcgatatg gggcaactga agatcgttgc 2400 tgtaatactg cgggtattct gacatgttga tatgaggaaa tgtcacttga aagcggcgca 2460 ttgagccgag tccttgaacg tgctattgcg tattgaggag gctgcaggca tccaaccccg 2520 cctcagctgt acctatgacg tataaggcag caacatgact aaatcgcagg gatgaaggct 2580 cggcaagtaa tctatactga tcaatctaac aaaactgtgt ataatattta aacgcgagtt 2640 acatgtgaat teeettaatg egtttaeett gattgatate etgateaaaa gaggatgget 2700 tggtcttccc acagcccaga atctttggcc cattcatccc accaggccta cactatgtca 2760 gtacaaagct acttagaaca gaaaagacga ctcacccagt cgatgccaga ttcatcaaat 2820 aggccatagt catacccaca acttccgccg cggtaggaag agtgataagt ctctggtttt 2880 gtggctccct gttcaccgcc agcttggtag ctccggagca tgtcgtccaa tatttggtat 2940 actcttgaag tttcatcacc agaatccgat gcgttcttcc aaagagaaac ggagacctcc 3000 agtgcctgga tcagagtgtc agattcgact gctgaaaact cacccgactc tcttcgtctt 3060 atcgccaatt caagagcgat ggtcatggcc gcaggcgcca gcatttgtcg tgttcgagag 3120 taggcgtacc aggacggctg tagtagtctt tggtactcta gcaatgccag agacgatgtg 3180 aggcagcgag agcgggatat gtcgcccggc tggtaggttg cacgttttcg gatgaacctt 3240 cgatgcaggg tacagatgct ttggtggtac atgcatgcca gctgtaactt tgaatagtcg 3300 gccggagtcc ggggtgagct gtattttgcg tcattcgcat ccactctcat atgaatcgga 3360 acateegace acacettggt caacaactga tegateteaa teacettggt atagtegtee 3420 gggcaggggc cgttaatgaa gtcaataacc tcgcccagag cgtgaaacac gcgtcccttg 3480 ataatcagat acgaggctgc cgttggttcg gacagtggcc ttgggggcgg gaggctttta 3540 atatettete etagtteeca gtegtgaaca ttaageggtt cetttgegte egagttaatt 3600 gctggagtca tccgcgggaa cccagacaga aacgacgcca cttcatccat gctcttgaca 3660

gaaagccata tccgtcgtct atattcacct tcgatggtcg agaaagcagg agtatgttca 3720 gggtcgcggt ggtaccccat atttactgcc gcccttacaa taactcctgt cataatccac 3780 aagccccggc tattatcgtc cttcctgtta agttcggcgg tcgcattgaa acgcaatgtc 3840 tcgaccgtat atggcaagca tttggcaata tcaccaagta atagacactg tgatgttcgt 3900 agteggtaca gatggaateg tteeteagee tetttttggt ateettgtte eecaagetge 3960, atggcgagag ttataattcc aaggatggag aaaagcaatc cgatccagat gacattgctt 4020 tgagacggat tgttcaggtg ggtgttatac tacgacgtca gattcgtacc acaatagtgg 4080 agggcagcca tacctcccga ataaaggttg gttcatgtat gatggctacg aaacaatgag 4140 ctcgttctgt caacaatatg cgaagaactc acgaggaacg gatatgggaa agttctttct 4200 atcgaagaac cactggatga gtttactcat ttcatttctc ggcggcaggg acgacaggat 4260 ctctaggata tctacccgct gaacatggcc gaaaagcaga ctggtcccat caaccgagtt 4320 cgtcaaggta tgcgagacaa ctgattcgtt cgggggctca tcccatgccg ccttcagtgc 4380 gctaatctgg gctagttagt gtggcaacca agaggcacgg gttaacgaac ttctcgcagc 4440 acatettgee agtegteege tggtttatae acagaatgtt eteegteeaa gaaggteetg 4500 cctacgctag ttgaactacg agcatctaca cctctcagtg ctgaagagcc actggagaag 4560 ccattggaag atggagcaac ggttgacggg tcactctggt tgcagctgat aagtcgcttg 4620 accatctcct ccaagcggtc aatccgttcg cgcatcgagt ggccattctg ttctatacta 4680 gaagatgaca gagctccatg tgtcgatctc tgaaagatac atgctgactc ctctccccga 4740 gcagtacaat tttgacacgg cttctctcta ttacatttca atctggtttt gtcagcacct 4800 gacgtgttct atggggttta ggggtatcta gacttcctga cgcggcagga ttcgcaggac 4860 agagggatee geegeegaeg tegettagea accegggttt etgtggteag agtetgeatt 4920 taggtcgtcg ttgagcttca gcggggtgtg gacgaagcaa gaatagtggc acgcccgacg 4980 ctgcgctctc tccgtatcga gaaatttcgg gaatacatat tttccggtgc cgtcatatca 5040 tctgtctagt gaattgcagt aaatgaagcg tttttataag tagcatgatc taagcctgga 5100 ttcaacagtg actctgtgtc ctttggtatg tcacgcttta cttttgctta ataacaggcc 5160 5196 aatgagagac aatgtgtata tctgactgtt tgttac

<210> 1860 <211> 2533 <212> DNA Aspergillus nidulans <213> 1860

<400>

aatgtacgaa acatcttctc tatatcaata cgtcaactga tggtacagca actaaccccc 60 tgccaatctg tttccatcgg gtcaggctct aaggaaaccc ggcaaaatgc gaccgctgct 120 gaagatatcg aacaggaagc agttgaagca atgttacaaa cgcgttctcg atatctcaga 180 tcgaatcctg tcgttagtgg aactgatctg gatatacctc ggcctggctc tctatatgtt 240 300 cgcgaccggc atgagtctga tctaccagac gcagcacgag cattctacga ggctgcagct aagatcacag ggatatctct ttccactctc gtccgttgtg tctcccaagc agagcttgag 360 attaccaaat ggttggagaa ccaaagacgc atcaagcatt tcgccgaacg ctcgatgcag 420 gtagtcgaga attcggatgc tggtgagatg gaggagttta gcgagcagga aatgccctaa 480 aaacttgcat atttaatctt tcttttggca gtgaagtcca aatataatct acaccaacaa 540 cagagtcata ataattgatc atccatcctc ttgtattcct tgaatctgag taggttaagc 600 ctcgatctgc ggtgtatagt gcggaaacaa tgtaaaatgt ggggaacaaa ttaggcctga 660 ggccgcaagc actaaactag tagttacgct agggcctagg gtatgcccat tcacgtgcac 720 tcatccaccg cttgctaagc gagacactcc attttgacgg gcattgcctc attcgaaccc 780 tccaagcgcc cgattgtcag ccagcaacaa cgaaaaatcg cagccagtac gtttaccccg 840 tgatattaag cagtgatgct actctcttgg aactgccagc taacatatct tttttccgcg 900 cctttctagt gcagatgtag gtcttccgaa catgccatta accccgttgc catccacaac tctcgtctat cgtcaaccga atttacgcaa taaaagaatg ccggaaaatc gagggtgaaa 1020 gaagagggct atgaatatgt gctgactgtt cttctcgaat agtttcgtca agaccctcac 1080 gggtaagacc attacccttg acgtcgagtc cagcgacacc atcgacaacg tcaagaccaa 1140 gatecaggae aaggagggta teeeceegga teageagegt eteatetteg etggaaagea 1200 gcttgaggat ggccgtaccc tgagcgatta caacatccag aaggtatgag gcctggtcta 1260 ccgattgagt tttgcgcgtg gtatagattt gcggttgcgg aggcggaagg acggttatct 1320 tgtgtcatag ttttgacgcc agttagccgc tcctagttag aaggagaagg ggtgtgtcgc 1380

aaggagaatt tgcggaagaa ttttgattgg gatgatgacg gttggctgac tatgcctctc 1440

tcaattttat aggagtccac tctccacctc gtcctccgtc ttcgtggtgg tatcatcgag 1500 ccgtcgctca aggccctcgc ttccaagtac aactgcgaga agaacatctg ccgcaagtgc 1560 tacgtacgtc taccggatta ccactcgact cagttccatc ttcgacgaag gatttgagaa 1620 ctaatactag aataggctcg tctccctccc cgtgctacca actgccgtaa gaggaagtgc 1680 ggtcactcca accagttgcg ccccaagaag aagctcaaat aaacgactcg ttcatgctta 1740 cgtttttttc tgcgttgctg gtgcggaagg gtgtgattgt gatgagccgg attgtaacgc 1800 taaaaaggtt catttttta caagcggcgt tgaaatgctg aagaaacatc agaagagctg 1860 gagtcgatac attttacatg gctactctcg gaaccagttg cagtcaatga aacaattgta 1920 aaatccagtg acccctcaaa tcgctatact tgtcttgtag ataaatgtaa cagattacag 1980 tacaggtgag gtgtacatgg tgaaaagact tgaaactgca caaattggat acacgtgctg 2040 aaatgctgcc ggagcaattc agggttcgga tatcttgaag ccaccaaaca atctggacag 2100 atcttgcatt cagaacatgc gcttgtcgtg gtcatcatgg tcgtccttat catcatcgcg 2160 accettetea etateaceet tettggaaae agggetteea tggetteatt eaegteagte 2220 acacgagete agaaacaeta gttgtgggga aggggaaaae teaegegaag aacaagatet 2280 taatcgcaat cgcaaaccca gcatgcaaca caatgaccaa tatcaacagc gcccgactag 2340 ccttcgcatc cgtcgcacta agcacaggat acagatttct aagtaggaaa aagaccgtcc 2400 atgcaaagcc aacccccaca agcgcccagt tcaacgctgt caacggactc caactaacaa 2460 gcgcgaccgc aatccaaacc aaattcgagt acccgtagag cgcccagcac tccaccagat 2520 2533 cagctgttga gct

<210> 1861 <211> 1902 <212> DNA

<213> Aspergillus nidulans

<400> 1861

300 360 480 tatttagata aaaggatcgg gataaaatgt agtataaggt agtaataaga tgataggtat 540 agataatata gataaaattg agttgggata tataatagtg gagggagaat ttaatgtata aaggtgttga tgtgttaagt tgtgaaagtt ttgtgtaaat attgagtagt gaattagtat 600 660 tagttatatg agtaatagag gaaatgatta tattgtgaga aattgtatag aaaattgata 720 agaaggtgaa taaataatta gtaaatatat gggaagcttt atatgaaagt agaatattta ggaagaatga actcaaacct ttagcttatc taagagtaag tttattccat aaagaacgac 780 840 ctcctcaatt tgaataatgg ggctaggatc gatttttcca tccttcaaac cagaatgcag ccacccatgg aagacctcct tgatgtgctt actccgcgcc accttgtcca tggagggaaa 900 gttgaaagta atttgggtgt tatcgagagt cggatggcct tcggggagaa caggcgaatg 960 cgctacctta gcaaaggcat ccccttagt tccctttaga atgtctaacg taggctgcag 1020 ggcgccatcc acgacacagt gcgccgtgtg caagtataca ccatccttct tcacggcgtc 1080 gacaatettg gagacaacgt egetgtettt ataateaaag accgeateag eteegagett 1140 ggctgattgg acggcgaatg agccgacact gctagacgcg ccccagatta ggaccgcttg 1260 cttgtccgca ggagtatacc gagtatcgag cggaataccg atcgtagtcc aagccgttag 1320 agccgtcaag acagccaggg ggaagatggt gccttcttca aacgagagat tgtctggaag 1380 ggggatgacc gcttcggact gggccagggc gtatttttgg aaggctccgt ggtcggggga 1440 gccgttctgg tagaaggacg aggcaaaggc aatgactcgg cttccgggac caggcacaga 1500 gcctgccgtg acactcgggc cgagtttggc gaccacacca gctgcatcac ctccgatgac 1560 cgcagggtag attggcaccg gtggcatgcc atagtcccgc tggtaataat cacaggggtt 1620 caaggccacg gccttcactt cgatgaggac gtcgttggga ccaggctcag gggtggcccg 1680 cttgccgacg gccaagggac cgcccggctt ggggagaatg gcagcatcgt gctcggcagt 1740 catggtggat gttggacgaa cagactttgt gattgttttt gggagagtct tccacctgaa 1800

<210>	1862	
<211>	2254	
<212>	DNA	
<213>	Aspergillus	nidulans

<400> 1862

tgtcctcagc	aggagcgaat	ccactgccag	ccccgagaat	gacgttcgcg	cagttcctga	60
gacgggcgta	acagtcgaga	atcggtaaat	ggaagtcctc	acaagaatgg	tgtccccctg	120
cacgaccccc	ggtccattgg	atcccaacgg	ggagtgtcgg	atattgcctt	gcgatggtaa	180
ggacgcggtc	aattgcatca	acagaccccg	gtttgaacca	aatatgtgaa	attgccaaca	240
tgtcaatcca	ctccttcacg	acctcgggcg	atgggatccc	agcgccgacc	gttatcccat	300
caattggcaa	gccttcttcc	ataatcaggc	ggcgcaacac	ctggatctgc	caggaaagtg	360
ctttggggga	agcatagatg	acattgcagg	tgattgagcg	atggggaggg	atggacctcg	420
acagctgccg	gagtgctgtt	tctagcgttg	ctcggttgta	atagccacca	caggcaaatt	480
caacatgata	gtccgcctga	atgatagccg	ctacaagctc	aggtgagcat	gttgttggcg	540
tcatccctgc	caccataaca	tgtggtgttc	ctagcagccg	cgtcattttg	gtttcaatgg	600
atgcatgagc	acttccctca	gctgctttcc	gtagccgcgg	gcgatatttg	cgaccccagt	660
ctttaccaag	tgggagagca	aaagcagaca	gattaagcaa	cgatagattc	gaagccatag	720
actggccgga	cagattaacg	acgttcatac	ccgttccctc	caaaacatcc	tgcaccaggc	780
tcccaacagc	gccaggccca	aatgagagca	catgggtagc	atcgttcatt	gcccaacaca	840
aagcgggcca	gttaactcgc	tcaacagtaa	cggactgtat	gagggtcaaa	agaatatcgt	900
gcgtgccata	atcctgcagg	ttccggagag	atccattcgc	ctggcagtaa	actggtatag	960
cgagatcgtt	accccgcaag	cgaaggccgc	caatggcatc	agtcactctt	agctcgactg	1020
atgacagaag	agaagagtga	tagggagctg	acactggaag	gaactggaca	tcgacgacgg	1080
accgacgcag	gggaaaggga	acgcggcttt	ggtcgagctc	gggcgatgcc	ttgacgctac	1140
gaagtgctat	gcatactcct	cgcagagcat	gtggtgctcc	agccagaacg	aacttgttgt	1200
ggccatttat	aagggatata	tagagcgaat	ctccaccttg	gtcgttgagc	tttcgcacca	1260
gccgctccaa	atgattaatg	tctaagcctg	tcacactcag	taaatgtgac	ggagcgcctt	1320

caccattttc caggcagtcg ataacttcat ttgcacacag aatacttctt ggagaagcat 1380 ggtgtgactc cagcccgacc caaaacgaca gttgcaggc aaggtcagcc gcgcggtaga 1440 aggatggcca tccgtggtca gtgtgagata tggcgattgc ggcggccaca aatacacctt 1500 gagagtgtcc gatagctccc tggagctttt ggcggactga ccagggtcca gctggaggct 1560 gtacgcagta atagcatagt gtaggaggct cagcagagtg ttgattggaa agctataagg 1620 agacagegee aaatetteeg geagtggtge ggatgeagea gegtegttga geeaggeetg 1680 taattggaac ccgcgcccag caaaaaatga cgatcggtgt gggatcgctg ctagtgattc 1740 tagacggcgg gcagaagagt cgagcaagtc ctgtataggg gcgcagtccg cgtaggcgtg 1800 cgagagatgg actaactcat cgagtcccgc ccaattactg ggcccttgcc caccaaagca 1860 cgcatataat cgtgataggc cagcgtcgac agcatcgaga aacggtgatg gagtcattct 1920 ctttacaggt cgtcaaactg taggctaaca gatcagagcc atggctggga atgagcaagt 1980 atatcgtgta gccgggacca ccacctatac gagaggggga gaaacaagtc agcgcagggt 2040 cggcttacga gcaatcggag atcgggcgtg gcggttctca agtttacata tcagctgttg 2100 ttcttcagtc tttcctgcag aactaggcca taacatgaat acagccatgg cgatacgaaa 2160 catggaacag acaattgcct acgagctact gattgagctt ttatcgtacg tttccttata 2220 2254 ggtgttgagc aaaaaactga tcagcagcag ccat

<210> 1863 <211> 2639 <212> DNA

<213> Aspergillus nidulans

<400> 1863

attggagtta ctacaatagt tcccatttga ggaattagaa tttctgcaag gtgtagatta 60 attgtctggt taggtggctt gtccatccaa cccgcgttat tcctcaaatc aagccctcca 120 ggaactgatt cagaatatta ccatactgca ggaaacccca atacaacgtc agagaatatg 180 tgctttgatg gcttcaatac gagaggccca atactgaggg taggtatact ggtgtagact 240 cagtatacaa tatacgaaac tttttacact actccgtata tctatcccat ctagccctgt 300 ggatgctgac tatactgtga ctcttgttat tagctaagtt ttacttcatg agacaagata 360 taactggatt gtttcatgat aacaatccca tgttaataga aatgggtcac tgtcaatcac 420

cgattgctct ttgctgtatt aattttccta aatttagtat acagtgtctc attcttaggg 480 tggcatgacg ctgtttcgtt ctgtatcaga catatttcag ctggatatat tatctcctag teceggagaa aetetgeage atttaateea gaaaagagee ggtggetaag agaegggett 600 cagtggactt ttaatcctca tctttcccgt ctacgcagca cagtgtccag atcccgctgg 720 caatactcga catgegegtt caatcatact tgtegetett cageettgtt ggegeagete 780 tetgegegee tegtgageae tteaagegea etgeeagaae gtetgeteeg geeggetgte tcaccgttgg aggaagcggg acctactcga cgatcggcgc tgcgtttgca gctttgggct 840 catectegte tgaggeetge atetacatat cageegggae etacaaggag caattgaeet 900 tecaataege tgggeegttg accetetatg gegaaaceae ggaeaegage agttacaaga 960 agaacaccgt cacgataacc catacgattt cctcacctga agcagggtcc cttgttgcga 1020 gtgcgactgt caatgcggcc atggataact ttaccatgta caacatcaat gttgtgaatg 1080 ggtacgggaa gggggctcag gctgtcgcgt aaggattttt tcatttgcac ttcattttca 1140 acactgctgc tgacgcctac ttttgcagac tggctgccag cggagaacgc cagggttact 1260 atggctgcca attccttggg tatcaagata cgctgtacgc acgcgtgggc gtgcagtact 1320 actecaactg ctatattgag ggtaceggee tettaattet ttttetaete teegggaaca 1380 gcactgaaca tctacagggg ccgtagacta catattcggc gacgcaagcg cctggttcgg 1440 cgaatgcgac atcgtctcca acggtgcagg ctacatcacc gccatgtcgc gcgagacagc 1500 ctccgatccg gcctggtatt gcttcgacca ctgcaatatc tacggaaaat cggggctgga 1560 ettgacegge gatgtatace teggaeggee gtggegegte etegegeggg teatetatea 1620 gaacteggag etgagtgata teateaaege ggetggatgg aegaetatgg eagaaggage 1680 cacgccactg tactacgaga tcgggaatac gggtgacggg gcagacacgt ccaaaaggct 1740 gtatettage gagateagtg eggetgteae eaaggetaeg gtgetgggga gegaetggae 1800 ggactggctt gactggagct attgagatga gtctaagaat gattgcgtgt aagatgaatg 1860 catcctgcaa gaaagtgaga taactaagcc acgggaaact gtctggatgc cgtaattacc 1920 ccgttcaatg gcgttgagga tcattcccga gactctgtcc cactgttttg taggagcgtc 1980 acgatatgtc gtcaaagcca gaggctctta catctaggta gcgtctgcca gccctacgat 2040

ggtccggtac aaagcatggt ggtatacact atcggctctc tgacattatg gctttatcaa 2100 cgcaaggtta ccattcaaat gtgaatacag gtcgagtcag ttcaaggggt aatgcagaca 2160 taaatcagat attcgcttga tgaatttcct gtaagtgaac cgccgaagct tcaaaattgc 2220 tttagttctg taaggcaaga atgacaggac ccctggtagt accacagatt agagagacaa 2280 gggcgaagat cctgtttcca cctggcgcaa agtccaggtt gagggactga ttccgctata 2340 caacgagggc ttgcaattgg atgacgtga tcctgctcta tatttaacc acggttagtg 2400 gatgcttgcg gttggaatag tgtagacagt agaatggcgg gtaggtaacg gaggacacct 2460 tcgcaatac cacgggtctg agtcctctga atacttaaac tgaatatcta aggcttctat 2520 aaggtctgca aaacagcaaa cgcccttata tgtctaatcc atggcgttcg ccaggctcgg 2580 gactggagtg gaggaagata tgggttcctc cgccgtgccg ataacaaata ttactggtc 2639

<210> 1864 <211> 2585 <212> DNA

<213> Aspergillus nidulans

<400> 1864

aatatggtaa cagctcaggc tcttttctct atctcctctt cttttttccc cctctcttct 60 attgacaata gatttgctgc ctaaactctt gaataggctg cgtttatatt atccctgtca 120 cacttaccgg actogectge gtcagagtga gtctgagttg catttgcaca cgcgtctcat 180 tateqtqcat egeqeetqqt tqeetttett ttettttett tatttteett tecteectet 240 ccgttgtctg tccatttcca aaaaaaaaat attagattct gagtatgtag ttatttgagc 300 360 ggcgcaagac tatagattgg agctgaaggt tagggtaagg ggctagtggt tgaggttgga 420 cagaattgaa tttactcaga aaagctaatt aataactagc tgatgcgcag gtggtctgcc gagcacttgc aatcagctat tttgcttata atccgttgaa atacgcctgc actcatcatc 480 gcagacgagt aaaacattca tcatttgaaa ttggtatcac ccttgattaa cgccagtcca 540 gaacccagct agaggtattc gagcaacgca gaaactccca aaaaagagaa gagaaaagga 600 ccagagaget atgtcagate ttttccacaa actcaaccge ccgcccgget cgctcagett 660 tgcctactgt agatgccagc gcattaccat ccacaccatc agacctggac atagcatcgt 720 catteccegg tacaggeteg ceetgeagee gaaggagtgt cegeaatgta teetegtaaa 780 cctctgccat ctccccattc cgccaccgct ccgcttcctg ttctgttcca aggggaatat caagattcca etectteetg gagaetttte eeegeegtet eeteteeet teattaatat tagcaacgtc ttcttccggt tgcgtttgca gttggtcttg atttctatcc gcgtctgcat egtteattee aacateegea tegtettett cattgttgaa tteettatee teeteeteaa 1020 taateeteee eagetettte gegtatteee tegeegeeeg tegeggegea teeeteetea 1080 actgcgcgac cgttgtagtt aacgactcaa gctgcgcata catcgacgca acccgcgccg 1140 ctaactttcc gtcaaatggc tcgtactcca ccgtttccag ctctgttggc gcagtaaatg 1200 ctgctgggaa aggaaactcc ggtgatgtcg agtccagccc gttgatcgaa gcggaggcgg 1260 atgcggatgt gaatgtgcgc gttatgacct agatcgaata agaaaacgga tctgttagca 1320 caactgcata tctcaatata taaaggtgca ttaagaaata tgcagataca tcgtccacaa 1380 gttcgcgcac gcgctcgcgc atagtttcgg gctcattgtt tggggctgcg gagggggta 1440 ggtgcaggtc tagtttttgg cgggagagag caacggtgtt gctgtgaagg taggtaaagt 1500 ctgcggcaga ttgaagttcg attttccggt aatgcgagga gtccattgtc tgttttccag 1560 cgagggtgtg gttctgaact ggcgaagata tgaacttccg cgtgtattgt agataacggg 1620 catgatataa gacggacgcg tcggactcag gatgggccat tagcggatgt taagtgcctt 1680 gtagcctaaa tatattactg cctgaaccat caggctacaa actagaaagg ggaagcattt 1740 ctcaggcacc aaacagcagc agatcagccc cacaaccgac gtcattctcg atcgatcggg 1800 cttctgcttt gaaacgttca gacatgatat ttgcatgttt catcctaact agagagaagc 1860 cqccqctacc tacctatttg tcctaaaatc catcaaggat taaccaggct atgaatatgg 1920 getteegaaa teteatataa geaceetage gegetatgea atggeeteea acateaaget 1980 categacaat acageteetg eegageggee ageeecagae gaegeateet teteegagat 2040 aacaaccacc accagttcag tgtctaggtt atggagtcga ccatcgatcc gtgcggagcg 2100 ggcgaagcgc cgttacgcga aatggcagcc tgagcggctg ggtgttgtcg ctagtgqaag 2160 caatgacatt gctgagcctg ggtcggtaca gccgtcgtcg tcatcggacg acgggtgaat 2220 tattgcgtgc aagaaccgat acaaataccc tcaccaatac aagcgcaatt ccggagaaca 2280 agagtcatgt aaacgatggc aacgacgaga gtaaaaaccc gcagcgtatt gcgacggaac 2340 aaatacagca gtacgatttc ggcactggta acgaagcaga atcaggagct gaaaggtcaa 2400 ctactcacca atcaaaaaat caccctaaaa tctgtggcct aaaaccaggt agcgaactgg 2460 acatacttta tgaaaatcag cgcggttggt tcttcttcgg cgtcccgctc tactccagcc 2520 agtccctcct taacacggac ccggctcctt gggtgaatgc cacggggaag cggagttttg 2580 tcgat

<210> 1865 <211> 3446 <212> DNA

<213> Aspergillus nidulans

<400> 1865

accetegega ttgetggega eggtgatggt geteeatega aatgeeagag egeegaacat 60 120 cctccaagcg gataacgatc tctgagcggc gccgaagagg attgaaggtg atatggtgcg qaatqaqctt ctgctcqagt ccgcggagat ggaaatagcg gcagtcacgg agcagctccg 180 240 cgcgttgcgc ctcgctctcg acatgcagcg gatagccttg gaggaggtgg acgagctgcg cgaagacgtc gccggagcgg ttgggaacgc tgggcggcac aatggctggc ggccgtagga 300 ggccgcgtcg atctaggcca gggaagactt ccgccgggga agcaaagaag gcgccgaagc 360 cqagggtgaa aaaattaggg ctatcgccgg gcccagagaa gatgtcgcgc gaaatctgga 420 aatgacggtc gccgatctgg attataatct gggattcgaa gagttgggac atcaaccggg 480 540 gaactgcggt taattagttg gtgcttttta attgtaaaac tggtattagg agagcgtacg 600 qctqtaqaat tqcqcqtcqq cgaagagttt aacgaactca gctccatctt tggggaggca atggtatect agaggtaatg ttageetate ttategaage ettggttgeg atagettggg 660 ctgaatacct tgcagatgtc gggcgatttc ccggaaagtg acagggtcgc ggtcgatata 720 780 tagagtgcgg atattgttcc catcagggtt ctggctcaat tgatcttcga agaatcgcga 840 gaagtacgag ggggctcaac aacaaccgtc atcataagaa cgaccgtacg gcgctgggaa ccagatccaa ctaaccatca gacgcaatgg aggccccaga gagacggaag agctttgtgc 900 cgatctggat agagaagacc ttctcgggcg gaagtgtgca gactggtggc gatgtcttgt 960 ctgctgccat cttcgttcgc tcgattaaaa cgatgtggaa cgattatggc tttgccgcat 1020 ggcagggtgg tggattgaac tcgaggaact caggctggag gccggcgaat gccagcgtag 1080 tcagatgtca atagatgtcg atggctttag ctatatatca tgagagtgtc tgatgccaag 1140 aagtggaagg catagaagct ggaatctaaa gctggagctg gagctcaagc tgtgtccaag 1200 tcacgagcgg ccggagcgat cggcgcagat attccgggtc ccctcacaaa caattcatca 1260 tgaattgtga tgattctccc catcagcatt gaatgctttt gctctgagaa acgcttgaaa 1320 tggtctccaa aatgacttga ttgagccagc agtttctact acggagtatc gaccgttgtt 1380 teegeagete teeegaattt caataategg tggagattae eeeggttteg gegaceatgg 1440 ggcaatcact ccacattgag attctgaaaa gaaactaggt ttcgataatg gcgtcggttt 1500 cgatttagtg tcgctgagga ctggagatgg cgatgcggag agtgggaagc ttgcggtttc 1560 acatggccac gggctcggtt gttcgactgt acacagtact aaaaagaagt atggacacaa 1620 atctcctttc ccgcgtctca ctccactaat gcactactac tatatttgct atagtagcgg 1680 taggccgtct actctgttcg tgactcgact cttattcgta tgagatcctc tccgcgaaac 1740 cagttgattt gagtggccga ggcagaatgg cctgatcctc acccactgtt ctttcggcgg 1800 acctgcctcg gttgatcggc cattgtggtc caagcccccg agtgcctctc catccctcct 1860 cgacgctgct gcgacgaacg attgattggt taagggtcgg ggaagctcta gccagggttg 1920 gtcgactcga atggatgtag tcttcattgc ttgctaggta cgggtacatg cttacagagg 1980 ctatcattcq caaqqactac cccttccagc tcgttcttgc ctcgagtcct cgacctccac 2040 tettetage ceateattet ggggaaggtg eteteegeee geeetgttga tgatetaeae 2100 tgcctgcagc cgtatatcaa ttttcccttc ctcccacttc gctggctcct ctcccacagg 2160 attitutat tigggagggg atcgcattic tattetictg cocacteteg tiggtigatt 2220 atcettacae egettgegga gttgagegte geeattgteg teegcaatga eagaacaact 2280 cgtttcgttc acgcctctgg tcgccccaat atcccctgtc tctaacgaac aggtgtttaa 2340 cgacttgcaa tggaaaacac tettatettt ggetgataet gteateeegt etgtgegtgg 2400 cccccgggcc cgcaaatcgc gcgctaccaa ggttgtacca caggcgaagc tagacgctgc 2460 gctcgagact ttaagggcct ccatccgcgg ccccgacgca gatacccttg taacacagta 2520 cttggaggaa aatttaacct ccatcccgga ggttcgccaa gcattgcagc ggctcttcac 2580 tcagcatgtg cacaaggaag gacgaaatgg actgagtatg atcctcagtg ctttgaagta 2640 tgttgctttc ggtcaattgc cttttgtgta tgctgatggt cgtatagtac gaaagccggc 2700 tetttgetac ttaegggete gatgateeet atteaggace aaccetteta tgteegagag 2760 cagattttee agggetggag tgaetegege ttgeeacegg tgegegeegt ctategegee 2820 etcaetgga tetttaagaa ggtgtgggtt aegtteagte etageettta teegaegett 2880 ggagtteece atgtteecat etatggaace eegeaaaatg getteeaatt egagtttttg 2940 caatteecee eagggeagaa accagagatg ategaaacag atgtgeteat eateggaage 3000 ggetgtggtg geagegtege egeeaaaaac ettgeagaag eeggeaagag ggteattgta 3060 gtggacaagg getatteatt eacaaaceag eattteecea tgaageecaa tgaaggtte 3120 aacaatetgt tegagtetge tggtgeegte atgaacgatg agagttegat ggeegttete 3180 tetggeteta eetggggtgg tggtggtace gteaactggt eegeeteget teagaeteaa 3240 gettatgtte geegtgaatg ggeeaagega ggeeteeegt tetttaeete ettggagttt 3300 caaaataget tggategegt etgtgacagg atgggegtea gegeegaeea tateaaceae 3360 aacaagteea aeegeatgat eettgaggga tetegaaage taggttatte ageeaageeg 3420 gtgeegeaga acaeeggtgg cactae 3446

<210> 1866 <211> 5628 <212> DNA

<213> Aspergillus nidulans

<400> 1866

gatcattttc ccgtctttcg atagaataat ggcgttaatg ggctccgcgt tgtgcttcac 60 catatgcatc atcttgccgc tcacatttta tctgaagata ttcggggaaga agattgaccc 120 aagggaacgg atcctggatt atttccttct aatcatatcc tcagtgctag cggtcattgg 180 gaccgtttgg gcatttctac cacaggccac cattgttccg atatgagttt ccatgcgaga 240 tagtttctgt ttattggctt ccactcttga taacaatagc aaaattattc ctcgttttcc 300 360 ctggatttag aagctccttc ttgaactgct tgggctggca tattccgtcg tactcccaaa 420 gctggtatat taattttgtc gtttgcttgt cctctgccag agaaaaacca atacttgtca 480 gaatgtcgtg cagtctctgc tgagtaaggt atcgcgagtt tgtgacgcag ggagcaggga gcacaaggaa caaccttggc acaatagtta tagaggagcc ctgcggtggt tccttggtca 540 600 agaaagtaac acaacgcttc aacatttctc ctcgatcgac tggatcaggg acgtaattca 660 gcactaggga gagtgatatg atgtgaaacc gttcgtcatt acttagggga agcggtcgtt

ccatgaaatc ctgcttcaag atcccgggtt cctgagagtc taaatcaatt ctcgtgacat cgaggtgttt gtgctgagag catgcattct tggtactgag cgcaccgatc tcgaggaccc 780 840 ggagetteag agaegtgett eteaataegt teaaactagg getgateeag ttgacaagga 900 ctctqcttqa qtcqccqccq cqqtctaqaq attqaccaaq cttqcttqct atctgataac tttttagtcc acceptttgct cetatatcce cctcegagett gegeactaaa tectgeteec 960 ctgattttag tcgttgcgct cgctgtttta aaagtgtgtg atgagagcgt atgagagttc 1020 gegttgeett tgetgataag getgeatttt tettetgaae tgttggtggg egagtgegag 1080 aaagtagege gggaegtetg tteteegatt ttttegtage cataatgeat gttteaattg 1140 caagatgtac attgtcatag taaggtaatg tatggcttcg gatagcagac cgctttttt 1200 ttcttctctt ttctgcctgt ggtgaaaggc ggtaaaaaac gaatcacgcc aagattctag 1260 gagggctggt caggtgaccc acagaggaag ccgcgagggt ttttgctaag cgaagacatt 1320 ccgaacaatt cgactttcga cactgcgaca atcacgacaa cagcgccaaa cgacagccat 1380 ggccccgtt cagaagaaga caggtatgca agcttgagcg atccagacct tttattctcg 1440 atatctgttg tcgattttgg gatatgttcg agagcatgga gtcgtgttat acaggaattc 1500 ttcatattcg tcccgcgcaa tctattccag gatgaaggaa ctgaaagaac cacgtatcga 1560 ctcggttatg cttttgtttg attccaagat tccctccgac aactatactg cataccgact 1620 cgaaaattca attctaaaat aaatcactca cattcctttt tctgaacagg caagtcgaag 1680 cccagcgaca aggctggtgc tgccgccaag gcagtcttga agggtgcagg cgtacgtcta 1740 aaacgtcctc aattatgaat tatcacagaa ccctatggct aaaatgttac tcgacatatt 1800 caggegeaca agactegeaa gateegeace tecaceacet tecacegeee caagaceete 1860 cagetytece gyteteceaa gtaceegege gtyteegtee eteacettee tegeetegat 1920 geogecaaga teatteteta eecettgaac acegagagtg etatgaagaa gattgaggag 1980 aacaacaccc ttgtgttcat cgtggacgtc aaggccaaca agcgacagat taaggccgcc 2040 ctcaagaagc tatacgatgt tgagactgtc aaggtcaaca ctctcgttag gtacgctccg 2100 gaagatetta taegaaagaa aaagcagcat etaactagaa taeaggeeeg atggaetgaa 2160 gaaggeettt getegtetta eeetqatgt tgacqetete gacattgetg etaccaaget 2220 tgctattgtc taagtgattg attttctaat gggtctggga aatggttttc ttttgcgcgg 2280

tggcttatat atcggcccta cagctccctg ctgttgtgcg ataacaaatg gctgaatgaa 2340 taaaacaaaa gagctttgat gcacgagtat accctgtgta gttgtcagcc aggtttattc 2400 catgaacctc tggagagata acagtagtca cggttctata cacggcgctg ggaacctaaa 2460 gtagtttgag aatatgtaaa tcgaagagaa gacttaagac tgagcttcat tcaaaatgta 2520 ttgcattgct atagtacata caggtccgcc acatcattca caatacacca agtctccgtg 2580 tetacagtga cegeaaateg tteegaceag atggtggeag ttataagaea teaageeetg 2640 aacctctata acctccgtga attactctag tcggaagtaa tatggacagt tattgtttct 2700 qcataqcttq caaatqcttq agtacqqcat tgttggtgtc cagccaacqg tcgacacagt 2760 tcattgcgca agettetteg etetteteca acegactgga tgtaacette gaggtaatge 2820 acttcttcca gcaagcatcg gctaggtgat ggacatctaa gcaacacgcg tgtgttagca 2880 qaqqctaaat qaqcaatqaa gcaagctcag caacccaatg gttgagaaag aaaaaaattg 2940 cggacggcgt actttgctgg atagcggcct tctgtgattc tgtttgcagg atctggtgca 3000 getetttttg gteggetteg etgagettge tgacategag ggtttgttee attetgtegg 3060 tggtctgctg gaaattgctc tgctggaaat tgtaaaatcg agtttgctgg acagataaga 3120 gtggcgggta cggagtagtt gtcaactgag atgttgctgc gccgaaaaaa tgacatcgat 3180 cttccagagc tagggcggtg agagcatgca ctatctgata aggtcttagc ctggttctta 3240 cgcttcttag agctctaatt tcctttctcc gcgacgttga gtttgacttc caaacatatc 3300 ttttaagega tteeggtaet etetgtetet ttgaagateg attttteate aactgaatea 3360 cgaagcccat aaagaagatg ceteegatee geacateteg caategeaag ceaceecag 3420 cgggcttcga cgatattgaa gacactttgt tagagttcag caataaaatg aaagatgccg 3480 agaatgcgcc gcatgaggga aagaagaagc acgaggtcct gtggcctatc ttccagatca 3540 ctcaccaacg tcagtatctt tatcctagtc ttcatacacc attcaaagtt ccaactccct 3600 gaacttacct gaaccttatc aatataggct caagatacat ttacgatctt tactaccaga 3660 aagaggctat atcgaaacag ctatatgaat ggctcttgaa gaacgggtat gcggatgcga 3720 acttgatcgc gaagtggaag aagcaagggt acgagaaggt aagttcttcg ctgttatcac 3780 tegtegeaat atatatgagg eeggactgae aaacttetea getttgttgt eteegetgea 3840 tccaaaccaa ggaaaccaac tttaacgcca cttgtatttg ccgggtaccg aaggctcaac 3900 taaaggagga tcagatcatc cagtgtgtca gctgcggatg ccgtggttgc gcgagcagtg 3960 actaagactt cettaeggtg etttgtgeet atatgttaat attgeeacac ategttgaag 4020 aatgacagcg ggttcgagtg gcatatccct tctgcggtct ctcagctgtg cgcattatgc 4080 atgactcgat ctggcctggg tgtttcgacc tggggttcgt gaagacagac gttcgacact 4140 gcgtggacaa actggtaaac catagtacct gtccctgcag caactctgtc ggcccaaaag 4200 cagetggtea geageettgt tgtteteeeg geetaegtag gagteagtet egeagaeggt 4260 geggegtgee aattateeet attitteaeg tatgitetgi ateegaeett gegitgggae 4320 gaaatggtac ccctgtgctg gcaccgagga aaccgggcac ggctatggtc gatagacgca 4380 ggagttttac agttaggatg tgtttacggg cttttccata atcagatgct caggtagata 4440 ctatctctta accaagttcg aataagacac agtcgtaatg gcagtgacaa agatagcaat 4500 gaagacggcg aaaaagaaac atgctgatat aaacgctgca tactcatgta tatcctaaca 4560 gatategteg taaaggtegt cataaaatea teteaggtaa teaaageeaa caaegaegag 4620 ccctacctcc acccaaaact ccagggagaa tgattgtgaa agcaccaaaa tgagcggata 4680 tagagaaacc ccggtaaacg ccagctcttt aatcttagga accaatgggt aagtaggtat 4740 taggacatgt gcatggccaa atccaaagtg aacgcccgtt gcgggaaaac aaagaataaa 4800 caaaactcaa gacaccactg acatgaacaa agacattttc gtggacaact cagatctgtt 4860 ctggtaagga ggaagataaa gcaacaaggc atgaagcgtc aaggccgcgt gttgctgccg 4920 cgctgaaaag ttggctgtga gatatgggat cgagatttcg aggcatcgtc cttgctcgaa 4980 ccccctattt tttggaatcc ttgtagaagg tcgacaccgt ctacttcctg tgggctgtca 5040 tcaaaaagat gccatgagaa aaaatcatcg tgcgcagaat caatgaagcg tccagagtca 5100 ggaagttttg acggcgagtc agaaaaaaaa agtctttttg acttattcgg cgataagggc 5160 ttaaggcccc caatccggtt gttagcactc aaagcagtga tatctgcgag ggcatttcca 5220 gttggtccat gtgcttcagt acgagcacgt ttagccgagc gtttttcagg ggaaccgtaa 5280 geeggattag atacaggete agtagteggg teggeaaaaa egtegaagga aacatgaaga 5340 ccatcgtgtg gagtataagc ctcgtcatgt atgttgaagg caggactcca tggaagatct 5400 teatecagge etagtegett tattggggag ttgaceatgt getggatttt ettgeggtgg 5460 tttcgaagat tagtgtttgg tgacactgat ggaggcggtt tcgcaggctt tttgaacttg 5520

ataacggggg tcagggggcc tgcaagcacg tttatatatt cgttgcggac cggagaggaa 5580 5628 ccaacaacga tccctgtttc tttcaagtac ccagagtgac ttggcgta 1867 <210> 5675 <211> <212> DNA <213> Aspergillus nidulans <400> 1867 tgggtggtgt ttacatgctt tttacgtcgt ccgctcggct tgaagctacc acatggcagt 60 120 ctcggatgac tctttttatt gcacacggta acgatagcca gaggggtcat attgtcgcgg ccgctaagtt tggattcgcc ctcgtgaacc gcaatacagg cgagctgtca tacatcgctc 180 240 gcccgtggga tgaaccagat ctgctcagaa ggtgagttga attgtgctct gtgaatcgaa cgagttcctg acccatataa cagaatgcgc ttcaacgatg gggcggtcga cagcaagggc 300 cgtctctggg ctggagccat gaacgatccc aaggtccaaa gtctgatcaa tgaaggggtg 360 cttttccggc tagatccaga cctgaaactg agtcgtatgg ttgagcagtt gacgatacca 420 aacggtattg gctggaactc cgccaacgat acgatgtatc tgacagattc cccaacgggg 480 aaqatcttcq ctttcqactt tgacqagagc actgqagaga tcagtaacag gagagtccat ttcgacactg gagagccaaa agaacctgac gggttcgcca tcgacagtga aggatgtatc 600 tggagtgcaa tctacggcgg gggtaaggtg atccgcatcg atacccaagg caaagttatt 660 ggcgagatct cacttcccac ccgaaacatc acctgtccgg cttttgtggg gacagaacta 720 ttcatcacca cggccaagga cgacaaaaat gacgacaagt tcccggagtc gattcggtat 780 ggagggcatc tctacaaagt tgatgtggga gtccgaggac aaccaagaca tgagtttcgc 840 900 ttcagtcaat gaccattact catgtgagga taagccggag tgaatcatat tgttgggggt 960 taatgattgg aaatcattat tgctgaaaac ggtgctttgg atcccgaggt cgaaagcctc aaaatgccct aaagctcagg tectgetgee etceagactg gacgaaattg gteeettteg 1020 gatcagtcac gcatatattt cttagcagcc gaaaccgatt caatagttct ccgatctaag 1080 catcttaccc aagacctgtg taacaatccc caaaaagggg cagcgctgaa tccggcctcg 1140 ggggacgagg tacggttgtg ctgagaccaa gcattgtcag ccctgcttca cgccgttacc 1200 atagtacaaa tgttgagcat acctttaatg ggtcctgacc ctttgaggct taagctgata 1260 tecteegegg aggettggae egeaceaecg aggttgeteg tateagttge egagtateea 1320 ctcgtggcta gcccactgct ttacccaaga aagagaagta ctccgtacgg acaaaagtac 1380 ttcgtccttc cagatcgtct gtgcgaccca cgtttttgtt tctctcgaaa ggtaccacgt 1440 acggccgaaa ggaggtactc gctaaagcag tatagtatat tactggcggc tcggtattgg 1500 ccaggtgaac ggtacatcta cggacagaga ttggggtccc aactccacgg taatacaatc 1560 ccaatgcgac ttgagaacaa tgccattatt ccccgttggt attcctgcgg tcgcgtttgc 1620 cttgaaatct gtgtaatagc gaatgcatcg gctaccggga tcgcttcctc accaagagat 1680 gcagtgttcc tgcctggtct gagctaatct aatctagact agaacttaat tcgaacgatg 1740 aaagegtgaa ggaaactaca tgcattgtee tgeegagtte cageateagg teettttegg 1800 aacgtgcaat attccaggtt ggacttgtta tcaccgacct gtatattgat gctctgtact 1860 gtttatctgt ctcgttcacc ccaccctgct tgcttcgtac atggtttcaa tgcaacctga 1920 caactgcgtg tggagcgctt agctcggaat aaaatcgata atgaccctac ctcgaggcag 1980 catgagaaga ccccaattcc ataagagggc ggttacagcg gcacagacga tgggtcttga 2040 gaacaaaaaa aaaagatgga aaaagcaacc atgccacgca ggcgatcaat ctgatcgaga 2100 tcgaaagaaa aaaaaaaacg accattacca atggacatga attaatgact aaatcatgct 2160 ttcaagacac accgactcgt cgcgagcgga cagcgcatga aaagccttga actacaggcc 2220 tggaaagtgt tggagaaggt cttctatttg ttcgtagaaa tcccccgtca caagggccaa 2280 ccaatgcaaa agccatgcat tctctctctc tctgtctctg tgcacaccac acggaatcat 2340 tctcctcact tactctttgt cttctctggt ctcttcaaga caggcaggca aacggagcgg 2400 aacaataate egtegttgea gtttgtagee taacegttee ceatggtegg agtggaggee 2460 gttcttaccg tctttcacqa qqcccqataa tcccqaattt atqqatttqc acqctacqqq 2520 gaaactaatt ggagtctatc agtcaattag gttacgctat ctctcccagc ttggcccagt 2580 ctaacgtgtc actgcctcgt ctcaaaagct gcagtattat cctccagaat tattgatgat 2640 gtgcgactac cctccacctg tcggcatgga cgtgcagcaa ccttctcgcg cggccttcgc 2700 ggttgatcga caacgataaa atttgaagat gtgtcttcta actttcgtat ggaaattgcc 2760 atattgatac actgactctg acaaggatta cagcgttggc ccatgcataa agaatatctt 2820 ttggtggttg ttgctctgac gacccagttg gctggctatt cgtgactgac acatcctgaa 2880

acgacagact cacaccactc accaccacag agcatattga aggatcgggc cggccagtct 2940 ctgcacgcgt acggtgtgca ggttccacca tgacttgagg agtaagaaga agaagccgac 3000 aacattagga cgttgctgag ccatccattg ctgaattgac ctgggccact caccgtcaga 3060 ttcgtcgatg caccgtcgtg cgtcgcccat cggatctcga acgagatgcg gaccacaagt 3120 ctacagtact gtggtagctt aagggctgaa gcctcttcac tttgagacac ccatgtccgg 3180 cgtagcccaa agtatattga cgcccacgta tacgtaccct gaagcatttt gcgaagatag 3240 actctctctg tatggtaggt ctccactgtt gacagaactc agcctactat cgtcaggcat 3300 tgttqcctcc gtatagcgcg gtaatcacgc ctcgtgctat gcaacgatca gttttgggat 3360 atgtcatgag taaggcagtg gtcatcgagc ctaatgtcgg ctcattgaag gggtcctggg 3420 tattcatctt ttcggaacga ccctagtgca aattcaggat tcctgaactc ctagttccta 3480 tgcgagatga tacatatggt cggcatcttc ttggaatcct tgttgcttcg ttgttttgtg 3540 cccaatgttg cagcggaaac atactccgga tcatagcctg attctccttg tcatttaggt 3600 gtctggacac ctcggctgac tgttgattgc tcttcccgtc ttgaggattt gtcccacatt 3660 gagttacgac tcgaaagtag gacgtaaatc atgtggagca cgccaggttg tgagttttga 3720 gattcgcttc ccaggcgaaa ggatggactg gcaccaatga aatcacgtta tacccaataa 3780 agacatgaag ggaccattgt gtggtataca gcctgaccgc cgggacaatc ggactgaccc 3840 gataggacga gaattatgtg agtgacgatc aatcacagaa ggagcgtggt ctcgttggag 3900 ctctggagct ggacggcttc gacccggccg agcctgggag acggcgccaa ccttcccagt 3960 catggaggca ccacgatcct caaagccacc cacatttatg cagaacatca agaaagccga 4020 gccatccgta catacataca aactcggatg gtagccacca tagccctggc cggactccaa 4080 cagcaatgtc tgcagatgcg gagttgatca gataggccaa gataaccaca ccatcacagg 4140 aatccaagcq gaccagttqc agatgcgtgg aatgaagcct ctatcagcac gtgcagcgtt 4200 gctcgtcaat ctagacgtgg tcttcaagtt cttttccttt ttctaggggc ccaaatgctc 4260 ctcaccgggt cttctgatct tattttccac gtcacttcta gcgggagtcg acgaaaccgc 4320 taggccgcgt tttagtactt cgtgccacaa aaaactcctt gaacgaagtg ctaccgtcgt 4380 gccaatttgt gcactggtca gccaagtttt tcgacaattg agctgctgag ttgatcggtt 4440 ccaggggcgg cttagattct tcaagcccga tcccaaatgg ggacactaca taacttccac 4500 gttaccagcc atgegacgag gagtccaaga tcaacctagt tatgggccgt ggggagaaag 4560 ctcaccccga cggattgtct tggaagggac ccgccatcct ggagttttgg ggccaggccg 4620 teggtggtat gaeegtaeta tgatgetate gtgagttete gaacaceget tegaaaggea 4680 caacggtact tetgteggag teeggatagt caggageggt aagtactgag tetgeggagt 4740 aagatcaaat cttcccqtct ctggataaat aagattctga atagtaatgc ggttcgctgg 4800 gccttttagg cgcacaaggc tagtcgtagt cgtagtgccc acggcccaca gcgagggctt 4860 cetgecacet gggtacaget aactgeegee etgttetgtg aegtgeatgg ceaattgeet 4920 atccctgcct gcatggggca tagcatcgaa tccttggatt ccttggaggt gccggcctcc 4980 actaaatccg accatgacca tggtgacggc gcgcctctta ggtgctccgg gtcgctcacg 5040 atgtttcccc agccccatcg ggcccacgcc cctgctagta gccccttagt gctggcgcta 5100 gtttgcctct agaaacaacc ctggctggcg accaattaaa ccgctcgtat gggtgctact 5160 ttcgatgagc gtccgccgac atggcataaa taatcataat acggcagtaa taatgataat 5220 aacacaccga atccaatgcg aaaaggtcca aaggtcgaaa gattgaaaca aacaacacac 5280 ttgcgtcaca tcctctgagc ccttcctctt tctgcccaat tggagtctga tattcgatct 5340 ccaacatttt gctttgtctt gaggaaacac aatctgctcc ttcacacttc cattcaaggc 5400 gaggcacaga tggatgcaga cctggctgtt gcaaataaca caaagtacgt gtctgagcct 5460 gettegttgt caagtegatg geetggageg aggaageegt tgagegetge tgggeagtet 5520 tgcgagcccc gtacaacacg tgtatgttgg taccgtattg tacggacagg tatatgacat 5580 gctttccctt ttgctcgcct tgaatattct attaatataa aaatcaaaat ttcttttcca 5640 ttttatcttg attttatttt attttgtttt ttgct 5675

<210> 1868 <211> 1620 <212> DNA

<212> DIVA

<213> Aspergillus nidulans

<400> 1868

actgaggaca gaccttttcc ctcccttcca tacggcggcg aaacccatcg agtgtaatcc 60 ggccgctgtg atttccctcc caccacccgc ttcgtccgcc gaggccatgt ctatgcttga 120 cgcgccctcc accagcatgc ccgatctcca acgcacccag accgtatcac agctgtcgaa 180

atatgategg aaatetagaa cagcagetaa ttatggteaa etaetagaaa ageetgaeea ggagcatgat catgaagagg atgaccagga ggaggaagtt gatgaggttg tcttggagga 300 tatgaaaaag etegaagaca acttteeagg gattteagat egetteegtt tggtgaatag 360 gattggtgaa ggtattgtct gcaatgcacc ttcatttacc atacggcacg cccggaacac 420 ctggatcgcc tgactaaact tataatctgg tttataggca ctttctctac tgtatacaag 480 qccqaaqatc tcctatacqa ccactaccqa aatgattggg atgtatttca agatactccg 540 600 agagatgaat cgacaaattc gccgtcaaaa cgtcgtcgag tagaagacga gaacgggaat acgataccca tcaggcgaac gaaaccacga tatgttgcgc tgaaaaagat atacgtcaca 660 agcagcccac tgcgcatcca gaatgaactg gaactattac atgatctccg gggatgccga 720 tcagtttgcc ctctgataac tgcattccgt catcacgatc aagtggtcgc cgttctgccc 780 tttttcccqc atacagactt tcgacttcag taccgaacgt tcatggtggc tgatatgcgc cattacttte qateqttqtt caetqcatta caetegqtte ataagcacaa tatactqcae 900 cgcgatatca agccaaccaa ctttttgtac aatccggact tacgggaagg cgttttggtg 960 gactteggtt tageagageg egaaggetee gagtataeag ggacatgtet etgeaeaage 1020 acgagecata tacgtegege gegttacace cagagttace actataceca etgtgeetet 1080 teeggeeteg etataggeta teegaaaagt gaetetegge egteaaggeg tgeeaategt 1140 gccgggacgc gagggtttcg tgcacctgag gtcctgttca agtgcacctc gcaaacaacc 1200 aaaatagata tgtggtctgc cggcgtgatt ctactaacat tgcttggtcg tcggtttcca 1260 ttcttcaact cagccgacga cgtcgacgca ctgatagaaa tggcgagcat attcggcacc 1320 cgccgcatga aaaatgccgc tgccatgcac ggccagatat ttgaaaccaa tattccgacc 1380 atcggagaaa aaggttatag ctgggaaaag cttgtgaaat ggtctagctg tgtagaagag 1440 ctgacagaga gtgagaaaca agctacccga ctgttagcag gattgatgga actggatcca 1500 tccaaacgtc taaatgctaa agaggctatg cagcacgaat tttttactaa ccctatcgat 1560 catgatgttg aatgggggg gcccgaagac agcgcagata gcggtaggga agatgaaggc 1620

<210> 1869 <211> 2654

<212> DNA

<213> Aspergillus nidulans

tggttttgtt gtgcagataa atgatacgtt aatcattact gaataccgtt gtttatgatg 60 atctaaatag ctagctgcac atttcatctt gaatgtgaag taacgaatgt actgcagtat 120 attocottoc gttgaatcag ctgcctcgtg aagtotatat atagtotgca cotggtcago 180 caatggcctt gactctacta tgaatattaa acattagtat agagagacat ggatgcataa 240 300 cgagagacta acaatatcat acacgtatag ctaagcatga gtggcaggaa accctacact 360 ggaatacgga gaactccaag ctcggctgtg cggttactat gcttacaata atttttctcg tataaggatt gccccagacg cttagtatca tttgctagct ggtatgaaat gggaagggct 420 480 ggtctaagca acatcaagta gtaggtatag aaagtgagtg aaaataaaga ggcctggtca tggatggtga agtacggatg aaggggctgg atgaatagat gattaaacac ttatggtata 540 aagatgtcgt tctttcactt cgttcctttt catcatttcc gtacacgccg ggcatgattt 600 actagattet etateaegee etegaaagee teettttege ttaagagaee ategeggegt 660 720 tttagccaaa attcgagtac agcggaacgc gcagcgtgag ctcgtcaagc tctttgacat gggtttgtag ctcagtgtcg gtgaggccgt ctagtgcggc gtcggtggtc gcgcaaagtc 780 gccgtaccgc cgcgaggtcg agctctggtg gtggtgacgg ctcgcgccgt ctggatgacc 840 getgeegagt egeggtgetg gatgeaegtg ggetgttage etgetttgtg agtettteet 900 agcaaggett tgcgageggg acaatgggee gggeagtega tttagateeg teaatgtgaa tggatgggag aatgagettt ttttgttttg atgeaggtag gatttegtet aggteeacgg 1020 ggaacccagg gagacgagga aaaggcgacg aatccgggac ttgacccaat tctgaggttg 1080 aagcgggggt ggagcaacaa gctgagacca taatgagagt gagcgttcag tgctgaagat 1140 ggcagacgag ttcgggatag gttgtaagtc cgactgcctg gatagcgcag ctttagatgc 1200 aggaaaaagt cggtcaaggg tcccgtccag acgggtgagt aggtcaggca aagatagtat 1260 agattcgaag tetattagag gaggetagae aetgattage atgagaacaa egagacaget 1320 tattgcggta gacttacgac aaaaggcggc gtcgttttct gggaggactg taacgaggcg 1380 ggatcaggtt cgtcgaggtc tgcatctggc tcttggaaac cgtcgtcgaa gtcgccaaag 1440 tcatcatcac ccccctcctc gaagtcgtcg aagtcatcac cgcctacggt ttcagcagaa 1500 tetteeteat ttaatgttgt gttttgteea gtgtgatteg gatgegagga getgtttgag 1560

tgaggcagaa gatctgaatt ggtcaatcgt ccctgagttt ttttgccctc ctagaggtta 1620 aagaaccgga tgcttaccgg gtgagtccga gactgtctct gttgcatccg gcaaagtgtc 1680 gctcggccgt cttcgatgag cacgtggacc ggagtgtatt gacccatcat ctggtacgtc 1740 accaacttca gaaagtagcg tttccggtac aggagtcgtc gtggtgttgg cctcgttgaa 1800 cttcgtggga gctaccgacg ggcttgtggc ttcggaggtc ttcgtgacta tatctggaac 1860 agogtocgct ttccgttttt catacgcctc cgtcccagga acatcaccgt aacttggttg 1920 acctgggtca accttttcca ccacggtccg gggaattggt gtaccccccg gggttacaga 1980 ceggegatge tgeccegeag eggaaggget tetgetgegt gagateacet caaceteate 2040 aggaacagca tettgeteec tttteteata tgegettgte eetgggaegt caeegtgtga 2100 agggacateg tecaetttet ecaecegggt eeggggtaca ggagaageac gagaegttge 2160 gegggagega gaaegegagt tgeetteget ggeatetgag aaatgetett egtegetate 2220 ggaggctata aaatataggt attagtcaat gagctgccgg cgagtaactg tgcgtctgag 2280 cgcttgagcg gcttaccatg gtcaggggcc cctgggtcct cgagctccac gctctgcctc 2340 gggggctcca agtacgagct ggtcggagga gaggggcgtt ccgtcatgga gaaagagtac 2400 gctctagtat tcaagatcgg tcatgtaggc atagattatg gctttgaggc tcaacagaag 2460 acggccagat gcacaaaagg aggcaaggtt ggagaaagca ggttacagct tggataattc 2520 agaccatctq gtgacgaagt cagccccgat catgtttgcc ttagcgccta aggctgaaaa 2580 ttattetgee tgaggtgttt ataatagaeg eagataageg eaceteaaeg tgattggett 2640 2654 ttataagcgc aaca

<210> 1870 <211> 1926

<212> DNA

<213> Aspergillus nidulans

<400> 1870

atcattettt gggeeggee getettggtg gtegtegggt tgattettgg gatgtattgg 60
agaeggtaet egeetttate gaeeagaget tttteaacag agaageataa eeagteggat 120
geeteegagg getetgegea eegaeatgat ageetagatg agategtgga ggeaatgagg 180
aegtteacea eeeggtgeaa tateetgete gageegettg tggaacteac agattteetg 240

300 tegaeteaaa gateegetae etttgegaet aegeggeegg eeettaeeae gttgtttgtt cggattetet tegtaactee gatatggata actitgaete tgeeteeget tiaceteatt 360 actaccegte gtgtcattat gatagtegge acaattatae ttacatacca ttegegaaca 420 qcaaqagttt gccgcgtcat tctttggagg tctcttacta ttcgccgtat atgcggaatg 480 attaccggtc tgtcatttga cctggatgct ggcaagactc acattcagag tcacggtcac 540 gccgcaaaca ttgcaactag gcgtcgcgga gactcgtcgg gcgttcgttt tacttttatc 600 atttatqaqa accaqcqtcq ttggctaggt atcggttgga cgtactcttt atttccgtcg 660 gaacgcgctg cgtggacgga tgagcatctg aatcctgttc cttcgaagaa cgagttcgag 720 cttcccgagg tgcaaagcgg gaatgcaaag tggcggtggg ttgagggcag cgaatggcac 780 attgatggag ctgatgacga tgtgtctgac tccaaggctt ctgatggggg cggttggata 840 tactatgata ataaggtatg tactcaacat cacacccatt catccggctc ctaacatatc 900 tqcaqtqqaa cqacqqacqt cqcqqtctat acqgatqqqa ccqttacact cqccqcaqaa 960 agtggtgtcg ggatgccgaa ctcgcggaga tcacaccaca cggcaagccc ctagatgcac 1020 cathogeott gaccoagged ttggcgcaag acatecagea gagcaaaaacg ggaaaacceg 1080 atgccaatgc cgatgcttca acagtggacg ctgattccgt gagtctcgcc ccgtccacaa 1140 cctctagcaa agcccggcgc cgacgttggt tcggcagttc ctcaaactcg aaaagtgtaa 1200 gcgacagcaa aaacagcagc agcacatcta ctccaccagc cacaaataac aatgactccg 1260 as modetgg aaatgegaaa ataacetett ettetgeeae tagtaetagt cacasoogea 1320 gcaactcctc gttaaggagc gtctcttcaa gaccggtgag catct ac 1380 tgtccggtct ctctgggagc aattctggtt ataacaccgg aagtccgcat gggagtagca 1440 cggtcgcaag cgatagcctt agtattcggg agaaggagat ttcggatgct caggatcggt 1500 tagataaatg gggggctagg gctacggggg ggacggaacg ggcggagagg gagcttggac 1560 teggtgatga ggtgaatatg ggaetgaget gagttgaget acetaagtet tataeer jg 1620 gtggagaatg tattcctaaa ggacttagtc aatctgcctt tacttggggc ctgc jct 1680 gaggategea tggtateggt atcattatet etttteatta etttggaegt jtgggtett 1740 catggtcagg tagatgttac agagatctag tgtagatacg tattgaaacc tggtctggcg 1800 aggattgtcg cgaaccggaa aggagtgtat ccaggtatat acccctttac gcgagaatca 1860 agteccagee tageetgttg ageaegteag eccagtgett etteaceeet etegeeegtt 1920 1926 tatcct <210> 1871 1100 <211> <212> DNA <213> Aspergillus nidulans <400> 1871 tggcgataat acgaeteact attaggaaac tetteacata ageatattte teegaetgcg 60 qqacqtcata cqattqacqa agqtcgqctg agaaacgcag tgcctcgcgc accgtctgca 120 taggttcatg qacatccatt tgctctgcat aggaagtgcc tcgttggaac gatgtaccat 180 240 gcttggcacc atctaccaaa atgtcgccag aaattacgcc aatgttcttt cgcgcggcga 300 qaacqtcaaq caqqqtcqtc ttccccqctc cggatgcgcc catcaaggcc gtcagtttac caqqctqtac qtaaccgtag atgttgtgca gcagtcgtcg agtgccggac ggcacaggaa 360 cgtcatagca tacatcttcc catgttagga ctggcttcga tgtcagcaat atatcggctc 420 480 caqqqccacc aaqqtcqttc gactgtcgag cagcgcgctt ttcgtccagt gctttgttca 540 gtttcttccg cccagcattt tccttctgat agaaggtgac ggtcttgccg ccagcgttaa 600 acctaacaac ttcaccgaag tacagattca tccctaagaa agcaatgatg agggccacca tgatgccaaa gttcctccag agatcctctc tgttatagtt gaatgtggtc gataaatagc 660 720 tctgaccagg aattattggg gaacctgctt cacctccagc aagcgtacac acttggtggt tcatatcggt gtatccatca ccatttggga ttagggactc gctggtacag gtcatattga 780 ggcttttaaa ttcgttgacc atcaagctag caaatccaag cccgaagggg ttgatatagt 840 aaaaccatcq tagccaaacc tgcgcattag gccactgaac aaggtatcca gacgttagta 900 taaacaaaqt qatcaaqaca qatacaaagt tcattgcgtg atcgaaagca ggcgacaggc aaccgatggt tctgaagatg acagacatgt tgatatagcc cgtataaatg agcagcacaa 1020 aagtgaagaa tgcccctgca ttcctgacat ggccgcacat gaagttgact atgacgctgt 1080 1100 aaacgaggat ccctgccatc <210> 1872 <211> 3165

<212> DNA

<213> Aspergillus nidulans

<400> 1872

60 teccettete tgccaaatea cateatecte etgtteatee cateetteae eccaetetet ttqtctcatt ccctqcaatq tctqttaaca tacaggatgg aagaactgta gaattgattg 120 gtaggacaag gaagatccca actitigtcag aatatggctc gctgacgctg cagagtcatg 180 cggataccca gacaacctgc gtatccggcc cctcctccgc taaaagcagc gtcacaccaa 240 aggaacagca agaagccaca agactcagag acaaagcact agaacaagtg agagggatca 300 360 gatttagctc tcatagccag agacacctac ctacacgact gaaaatggag gtcttatcat 420 tttggcattg ttcatcagtg caatacaaaa ataggcgccc cgagaccttg cgaatatata ttottactgo tatcaatogt gotatcaggo tacgaaagga acacaactaa tttacagcaa 480 540 ctttgacggc acaagagcaa gctatggcta ctttataagc atatggattg cattcgaaat taccagecca attggaegae acegaeteae etaegaggee aetggetgga geaacaeage 600 660 ggaggaccac gtttttgcta gcagattatc tggaattggt gcccaagagc cacggaagct ccatgccagt tccaaattaa gccttcttat cagcatctcc accgaatgtc acctacgagg 720 tagcagetta tttcgatgta acgaageetg ettacageeg tgggetgetg ttcegggaae 780 tatgccagat cccgtggagt cataatgcag atatgagtaa cctacagacc tcgcgcctga 840 cgtttgagtg cgccgtcgct aacatcatgt ttgcatctga aatttctcag aagcatggag 900 taaattcacc aagtccattc ctgaatgcgg ctggcggtgt ttagacgact ctcagaggcg ggttcgacgt ctctcagccc agtttaaaga cgaaagcaag tggaatgacc agaaaccttg 1020 tettgaeate catgecaacg gagetetagt catggaggeg tataccaaga gtgeataatt 1080 atacgaatgt acaccatggc ttctgatcat tctgctctac cctgtttcgt cggcgctcaa 1140 ctaaacagag ataattgtgg cgatggcttt ccttgttgtt ctcaaacgac tccacgatat 1200 gacactaget tgegtgatge geaagttaat gttggtgget getgaggete tgaacqaggt 1260 tactggagct cataagggcg aggtggccat gaaatcaata atgaggatgt cttcgctaca 1320 ggaagtgcca ctacgccgcg acagcgaaaa cgtatcctac taacagttcg agtaaaaccc 1380 caagccagga catagccagg cattggatag cataggtttt aaacggtgct ggtgtatcac 1440 tacgtgtttt ggggcaatat gtacagtttc aggcgtgatg tcgagacact gacagaaggg 1500 acttactttt cacttaacga ccaggataaa atgcagttct ttcatattct tctcaattat 1560 tgaattcaag cacgatataa aatggctgaa acttgtaatt acttaagccc taatcgtaca 1620 gtatactttc aggcctgcag ccagctggca ctgttcagtg gcacgacttt aaaaattctt 1680 acataagegg accatgeaaa egegteaaac tgetttgtte eacteggett teetgtgett 1740 cgatacagac ctcaaaccaa gttactgtca ttcatggtca ttttttacgt tctgtgctga 1800 gcatggtatg cactaaatag acatatattg cttgtcaata tctgatcttt gccacgaact 1860 cqtaaccqat gccttqaaca aataccqcct gttcqaccqc gtcttqaagc tttccttggt 1920 cgacagteta tgcaaatatt ggttactttc acteeettge tgggegeeca ategteggee 1980 tcaaaggcat ctcagtccat tctagagctg gacggagggg tcaaaatcct cgtaaacgtt 2040 ggttgggatg acacatttga cccgctcgat ttggtggaat tggagaagta caaattgccc 2100 ttcgcatatc tatcaagcgc attgccttta accacggatg ctaacgcatg atactggtta 2160 gacacgtete tacteteteg etgateette tgacceaege aaegeetteg catateggeg 2220 cctatgtcca ttgttgcaag acattccctc tttttaccca aattcccgtg tatgcgacaa 2280 gteetgttat egegetggge egeaceette tgeaggatgt gtaegagteg gegeegetag 2340 ccgcgacctt tctccccaaa gcttctatat ccgagcctgg tgcctcgaca tctgctgcgt 2400 ccgccgcatc tgtgaccgag gccgatggga gtgcggacgc aaccagcgct gggcggatat 2460 tgcttcaacc tccaacgaca gaggagattg ccagatactt tgccctgatt cagccactga 2520 aatactetea geegeateaa eegatteegt caeegtttte teeteegete aaeggtetta 2580 cacttactgc ctataatgcc ggtcacaccg tgggtggaac aatatggcat atccagcatg 2640 gcatggaatc tattgtttac gctgtcgatt ggaaccaagc tcgagaaagc gtcgttgcag 2700 gtgctgcctg gttcggagga tctggtgcga gtgggacgga agtcattgag caactgcgaa 2760 gcctacagca ttgatctgta gtactcgcgg aggtgacaaa ttcgctcttc ctggcggacg 2820 gaagaagcgc gatgagatac tattagatat gattcggagc actttggtca aaggtggcac 2880 cgtgctgatt ccaacggaca caagtgcgcg ggtgcttgag ctggcatatg cgttagagca 2940 tgcctggcgc gacgctgcta gggacaccca agatgatgtt ctgaaacggg gtggactata 3000 cttagctggt agaaaggtca acacaactat gaggcttgcg agaagtatgt tggaatggat 3060 ggatgagagt attgtgcgcg aatttgaggc agctgaagct gcagatactg ctggccagaa 3120

<210>	1873	
<211>	4248	
<212>	DNA	
<213>	Aspergillus	nidula

ans

<400> 1873

tgaggtcctg cttgacgtag ggtgttccaa agtggaagat gttcagatat caacgcccct 60 gtcgcgggca gagatgtgaa gggcatgagg tgttgattct actgcaggaa gctgataatt gtgcttgcac ggattgatct gccacagccc aagcggattt gatgtacatc agcctagagc 180 240 caggagaaga acgcagttaa aactactgca gaccaactag gtcgaattca atgagccgtg 300 aatctatgta cttgtacagt gtcgtacgca tctatgcaac aaaatttaga tcggactatc tcccccaacc gctaaagaaa ccgcctgatg tcgttggggc ctcggtgtag gtctttgaaa 360 gaccoggatt cggcggtact ccaagcagcg aattccggtt ttctgttgtt gaggatcgtg 420 480 tcaaaccacg ccctgtcct cccatcattt tccgtaatga gtccagcttc gccttaacct cttccagttc ctgtttagcg acggcctctg ctgtctttgc atttactagc tctaagagca 540 gcgcctcgtc acctggcggt ttgttgtttt ctgtggatag aacgttttgc aggccaaggc 600 tgctactccg tttattgaaa gtggcgggtt gaatgctctt ttgtgaagcg gaccgagcaa 660 gtttgagttc gcggagtcca cccgagcaga agctttcacc gtgatcgctt gtcggcgagc 720 780 tgcgctctag ccgctgacga tcgcgatacc cgtcttggat acggccgcgt gcttcgcgga 840 gttgttcgcg gagcgaggcc gcttcctgtt cctgttcatc gatgcgccgg gtgaggtcga 900 gacateggee agetteaacg gagtacatgt tettecateg etegaggteg teacgeagtt gatgettggt ttggtcgata gatgtccgcc tggttgaatc taccgttgcq agettttctt 1020 ctgctttgct gaggagttct gatggcgcag cgtctgcgtt gttttctttg ataaattcga 1080 gcattgatcg ggcgagtgct tggtcttcct cgcgctcctc gcgctcacgt tgtagttcgc 1140 gcgaaaggtc tgcttgttga cgttgtaggt cgctgagtgc catcaagagg tcttcaatct 1200 ggctgtgaag atcgcggtcc ttgttatgag acatagcgga ttttgctcgt ggtttctgag 1260 ceteaactga tagtteagtt ggegetgtge tggegteega egtegaeteg acegagttaa 1320 gcgtggaggc catactttgc ttggaggttg accgccgaag attgttattg gggttgagat 1380 tgagtgattt gacggacgtg tgagggccag agccggccca gaaccggcca aggaatcgag 1440 aagctgcggc ctgcatctgg ggaaaggaga taccagtagg aaccccttgg gactggttgt 1500 aactqqcctc caqtqcctqa aqqctttctt tqqtqacaaq agtgqttaqa gagacaaagt 1560 cgttaacgaa atcgtcggcg tcaaaagcgt agctatactg gtcagtgaga gtcgtgtatt 1620 ttaggacaat acttacgtat cccagagact tctagaaagc agcagttgca tgacatcttc 1680 aaactetgaa cageecatga tettttttte gttgegette attagegaaa gegegaegeg 1740 catcaaagtc tcgcaggcgc cttccaagaa gatgacatcg tagatccgaa ggagcatcgg 1800 catagggcag gagacagcaa agaacgacag gaaccactgc gagacataga caggctcaac 1860 acccagtgtc tctaggtgtt cgaagagggc gggtcgaagg cgggagagga gattctggaa 1920 ttggtacacg cggaggtgca gacctgacag gtcagggaga tagcaggtcc gcaaatcata 1980 atggtccata agcctgcaac tattagcgtg attcgttcga cgatgcaggt caacttaccg 2040 cacaaqcacq caqaatqctt ctqcatccqt catqtqcatc aacaatqqcc caaccacaaa 2100 gcccaagcct tggcagtaac ctatcttcgt gtcataaaga ctgaagcatt tgagcacacg 2160 gccaagcatt cgttgtcctt cgccgtttgg atcgcgaaac atctcaacat tggggaagct 2220 acggccaata teetteecaa teaateeete ataegggeta gtetegeege atagettetg 2280 gtacteggtt aatagegaag gateeettge geeegacaag eteggeeaga egacaceaeg 2340 caaaggaggg ggaactccgc ctctaatctt attcgacgtc aacgtcggaa gtcgctgcac 2400 tgtttgcgga tagtctgcaa cgagcgcggc ccagaattca agttccgtca tgggcggagg 2460 tgggagttgt gaaatccgga gagaggatcg agggtcctcg tcgatcaagc gcttgatctg 2520 atgcagggat tgcgatcgaq acqgacqctq ttqtqcctqc tgtgcggcaa ccctggcaag 2580 accagatttc gggttcgtaa ccagggcatt gttctcttgc tccaggcgag ctaacaacag 2640 ggcagttgtc tatgaatgtc aattctatcc ctccccatgc cattttctcc agacatacct 2700 catcagatgc ctccatccga ggctcctgct cctctgtttt ctccagctct tcccagtcca 2760 ctgcatcacc ttcgagccca tccggccggt cagtttcttc gctgatacgc gcccgagcga 2820 gttccgatcc taaatccggt ttcgcagagg tgggtgtggt ttttggggctg atctcatcgt 2880 cggaatgtgt cgtagcgtgc acaggggtct gaggaatctc aagggtccgc cagtcgggtt 2940 gagtgtcttc tgaattcgac gacagaggca cggttaccat cgaatctgtt tggtgagccg 3000 tacggaccga ttctgaacta gggcgtgacg gggtctgctc ggaacgttcc attgtcgcta 3060 gtcttctctc aaccaagggt tcaatgagcc tcgtcgatca aatcgagggg tgaaacacga 3120 gggttggagg ggtcaaattc ggaagtcgcg atcaggtcga gaagctgccg gtgggaattg 3180 gacgacaaac agcggcatcg ctcgtgggcg tagaggcgag tggtgactca attcgaagtt 3240 gaagaaggag aaacgaggaa gagacggcgc gagttgaaag cagtatggta aggttagtta 3300 acttaagtgg tggttagtct ggtgctctaa gtgggcttca cactcagggg gcgttgtcct 3360 gattgggact ccaccaggtc tcgccctggc gatcgtcaaa ttattatcag agcgacaata 3420 ctagcgtgtg ctgagactca gtctattatt ctatgtctaa ggagagtata ttaagggatg 3480 ttccgtagtg ttgcttccta tttggtgttg gccatgtaga agagggcaga atcgtgagct 3540 ccaatagact ctcctgatct ccgcacagaa cacaacagta caaccatgga acctgaaact 3600 gggtgtctgg gacactggag cccctcagga accgccttcg aactcacgat acacgaggaa 3660 accatgtctt cttgaaagtg catatgtcat gacgtaaaaa ggatactgac agacctcgct 3720 ccaggggcga ggtaccgagt ctacttagga gaagggttct agcggcctcc aatccgccct 3780 tcgaaatcag cggtaatgta atataacgtc gcatgatcgt ttgagcctta atggagggtt 3840 cacagcacgt ctaatgagtg gacatgtaat ttatcgggac tcgttgattg gctctcatga 3900 aatagattac actccgacat accgctgcat accgacattt tgaaacaaag cccccccaga 3960 tgtttaacta atcaaaactg gcagcagtag taggtcacga taattttcta tcaagtggtg 4020 tactcagagt agttatgcag tataacgcta gacactagca tcttccgcag ctgcggaaaa 4080 gtagtaccat atacatgtta ccgtatatat agggcagatt gtagtcagtc tgtatttgaa 4140 ggagctggga gtaactaata aatacttcaa gcacaattat atatatttcc cacaacaact 4200 4248 ccgcccatta ctgataggaa ctcaccgata tttgaactta cttgagag

<210> 1874 <211> 2260 <212> DNA

<213> Aspergillus nidulans

<400> 1874

aactgtcata gaaattgtat caccggtgtg aggagacgtg tcaacaacga gagcgttgta 60

acaactccct ctacacccag cctgagacat cctcgccatc cacaacgccc tctccaagat cagcccttac ttctccattg ccgctggttt cggtaatgtg cacggtgtct acaagcccgg 180 caacgtccgc ctccaccctg aactcctcag caagcaccag gcctacgtta aggagcagac 240 tggctccaag aaggacaagc ccgtcttctt cgtcttccac ggcggttctg gctcttccaa ggaggagtac aaggaggcta tcagctacgg tgtcgtcaag gtcaacctcg acactgacat gcagtacgcc tacctcagtg gtgtccgtga ctacgtcctc aacaagaagg actaccttat 420 480 gtcaactgtt ggcaaccctg acggcgagga caagcccaac aagaagttct ttgacccccg cgtgtggatt cgtgagggtg agaagaccat gagcaagcgt gtccaggttg ctcttgagga cttcaacact gctggcaagc tctaaagcag ttatatgact ttgcaaaata ttttggacat 600 660 tcatgattat acagatatga ggcgacgaga taccaatgaa agtgtatagt cttaaaaaagc aaaaggttgt tagtagattt ggagatggcg ttggcatggt gtaggtatag tttaaaacga 720 tatcaaaatt atcgttcaaa gcgaatgaac agtaggccta ataagttgat gagcgaatat 780 840 gtgttttgtg ttacaaccac tacgcaaggc gataagaggt agattgttga tagctattcc 900 agctagaccc ataggagcat agcactaggg agcagcatct ataatagaac ttatggctac aatgctgagt gtaatcaaat gttcattttg ttcaatgaca agcaaaatgg tagaaaaatg 960 gaagatataa agatgtcaat attattgctt catcgcctgc tcaattctgc ccataatcct 1020 tccttctcgt tcagaaatta agacggatca tccaagtcgc cgcatgacca tccttgctgg 1080 gtttactcaa gcggggtttg tgcattggaa tgctacggta tcacttcctc acccggccat 1140 cacaattatt cccatcatca ctatcatatc tcccctgtgg ccattgctgt ctcacattgt 1200 gcaacagcag accagctttg aatacaacga gatggcctct gttacggagc accctccaac 1260 gctggagcaa attgaagcag atcaagacga atatgatcgc ctattcacag caaaagtgga 1320 ctctttcgat gttccaacga caactcggcg ggaactgtgg tcctattacc tttattataa 1380 tggtagacat ggacggtgtt aatggtgeec ttacagtact getactgate gactetetaa 1440 catctaggag acaacggagt aggccctctt tcgtataccc aagcattgta aggccttgtc 1500 ccattcttgt acaagcattc ttgaccgtct aggtttcaat ggtcccttaa cggcgccggc 1560 tggcaaccag ggaccacgcc ccggcaaccc tgcaccgatt cgtctccttg cgtagtccct 1620 tgggccggag ggacacgaac cgtctcctcg attgtgttga tagcaaatgg cctcagcttc 1680

accttcatga caataatctt tgtctggctc gggagtgccg cagactacgg ctctttcggg 1740 cgctggttgc tcctcgctct tacagtcgtt tgctgggctt tgcagtatgg gacgcttgct 1800 atcagagagc cgactcagtg gcccgccgct atggggctgt atatcgtgac gtatgttgcg 1860 tatggcgcaa cgctggtgtt ttatgccgca atgttcccga agcttgcag gtatatgccg 1920 catgtcagga aggcgagga ggaggatttg agaagaggga ggatcgatca aagggattat 1980 gatgctgttg agtccttgga gaggaatcat atttcgtgag cgtggttctg gttcttgata 2040 ttgatgatac tgatgagaaa atgcaggaat atatccacag cacatagtaa tattggctat 2100 ttggccgtgt tgcttctcaa cctaagtgtt ctattgccta tgcagggcaa taactatgcg 2160 aataatttag ccatctgtct gacgaactcg tgtgcgcaat cttcctgctt gggtacttaa 2220 cctgcaacta atatagcgtc agattgggtt gtcttggggg

<210> 1875 <211> 1721 <212> DNA

<213> Aspergillus nidulans

<400> 1875

cataacctat tattctgtac aatacatttc agagaggata gcactaaaaa ccataaggca 60 aagccatttt ccttgctctg ttcagtgtcc agttgtattg aggccggaaa ctagcgcttt acttcttcac ccggccatca cgattattcc catcatcact atcatcatct cccccgtggc 180 cattgctgtc tcacattgtg caacagcaga ccagctttgg gatacaacga gatgaccttt 240 gttaccgagg acccctcaac gctggagctt gattgaatca ttctagcgca ggatttcacc 300 cagatggtca gtttatgtaa taaaatctta cattgtagca aatgaatata cagatgaaga 360 420 cagcaaatcc tgattacggc gataatttcc tttagcgtag tccgctgtgc atgactgctc 480 aatcaqaaaq qqaqqcqqaq tctctaagca aagtatgtag gtaggccagg tggaaagctc cctaaqaaac aaatccaacc ggtttcctta acgatcccgt taacaatatg ttaaacttaa 540 600 cagagagatt cctctcatca taattgcatc acgtagacat gatcagaaaa gtgataagtc 660 caqqaacaca qqcacqqaqc catcttgaca ccttggtagc caacactcta gctatcttag 720 atgcactaaa catatctgta aagcagtatg actgcacagc gggaaaccct tgtattcctt 780 caagctgttg ataatgctgt ggtccgtggg agattcgtaa tcccagtgtt ctaggcgctc

tcqacaactq ttattttgaa tggtagctct ttatgtatat aaattatatt ttatctattg ataaccetge geagtgtttt aaaaaaagae ttetgtteta tttgcaggaa gttataaget 900 aaggatetet atteaceaac eecageteea ataacatatt geetaacaac aaaaagtage aatcggcata gacaaggcca tggtctgccc agcgccgcga cgcgaactcg taattgcaaa 1020 cagtegetge gtegaggate gtttegggga atttgagtge agaeetegat etataceeat 1080 tcataccagt ctcaggccct gagagaccct cctttgccga aatggtcaga cgccccggct 1140 gtcggcagga tacgtaggga ggcctggcgc cgactgagcg acattgaact ccctggtgac 1200 gaggtcatga acttggacac tgtgccctcg agtatgcgca gtgcaaagtc aagatactac 1260 tecaeggget etaegteegg cetgteetta etgtetttea gtgeettgea caacagaact 1320 agcccgcaac aagctaccat cccgcggacg tacccgggac aggactcatt accgggcatt 1380 gaagcccagt ccggactggt tcggaggtag tgctcatgaa ttatcgcgag tcttagccgc 1440 tgagaaccag ttttccggtc aacctccatt ctgaaccaga aacccagttt gccggactca 1500 aaattegeet taccetgtge gaatttgeeg gageeeggt taatageece gtgggeettg 1560 tgcggtggga gccctccca tgtatgcacc ccagagggcc ctttgcctcc aaaatacgtg 1620 tccttttcta gacctgttcc ttatcctcct cttcctctta ttacacttat ccctctcccc 1680 cttctctact tcctcttact tcttactttt cctattcccc c 1721

<210> 1876 <211> 3049

<211> 3043 <212> DNA

<213> Aspergillus nidulans

<400> 1876

catttcaagg ttacaagact gcggaagttc tggcaggcgt agacggcgtc ttcgccgagc 60

tcctcctcaa tacgaaggat ctggttcagt ttggctaaac gctccgaccg ggcaggagca 120

ccagtcttga tctgtccgga gcggagaccg acagagatgt cggcaatggt gacatcctca 180

gtctcaccgg aacggtgaga gaccatgaca ccccagccat cggcgtagga gtccttggcg 240

gcctgaatag actcagtcag ggtaccaatc tggttgacct tgagaaggag agcgttgcag 300

gacttgagct caatggcctt cttgatacgg agagggttgg tgacagtcag gtcatcacta 360

ttaactagtt agatcagtta ctaggaaaaa gcggattgca atacataccc gacaatctgg 420

aagtcagagg tettgtagaa gtagetecag geeteceagt egteeteage gaaagggtee tcaatactga caatggggta cttggcagca agggacttgt agaggtcggc aagctgttcg 540 tatgtgagcc acttggaggg gtcgctgtcg gggttcttga agtcgaggtc gtatttcttc 600 660 tcctcgggct tgtagaactc gctggaggca acgtccatgg caatgtgaat cttgccggtg tagccggcct gctcaatggc ttcggtgatg aggtcgagag cttcttcagc ggtctggata 720 tegggageaa cacegeete gteacegaeg ttgccageag actggeegta ettettetta 780 840 gcaagagcct tgagcttgtg gtaaacctca gcaccctggc ggagaccctc ggagaaagag gaagcagtgc tttccatatg tcagtatact tgaacgaatg caaacggccg gcaagaaact 900 cactcaggaa caatcatgaa ctcctggaaa gccaggcgac caccggcgtg ggaaccaccg ttqaqqacqt tctqqaagqq qacqgggagg acgtagggct tctttgttcc agccaagtcg 1020 gagatgtgag cgtaaagagg gacacccttc tcagcggcac cagccttggc gatagccaga 1080 ctgacaccga ggatggcgtt ggcaccaagg ttgctcttgt tgggagttcc gtcaagcttg 1140 ttgaggaact cgtcaatctt ggactgctcc ttgacgtcga ggttctcctt aatgacggcg 1200 gggccaatgg tctcattaac gttcttgacg gcagttagaa cacctatttg agaaccattg 1260 ttagaggtcc ccatctcgta tcaaacttgt gggagtggtt gcaaacgtac cctttccgag 1320 ccacttggac ttgtcgccat cacggagete gtgageeteg tgctgacetg caattgaagt 1380 taggaacgtt tgtttttcat caatcgacgc atgctcaata ggttacacac cggtagaagc 1440 tecagaagga acaatageae ggtgaagaee ggteteggtg acaaegteea eeteaaeggt 1500 ggggttacca cgagagtcgt agactgagcg ggcgtggatc ttggagatag gcattttgat 1560 gaactagaag gatagagtca gaaaggagaa aaaggggaaa attttggagg acggagaagt 1620 taacaaatat aacagaaagg ggaggcgaag agttgctggg agtgatttag caggcgggga 1680 tgtcgttcac cgatggccca aaaagaatga tgccagcagg tgagcgatgg agtcatccgg 1740 tcaatcgctg atggatcgag accgcctgga ctcatcctta ggaagaccgc aatgtgaagg 1800 aggcataccg acaggtcaat gctggtgtag ctgtgatgat gatggtatgt tgcctgatga 1860 tggggagagg tcaagcttaa gctggtggga tggtggggtt gaagaagagt atacctagga 1920 ggcggatgta aagagacggc acttaccaaa ctttggacgg acggggagag tagtaaaaca 1980 acaacagcaa tttggactat agggagcaag aattcgatgg aaagcagctg gttcttgtat 2040 tcctacgcaa gttgtctggc tccgagtctt tccaaggtga tggtggggca gccactgcct 2100 gtttgttggc tcaggaggct tactgacgct ctacagcgag atctcccgta caccctcggc 2160 gcaaggeggg tgacaggatg ctegegagaa ccaatecace ttgtttgagg taateactea 2220 gagtagacge eggegtgate gtgactttat tetatagtte getgatgeet etcaaaageg 2280 aacctqqtaq ttcatatgcg aatcgaggtc aatctacaaa gaatgctatc tagccatgca 2400 agageatgee atagtateae geageeegea atteggeaae ttegttgegt aatgaeggeg 2460 aaatagagte gggteaaatg ttgatacett aatgeetgae agetaeegga taatagttae 2520 tacgtaacge teggettgaa eatggeetat attggeetga atttaatgge atgaatatag 2580 teatgtgace gagteegtgg tggtagetea ggegagetet caagetaagt ceagatacee 2640 ttttatcage atctccgtca tcgctccatt cctctcgcac cggcaagcag tctcttataa 2700 cgaataaact gtggtcactt gaaatcagtt tgatccagca tcgctgttaa ccatcgattc 2760 acgatgaacg gtgctgttga tcccgaaagg gagcaggcac tggaggagta caagcggagc 2820 ctactggatc tccgggaatg ggaggctaag ctcaaagcgc ttcgtatggg aataaaggac 2880 ttgcaaagag agtttgatat ttcagaagaa aacatcaaag ctctgcaaag tgttggtcag 2940 attattggaa aggtgctgaa gcagctcgat gaggagcgat gtacgttctt ctgcgacgaa 3000 3049 agattetttt attatattee acaegagage agetaatett agaagteat

<210> 1877 <211> 1104

<212> DNA

<213> Aspergillus nidulans

<400> 1877

agagtctggt taaaggatag ggggcggact tcggctggtc ccagggggtc gacctctggc 60 gggacattga ggagtttgta cgcaatgctc agaaggggaa tggacaggcc atgaacgaag 120 atcgagaata acacgagcca atatattgct agggtatagg ttagattggt ttgagagtaa 180 gtgattccaa ctcacttggt ttgagggcgc ccattaagcg agcctccatg gcactaccct 240 cgcctaccgg agggaataga tgggaggtgt gttcggcgta gaagacagca ccaattcctg 300 gcaccgcgtt aataccagtt ccgtacagac caagtattga cttacctatc ggtccaaagt 360

agcccataaa caaagcctcc ttccagttct tgcagacctt gggcataaac ctgtacaaag 420 cgagcgtgct gggaatgcgt cgaaagagga ggacgatgaa gccaagaaga atcagccggg 480 gatatgtgat tcctgtggtg tctggctggt ggaagtcatc ccatggaatg acggctccaa 540 600 tatacatgaa tccaccaaag ttgaggagaa cgtcgataca tgaattgact tcgtcatggc gggcttcggt ttctgccaga tagccaccgt cccaattcag cgcaccacca gcaaaataac 660 aggcgaggag atcgttcgtt ccgacacaac cacacgttcc aaggaggaat agctggtaat 720 ggtttaggta tgaacacggg ttgcatgaaa aggacttact cctaacgcag ccgggaacag 780 cacgtagctc tcgccgtcta tccactttct gaaacgggtt agcatcctca aataatggta 840 900 tcaggtatag gcccgcttta ctttcggagg gtataccgca gtaggcgcat actggcatag cccagggtgg cgccataaac cacgccaagg atgatgtagt aggcccaggt ctcgacaaac 960 cacateteca tegetttege aageeegea tgeatatgge etacatette egagegegeg 1020 acatgagcat gggccgtgtg gtcctgaacc ggatttcctt gggtatacgc agcagatagg 1080 1104 tcgctagcac agaaagggaa acca

<210> 1878 <211> 3122 <212> DNA

<213> Aspergillus nidulans

<400> 1878

tttagctttc gttgtagctt ctccatcatt tatactatct ataagcacct ggttcacgat 60 gggtgaagac aaagaaacaa atateetege eggeetegga aacaccattt eecaagtaga 120 aaacgttgtt gcggcatcgt tacgaccttt gccaacggca acgggtgatg gaacctacgt 180 tgccgaatcc actcagacgg gcttagccaa agatctgagc catgtcgacc tcaaggatgt 240 ccgcacactc gccgaagtcg tcaagagtgc ggctacggga gagccggttg atgacaagca 300 360 gtatatcatg gaaagagtga ttcaggtcag ctcagattcc aacaacaagt atgcgcaggc tctgaggcta atcaacatct agttagctgc tggcttacca tcgacatctc gcaacgctgc 420 agagetaace aagteatttt tgaacatget gtggaatgae ttggaacate caccagttte 480 gtaaggaacc aggagtctgt aggctacctc ggctgtctga caaatatata gttatctagg 540 agctgattct atgcaccgca aagccgacgg ctcgggtaat gtagattatc ccagttccag 600

tettetacet actgtgetga ettttegatg atagaategt ttetggeete aaettggege tgctggtagc gcgtacgcaa gatctgttcg gcccaagacg atgcagtctc catccctgcc 720 cgatcctgag actattttcg attgcctgct ccgccggaaa gagtacaggg agcatcctaa 780 taagatatca agcgttctat tctacctcgc ttcaatcatt attcatggtt agccagtcca 840 gtgattgaag gtaatgatgg gtttgctaat tatcttcgaa gacctattcc agacagaccc 900 taaagataat teegtgteea agacategte atatttggae eteteaeett tgtatggeaa taatcaagac gagcagaacc ttgttcgtac gttcaaggat ggaaagctta agccagattg 1020 tttcgctacc aagcgagtgt tgggctttcc tcccggcgtc ggcgttctac tgatcatgtt 1080 caaccgcttc cacaactatg tggttgatca attggcggcg atcaacgaat gcggccgatt 1140 caccaaacct gacgagtcca acgttgatga gtatgctaaa tacgataaca atctcttcca 1200 aaccgggcga ctggtgactt gtgggttgta cgcaaatatt atcctaaaag attatgtccg 1260 aacgattttg aatataaacc ggacagatag cacctggagt ttggacccca gaatggaaat 1320 gaaggatggt ttattaggtg aagcagcagc aatggcaacc gggaaccagg tgtcagccga 1380 atttaatgtc gtgtaccggt ggcacgcttg catttccaag cgcgatgaaa aatggacaga 1440 ggattttcac cgtgaaatca tgccgggagt ggatccaagc acactatcga tgcaagattt 1500 tgtcgcgggt cttggacggt ggcaggcagg actcccacaa gagccacttg agcgcccatt 1560 ctctggctta cagcgtaagc cggacggtgc attcaacgac gatgacctgg ttaatctgtt 1620 tgagaagagt gttgaagact gcgcaggtgc atttggtgcg tctcacgttc cagccatctt 1680 caagagcgtt gaagctctcg gtataatgca ggctcggaga tggaacttgg gaacgctcaa 1740 tgagttccgc caatatttca atctggctcc tcataagacc tttgaggata tcaactccga 1800 teegtacatt geggateage teaagegaet gtatgateat eeagatettg tggagattta 1860 ccctggtgtt gttgtggaag aagccaaaga ctccatggtc cctggaagcg gcctttgcac 1920 gaacttcact atatccaggg caatcctttc ggatgcggtg gcattggttc gcggtgatag 1980 attttacact gtcgactaca ctccgaagca ccttacgaat tgggcctaca acgagattca 2040 gcctaacaac gccgtcgatc aaggtcaggt attctacaag ctggttcttc gcgcattccc 2100 aaaccatttt gatggaaatt ctatctatgc tcatttcccc cttgtcgttc cctcggaaaa 2160 tgagaaaata ttgaagagcc ttggggttgc cgagaagtat agctgggaaa agcccagtcg 2220 tateteteat eegattttea teagetetea tgeegegtge atgteeatee tegaaaatea 2280 agaaacgttc aaggtgactt ggggtaggaa gattgagttc cttatgcaac gcgataagca 2340 ccaatacggg aaggacttca tgctgtctgg agaccggcca cccaacgctg catcgcgcaa 2400 gatgatgggt tccgccttgt atcgcgatga atgggaggct gaggtcaaaa acttctacga 2460 gcaaacaact ctaaaactct tgcataagaa ctcctacaaa cttgcgggcg ttaaccaagt 2520 cgatatcgtt cgtgatgtgg ccaatctcgc ccaagtccac ttctgctcta gcgtcttctc 2580 attgccactg aaaacagact ctaatcctag gggtatcttc gcagagtcgg aactgtacaa 2640 gataatggct gcagttttca ctgccatctt ctacgacgca gatattggga aatcgttcga 2700 gctaaaccag gccgcccgta ctgtaacgca gcagctgggc cagctaacta tggccaacgt 2760 cgagatcata gccaaaaccg gcttgatcgc taacctcgtg aaccgccttc accggcgcga 2820 cgtgcttagc gaatatggca tccatatgat ccagcgtcta ctggatagtg gtctcccagc 2880 gacagagatt gtatggactc atatecttee taeggeeggt ggaatggtgg caaaccaage 2940 acaactgttt tcgcaatgtc tggactatta tctctcggaa gagggctctg ggcatcttcc 3000 tgagatcaac cgactggcca aggaaaatac cccggaagct gatgagctac ttacacgcta 3060 gtacgtaacc tctttgttgt ctttcccgaa cgcgcacata cttaccggag cagtttcatg 3120 3122 ga

<210> 1879 <211> 3275 <212> DNA

<213> Aspergillus nidulans

<400> 1879

tcaggaaaac catgatgatc gagtctctcg aaaggtgtct ggcaataatt tggcctaata 60
ataccaatat cacacagatc tgcaggagta cctcggatct tatgtgtccg atgacgacgg 120
aacccttcga tatcaggagg gtatcctggt agaggcgcta cggaacggct actggattgt 180
ccttgatgaa ctcaacttgg caccctctga cgttctggag gcactcaatc gacttctcga 240
cgataaccgc gaactgttta tccccgaaac acaagaagtg gtccatccac acccgaattt 300
catgctgttc gcaactcaga accccgcggg actctacgga ggcagaaaag tactttcccg 360
cgcgttccgg aatcgtttcc ttgaattaca cttcgacgat ataccagaga gcgaactgga 420

gtatattctc aaagaacgat cacaaatagc gccatcattc tgtaccagga tagtcgctgt gtatcgaaaa ctttctctac tgcgccaggc aaatcggtta ttcgagcaga agaatagctt 540 cgccactctg cgtgatcttt ttcgatgggc cctccggcaa gcggatgaca aagagcagct 600 660 ggctataaat ggtttcatgc tacttgcaga gagagtgagg aaccctcagg agagggctgc tgtgaaaggc gttattgaag aggtcatgaa ggtcaagatc gacgaagaag tcctttacag 720 cacttccgag ttagataagc gtgcaccatt gctaaggcaa ctgacccctg gaatcgtttg 780 840 gacccgggct atgaggagac ttttcatcct ggtttctaca gctcttcaga ataacgagcc cattctcctt gtgggtgaaa caggctgcgg aaagactcag ctgtgtcaag cggttgcaga 900 tgcttaccag aaacaactgc acattattaa tgcgcatgta aatctggaaa caggcgatct tattggagct cagcggccag tacggaatag atcggctatc gaagacgcca tgctcaacga 1020 tttgcgaata ctgttgcaag acgagtcgaa gccgttcgag gagctgaagc agattttcgg 1080 cacactcagt gccgaacagc gactagagtg cgatccacag ctactaaaga agatcgaaaa 1140 gaatcttgct cgattaaatg cactttttga atggactgat ggaagtttga ttaccgccat 1200 gaagacaggc cagttcttcc tcctggacga aatatctctc gccgatgact cggtgctgga 1260 acggettaat agtgtgetag ageeteatag ategataett ttggetgaaa agggeeceat 1320 tgactctatg gttgtcgctg acagcggctt ccagtttctt tcaaccatga atcccggagg 1380 cgactacgga aagagagaac tctctgctgc cctccggaac cggatgacag agatttgggc 1440 teegeaattg tetgaagatg aggacattet teecattett caaatgaaac tagagaegea 1500 attggagcaa atccctcggg cgatgttaca atttgcaaaa tggttcaaac gcacgtttca 1560 aggctcctca accaattcac tttccattcg cgatctttta gcttgggttg attttgtcaa 1620 taaatgccag ggctcggatc ccttgttcgc tattattcaa ggtgctgcaa tggtattcat 1680 agacacactg ggtgcaaacc cggctgcgat gctcgcaacc acgttgcata accttgaagg 1740 aaatcgcaaa ctgtgtctgg acaaacttga ggaactattc aacgtggatg cgtcgaatat 1800 ctatatgcaa aaatccgata ttggtgttca agaccaggca ttgcgtattg ggccctttta 1860 cctcacaatt cagggtgatg ctcaacctga cccggatttc atcatggatg cgcctacaac 1920 tattgccaac tcagtacgca ttgcccgtgg gctgcaatta gcgaaaccaa ttcttcttga 1980 aggtagccct ggcgtgggta aaactacgct agtgactgct cttgctcgag ccctcgggaa 2040

accgcttacc cggattaacc tgtctgagca aacggacctt accgatctat ttggatctga 2100 tgtccctgtg gaaggtggcg acgtaggtca gtttgcgtgg cgggacgccc ccttcctaca 2160 gcttgaaggt ctcaatgctt gtcttgacca ccgtcagatg gtctatattg ccgaacttga 2280 ccaaactttc aaacgtcacc caaatttcgt ccttttcgcg gcacaaaatc cgcatcacca 2340 aggaggcggt cgaaaagggt tgcctgcttc tttcgtcaac cgatttactg tggtgtatgc 2400 tgacagtttc accgacactg acctgaaacg catctgtgcc agactgtatc ctggcagtcc 2460 tattacgcag accgagcggc tagttgactt tgtctccatc ttgaacgttg ctatagtcca 2520 agaaaggaga ctgggagttc tgggaggtcc ctgggaggtc aatctacgtg acattcagag 2580 atggcttcaa ttggctgatc gcgggacttt gcaaatacac acgaagaact tcctcgatat 2640 aatcatctcc cagcgattta gatgtcagga agatcgagag cgggtccgcc acctatacga 2700 acgtgtcttt gatggtgtct ccacggcagc caaaagttat tatcataaca tgacaacaga 2760 atgcatgcag gttggccttg gagtgatgcg aagggatatg ttgctgcaag aaactcccaa 2820 tccgcatctc aaggtactgc cgagggatct gtctatcctc gaatctctca tgctttgcat 2880 tgaacagtca tggcctagca ttctggtggg agcttcagga tgcggtaaaa caacattgat 2940 aagaaagctt gctgccatta acggagccaa cttggttgaa ctagctttga gcgcggatac 3000 cgatacaatg gacctcgttg gaggcttcga acagatcgac cacaacagag agacgtcggc 3060 tettttagag gatattttgc tgttcgtgag acgacatata etetccaget gecegtecga 3120 aacctctcaa gaagagacgt atactttgat tgaactgtat gaacggctac agagccctga 3180 cttgtcgctg gagctagtgt gcacgttatt agaaactgct cgccagcgtt acgaggacca 3240 3275 agcattagag cgactactcg atcgatcgcc aaccc

<210> 1880 <211> 3190 <212> DNA <213> Aspergillus nidulans

1880

<400>

atgetegeet gatgeeete ggategttet tetggggege tegtttgege aaatgtggga 60 acgatgeege caccaateet tgaccagaac atcetttete teaagegaac tgttteetee 120

cacgcctctt gcaactcgtc aggttcctcg gcgtggatat gaccgtcaag gatgagacgg aggtagcccg caaactcaca gcacgagcgt accttttcta aacagagaac gcacaatggg 240 300 tategetgtg etgttteact gteagatgte eggaaaeggt gagtgegete attateggtg 360 ccactccgcc gttcgccaca gagagaacat gggaattcgt attttcgaac atttggtggt 420 accggeteta egaccagget teetteacaa atactagata geacgttteg eetggteage 480 caggatatee etggggeege ategagtete aaegtaggtt egatatette cacaagtgea 540 cgcttgtaga atcgtgcatc cttcaaaggg acgctagagt taggggggttg aggcgaagaa acactcccac tcggggaatg aggttgagat tttgacggtg agggggagcc cgagccgaac 600 cccgcaccac caaagccagc cagactcatg acgtttaagc ccgaatatga tccgctggtc 660 720 gccctactgg ggggtttcga actcttcgat atagtaaaca gctcacgaaa atcctcgtaa gccaatatgt cggttcggca tacagttttg atgagatcag gaaaacttgt agcaggaccg 780 ggtgctatct cggcgcagac aacatcgcca gggatatctg tagcttccat actcttccta 840 gtgaaggcgg gaggttgtga gggaccagcc ggagaaggtg gtgctgtgga gattgctgtg 900 cgaccatcga gatcgtcctt ggaaatgttc attacctgaa ggactgattt caattcggct 960 aattgttett ggtgegaage gagaagegae tetgtgtett tgatetgaga aegtaaetgt 1020 teattettet tetecaeage etegegeteg agettggeag eageaaceat etgtggaatg 1080 atttagaaaa acagetttaa ggaaccatgg eegagtatat geteacettg tttgetteet 1140 caaagagage egeagtgagt gtttetaget ettgetegat tecettttte teetteteeg 1200 ccaataaacg ctgagccttt tcttctgcca aagaagcctt caattggtca acctcagctt 1260 tettcaccag egetcegtet teaatgtete gecagtattg etegttttee gaetetaacg 1320 egegggeett tteetggaet tgetetaaet eetggegagt aaeggeeaaa gtgteatega 1380 gttttgtctg attgttaatc gcttgaacaa gttttagact aagtgttgca acttcgtcat 1440 taaggtccgg gtgatgtgag gacgatagag tcgactctgt tgattcagaa ctgggcagaa 1500 gtcttgggtc cctcaaagtg ctgaagccgt ccccaccttc acttgaggaa cgaacagtgg 1560 ccggagggtc tgcggcaaca cggagaagat catttgtgga cttggccttc gtaacatgcc 1620 tatcaggcga agccgaccta ttcccggatg acagagaccg tttgtggctg gatgggcgcg 1680 gtaacatgtt tgacggcgag aggaaacctt gatgcgaata ataagagtgg aaggcgatca 1740

gactacatgc gaattagtag agcttcatgg aagaatacga tcgacttagg gttgaagact 1800 cacteggeca tggtggcgag aatgatetga tegtgaateg geaagataag gtagtgegtg 1860 accagatcga gacgtcacgt atgcgcaggt atttagtccg cccgtttgat gaaacgatcg 1920 agtcgacaaa ggagtgaggc tgtagattag gttgtatcag tatatcgagc tgaaggcgat 1980 tgcgtatccg cgcgtaactg gaggaggcgc aaattggatt cagataggac gcattgacgc 2040 gggacaagga atgaagtcag ggccgggaag gagcggatgc gcaggagagc gaaggtacac 2100 tcatggagat cccagggacg agattaattg aaggaaggaa tgcaaacgac gaaaggaaga 2160 ggagttggag atgtaacaga cccctcttcc acggcggcta gcaggagatg cctggtggtg 2220 gaggaaagcc cgcactcgca cttcgtactc ggagcttcgt caccccgtct ggtgcattac 2280 tagtggcggg tattttacct gatcatgtga cggggcctct aagagggttc tgccaacctc 2340 gtcatgggta gacgtgagaa atacggagta ctagctggta ctgtatttaa tttgtagtct 2400 gagtaatcct acgtcaccca atgattaccg agactaaatg accaacttgt actgtatgtt 2460 atgcgtatgc taatcatgca aaacatggtg aagcggcgat tctgctaagc ccccagcctt 2520 agettggaag etcagcaace gegeaaggga teaetggeet teegggagtt tgeeteggat 2580 ggagaccgac tcagtcccta gccttgaaaa acgctcattt attgtccctt gttggtgcgt 2640 gcttgaatct cttcaatgag gttagtataa ataggtcgtt gccgttgacg taagacactc 2700 acaggctgtt cgcataatat cccttcgacc atctagtcat acaagtcata cttgttgaat 2760 atcgttagag caaaatagga gcacagaaga cggggttttg gagtaccgat tactgcatca 2820 ggatatette atgegggget tgaetgette gageteaaae eaacegttte etgaetaeag 2880 aggcgggatt aagcagactc atacatcagc caatggaaac gtcactgtcc cttatcattg 2940 aagetttact geagagtgga acatgegtte gatggegeaa teceaecteg tatteeeggg 3000 atttccccgt acacggcata ctctgagtaa agacgatcag taaccatctc cctggaatct 3060 tggatggccc cgccaatctt ttggccttgc agcctcaggc cgcaaattaa agtggggttt 3120 tggggtttga tcgtccatcc aacacgccaa atcttcagga ccatattata cgatacttac 3180 3190 cccgtgtcct

<210> 1881 <211> 2983 <212> DNA

<213> Aspergillus nidulans

<400> 1881

ggaatgcacc tgacgggttc gcgaagaata tgtcgtcttc tgggtgggag ttttttgact 60 tegteaaqag gtetageage gaegaetgeg agtgaegeae ttggteegga aageateate 120 cqctaqaqat aatqcaaccq caggccacac taaccaagct tttcqaatat tcccaagcta 180 tgttactact tgctctgttt gtcgagtagc tcctgaaggc tagtcctcgg cgagcaaacg 240 tcattcctat aatgtacacc tgcgtacatt agttggtacc gaagttcgag aggaggcggg 300 atgtcacctt ttcataaacg caaacgcatt tatcgtcact catatcagga tcagatctaa 360 gattgctaca gctcctctaa gtggagcaac agcgtcttct cgcagaagtt catagtgggc 420 tttcagatac gtatctctcg atgcccaagg ccttcaatct tgttcggctc gaggtcgacg 480 aattccccgg cgaagttaaa cacctcatcg gacgatggga gttctggctt caatagccat 540 ggctccgaat ataaagtgtc aggatcatgg gtgtgaagct gattgaagta attgcgtatg 600 tcttcggtaa cggttgcaac agtgcatgcg ttcaaagatg cttgcctgaa cacctttggt 660 agatgggaat tgatctcctc ttctgagtcc atagtgggac tggattaagg aggtatgtga 720 780 gaagatgcac ctctgcgtta ggagagaagg aagaagaaga taggtaaccg attattatgt 840 gttagaaact gaacaaaaca gagcagcaaa caagacttgg actaaggccc agcagtcact actaccagat tcacttgcta ttgttcctct gctgaatatc ctattaatga tactctctca 900 tcgtcaaaac cggtgttatt gcgactgtca cctcttttgc tgatttcgct gcagcaagac 960 gacgcatcta tatgccatct tctttcaggc atcccagtca cccacatatt tcttaggaag 1020 caagacagtc tagccagcaa tccgcgaacg gtgtcgcacc cttatgaatg ataattggtg 1080 acgacggtat actgcggaat tcggtgttgg gttctgagac taacctgata tggtgtacgt 1140 tacacctcag gcattcaaat acaggttgga aacgtgattg acgtcggaaa caataatgtg 1200 ategatacet egeactggag ttgeggttga getgeeggga tateagteat teetttgaae 1260 tettatgtea accgtetett tatttttett eteetgacag eagatetatt ettatteata 1320 ggcgcggcga cgatagctcc ggaggccatg aggctctgat ctccgcactc tcccaggtcg 1380 cagagggagc aaaggctgcc tgcagcagag gagaaacagg acgagtcgaa taccctcgca 1440 tacgagetgt caegttactt gtttgtegat ttgtttgeta attteegeaa tetgeggtaa 1500 tacttcttcc aaaacacgat ggcttcaatt gtggaggacg aagacgatcg agacattgca 1560 ggtgagtccg ccttgcaatt cgtcttaagg ttcgagcggt gactaactcg tcggcaacac 1620 tctaggctca caagatggaa gctcggataa cgacatggat gatacactca gagatgcgga 1680 cgagggcggg ggcgacaatg aacctgatat ggacgcggat ggcgatgcag acgaccagga 1740 tgcggacagc gcgtccaatg cgagccatgc ttctgaaagc gccgaagtag caacgcaaca 1800 gaaccaggag actacaatga ctccggttcc cgacaatgcg acgaccgacc taacctccgt 1860 tttccatccq aqcqtqcqtc ccgaatgcct gacagcttcc agctacgata tagtccccac 1920 gaccgctgcg ccgcacagta cctcgattaa cgccataaca gcgaccgcag atatgcggtg 1980 qqtqtttaqt qqtgqctccg atggatatgt gcggaaattc aactgggtgg actctatcaa 2040 cagtaagctt atgttgactg ttgcgcaaag gcatccgttc gtcgacagcg tgataaaggc 2100 gggcgttctg atgacatact gggagaacat ggatggaaat gctttatcgc cagtctattc 2160 gctggcctgt caaagcgaag ggctctggct gttatctggc ttggaatccg ggagcattcg 2220 actacagtct atacggcacg acgaaggcaa agagattgcc ctgttacagc agcatacctc 2280 agcagteteg gtgetttete taacgtetga tgagaaatea ttaettteeg gtagetggga 2340 taagcgaata tatgattggg acctcaatac aggacaaacc agacgcgttt tcggatccag 2400 cqccqqtcaq atctcqqcaa ttgagctacg ccctgagtcc agcttgccag tccccagaga 2460 cacaactgag attcagcaac ctaatggaac tttctcatcc aacaatcagg cgagcggagg 2520 taatagette agetatatgg acacaacgaa tgateaggge gacaacgaeg eggtgaacee 2580 gcaggccgga tcaccagcag actcgctctt tggaggagct gattctttgt tcggcgatgc 2640 agacggcaca gctggcgatg gactgggcac agcaaccaat tcgtttggca tagatgacga 2700 cgatgagttc ggcaaagctc ttaccaacgg tgtcgctcct gacgctgatg ccgctggcga 2760 accagacaca gtgcagcaaa aaaatctctt tgactccaaa gatccttcca atgatgcccc 2820 eggegtegat teaaacacae ttgtacecaa eeaacegeta gatteteaet caaeggaege 2880 agtaaataac caatcccaac cattagttaa cggccttccc cacgctgaag aactagaacc 2940 2983 gccttcacag agccaagaac acactcaatc aacgccgaca gag

<210> 1882 <211> 474

<212> <213>	DNA Aspergillus	nidulans				
<400>	1882					
accagtagga	ttctcacctc	aaagcccagg	gaatatgcgc	gcgacgccgc	gccaggatgg	60
ctggcaccta	gtgtatcctg	atagcgcctc	acatcgccgt	ctatgccatg	atgcatgagt	120
gcgcgcaggg	ttgcgacgag	cccaggaact	gcaagccaca	ggtatcctca	cgccagagcg	180
cgccacccgc	cgaagggaag	acacgggagt	gcaacgagct	atggcatctt	tttgagaagc	240
gaatcagcta	gacatacccg	caagcgccgc	aggtcgtgga	ccaggttaca	aaagacagga	300
ccgatcaagg	ggccggcggc	gaagcggtca	tcccaggagc	gcaagccgta	gagggagcta	360
tagcggacgt	ccgagaccca	gaacggatga	ttggacacga	gctagcggac	gagaggacaa	420
gattgggtta	ggcagggggc	gatggcgcac	gaagcgcagg	ccgttcgggg	aaag	474
<210> <211> <212> <213> <400>	1883 3448 DNA Aspergillus	s nidulans				
		cgatgaccac	gcaagggcac	aacggaccaa	taggactagt	60
		tggtgcgaac				120
aaacccccc	gctctctgca	aagaagtcct	ctcgggagaa	agaaacagga		180
		aagaagtcct taactagtga			aagacgaagg	180 240
tctaggagta	tcgtcggaca	taactagtga	atacgacgga	aggetteate	aagacgaagg	
tctaggagta cccatcgctg	tcgtcggaca tcagtactag	taactagtga	atacgacgga cgccgtgtgc	aggcttcatc ctgcggaagg	aagacgaagg ctgtttattt ctccgatcga	240
tctaggagta cccatcgctg tgctgtcaac	tcgtcggaca tcagtactag aattgcaata	taactagtga tatttccgat	atacgacgga cgccgtgtgc aatttgtctc	aggcttcatc ctgcggaagg tgcaaaggtc	aagacgaagg ctgtttattt ctccgatcga tgccatgatt	240 300
tctaggagta cccatcgctg tgctgtcaac gcagatacca	tcgtcggaca tcagtactag aattgcaata tgccgcggct	taactagtga tatttccgat ttgatggttg	atacgacgga cgccgtgtgc aatttgtctc acttgcacag	aggetteate etgeggaagg tgeaaaggte agtaggetga	aagacgaagg ctgtttattt ctccgatcga tgccatgatt ttgcgatgga	240 300 360
tctaggagta cccatcgctg tgctgtcaac gcagatacca gagtgtcctg	tcgtcggaca tcagtactag aattgcaata tgccgcggct agtgccgagt	taactagtga tatttccgat ttgatggttg tgcgatcatg	atacgacgga cgccgtgtgc aatttgtctc acttgcacag cgtggagcga	aggetteate etgeggaagg tgeaaaggte agtaggetga tgattegaga	aagacgaagg ctgtttattt ctccgatcga tgccatgatt ttgcgatgga tttcagcaag	240300360420
tctaggagta cccatcgctg tgctgtcaac gcagatacca gagtgtcctg gcgcaagaaa	tcgtcggaca tcagtactag aattgcaata tgccgcggct agtgccgagt aaaacgaaag	taactagtga tatttccgat ttgatggttg tgcgatcatg ctgaattata	atacgacgga cgccgtgtgc aatttgtctc acttgcacag cgtggagcga cgaagatctc	aggetteate etgeggaagg tgeaaaggte agtaggetga tgattegaga agagaageat	aagacgaagg ctgtttattt ctccgatcga tgccatgatt ttgcgatgga tttcagcaag ttgttaatgg	240 300 360 420 480
tctaggagta cccatcgctg tgctgtcaac gcagatacca gagtgtcctg gcgcaagaaa acagctttca	tcgtcggaca tcagtactag aattgcaata tgccgcggct agtgccgagt aaaacgaaag gcgtggctca	taactagtga tatttccgat ttgatggttg tgcgatcatg ctgaattata gagaagacgg	atacgacgga cgccgtgtgc aatttgtctc acttgcacag cgtggagcga cgaagatctc acagcgcagc	aggetteate etgeggaagg tgeaaaggte agtaggetga tgattegaga agagaageat ecaeteetgt	aagacgaagg ctgtttattt ctccgatcga tgccatgatt ttgcgatgga tttcagcaag ttgttaatgg caggatcaag	240 300 360 420 480 540
tctaggagta cccatcgctg tgctgtcaac gcagatacca gagtgtcctg gcgcaagaaa acagctttca ctaatttggg	tcgtcggaca tcagtactag aattgcaata tgccgcggct agtgccgagt aaaacgaaag gcgtggctca ccagtccgac	taactagtga tattccgat ttgatggttg tgcgatcatg ctgaattata gagaagacgg taaggagaac	atacgacgga cgccgtgtgc aatttgtctc acttgcacag cgtggagcga cgaagatctc acagcgcagc gttcttcagt	aggetteate etgeggaagg tgeaaaggte agtaggetga tgattegaga agagaageat ecaeteetgt agaateaagt	aagacgaagg ctgtttattt ctccgatcga tgccatgatt ttgcgatgga tttcagcaag ttgttaatgg caggatcaag cctcacggcg	240 300 360 420 480 540 600

cacctaaaat tgaccaaagc ccaaccgttt agaacataca ggaagactct tcggctgcag 900 qtggaagagt gtgcgggtca aagaaatgca cgatgaattg tttgcgggac tagcggttgc ctcacctctc cattatcagc aggactgaca ggcatgcccg aactcggagc cctgaagccc ctgacaaaca aagccgactc ctgggatcag atttatgaca ggccacgacc agttgtagcg 1020 atctgcgagc atccccagcc gaaccaaagt tgaaaaggcg cttatttacg ctcccgttat 1080 gcttattctg gcgctcgggt cgttccaaac tctagttacc agggtattaa gcacggagca 1140 agcctatgtt tccccgcccg gtgaataatt ttcaagtcgg caaaggcaca aaacaaagaa 1200 aattctggac atatcaaata cacgaacaga tggtctttag catactctga ggggcaccgt 1260 aggcggaggt ggtcgcgaat caatgtcgtc gctagagtca ccgaggatcc tctaatgggg 1320 gaaaaagtta cctatgtaca atagatattc atattcgact acccgcgaaa cgcgacgaag 1380 tcttgaatga gggatgctga gatgtcggtt agaacaactt gacacctgcc gagacccttt 1440 tccacactta gccatcaatg accagccgcc caggataact atcctacagc gtggactaat 1500 tcaaacaatt cccctcagcg gaaggcccat tttattcata tgggcagaga gcgttattgc 1560 cttatgcaat caatcactgc tctgcagcgc tgtaacgtac gtacttttta cgaagtatgt 1620 gtatgcaagg cctcgatgag caaataaata taggccctaa taggtagccc ctttgacagg 1680 tggctactcc tgtacggggt gtgggttcct ggattgagtc agtcaaaggt tgcgttttgc 1740 gttttggctt tcttacactg taaggtactt ttgcatgcag ctgggccgca gctggaggct 1800 actcttggga agtacggatt gcaatagcgt agtcgaagga tgacagaagg tggcctcata 1860 ggaactaggg ccgatgggta taaggacggt tatcctgcaa cggtacctaa tgctgccgtt 1920 atcagactgt cggtctagga tcagggcttt gttgcgcagg agtagcgaca gaatgcaaga 1980 catggagcca tectgataaa aaggeeeege eetattgaeg atgaegteta taaatataeg 2040 ctcataaata gtaatagtac atgatgttac tggacataca taatccaatg ctagtcgtcc 2100 ctcttttact ctcagtcgct acgtaccggg ctcactccta gcgggacgcg caggaaggtt 2160 tccataagaa gcgccgcggc aacgcttaca ttgagactat caactcgagc cgggtcagag 2220 gcagctccta cgccgggaag gagtctggca ccagggatgc tgacaatgga atcggcacgg 2280 cccttgatgt ggttgctaag accagatect tegtageeca teataattae getgggegae 2340 tgtccgatga gggcgtcggg gtgtccttca ttcgctaccg ccgagccagg aggttgtagc 2400 gcgccaggtt caaggtaagt agcacctgtc ttaggaacat ctgcagcgta aaatcgccag 2460 ccgttggctt gggaccgctt gatgaagtct acttcgttct ggacgtcaag aagagtcatg 2520 ttctcggcgg cgccggcgga ggccttgatc gtgacgggcg acagtggcgc cgagtgtcgg 2580 ccggcaaaga caatggcgtc aaccccgagg taataggcgg agcggataat ggaccctagg 2640 tttcccgtat caacgacacc ttcgagtagc acgacgactg ggtatcttat ctgctgttgg 2700 gtgtatgaat tgttgatttt tatgcagtca ttcgtcccgt tcaccttcgc ttcctctcgc 2760 gtttgcggtg cgagttccac tttgaattcg ccgtcaccca attggacagg cctgagtgct 2820 tggatgggcg ttcggggaag gggcgatact tcgaggacac acccgttatg gggtcttcct 2880 gcgctcattt tatcaagcag tcggttccat tcaccgaagg ccaacttgac tttgacgttc 2940 ttggacagag caagtttccg caacaccctc ttgtcagcgc tcaactcttc ttctccggct 3000 gctgtcgtac catagataaa ttcggatgcc gaagtggtgt agggaattgt gggtgggacc 3120 cagacatgct gcttcactcg ttcagggttt tcttctgtag gcttatggtg ttctatccga 3180 cgtgagcgtc gcttttcttc atcttcaggc gttggaacat attgtgaaga gcggccgctc 3240 tttgccgatc gagattcatg actgtcacgc atgttttgcg gtaagcgacg tctgctcgca 3300 gcattagatt ccttattacc gcgtaagtcg tgcgcgtttt tgaatcgttg atgttcagga 3360 ggcaatgcac gaaagtttcc ggacctaatg aattcatctt catcgaaccc catttcggga 3420 3448 agcgcttgcc ggtgcacttt tctattgc

<210> 1884 <211> 1169

<212> DNA

<213> Aspergillus nidulans

<400> 1884

cagattgaga gcgttttag caccaagagg taagcagcag tacgggtggt gtggaggtga 60
tgtagcttta tgcggcagga gagcgtttgc ccccagtctc ctggagatga tgacgactcc 120
ccaactccgt ttacctctgg cgagggcgcg gcgtttcaaa ccaacaatcg cctagatagg 180
gctggagtcg cgacaacgtc agtggcaatc tattaatctg gaggccgacg ctttgaatgc 240
tgcagaacat ttataattat ctcttgatgc agcctcattg agcctcgagc gacgttgtca 300

ccagagggag atgtctcccg ctcattacag cctcaccttt tagcgtcgaa attctctgaa 420 ttgcctgcgc tataaggatt tccccagatg atttatctgt gattgcgaga ggtacattga 480 acagcaatac caaggaagct ttctgacgcc gcaacaacta tattctatag ctttcattac 540 gcacgatcgc cattgtggta taagccagtt gtcctaaatg cagtatatac tcttggcgat 600 aaatgaacca tactcactct gaaaatgttc tccaatacag ggtatattcc tataaaaacg aaagaaaaaa taagaagaga aaagaggaaa aagaaagcac agcggatgct tcgaattccc 660 720 aacgcagacc tgatgatctt attccatcag ctgtacagtt cagtgcctgc aactttgggg atgatcttct tcaattcgac ttcgctgctc aatgccctat tagcgacctt gaaagcttca 780 tccagcaggc gaacaaacgt acaagacaag tccagaatcc gggggaatca acccaggaaa 840 900 ccctctcttg ccataaccgt tatcgctgca ttcacatcag tctgtggcct ttcgacaatg 960 ccagttcaac accgagtctt caattagaag atacggtgac ctgatgagaa gggggtatag acggacatac ctcgatattg tgaggatagc cttctcacca agggtcatct gctgcacgcc 1020 tttgtcccag cctgtattgc atccgttagt aaagcaatct tgtcaggcac catgctctgt 1080 cccacaacta cagagettat gageataceg agtataacet teccaactee aateteegtt 1140 1169 ttcagtgggc cccgaccttg cgaggtatc

<210> 1885

<211> 825

<212> DNA

<213> Aspergillus nidulans

<400> 1885

ctggaacacc aggaatccga ctcggccgct gccgcgcatc aagtttgcta atgatctcct 60 gcaactcctt ctcaaaccca agctccatca accgatcacc ttcatcgagc accagccacc 120 gtacattgct cacgtccaat gcctgcgtgt tttctaggtg atccgctaac cgaccaggtg 180 tcgcaacaag aatattcagc cccttccgca accgcgcttt ttcgctcttc ttcttctcac 240 caccaataac tgttccagcg actatccaat gcgcacagcg caacagtccc tccaagacaa 300 ccgagatctg cttacacagt tctcttgtgg gtgctaagat aatcgcaaac aacccgctgt 360 ctctatggac gctcgtgtca cccttcgcat caccttcgtt ctttgcgcgc gaaagagcca 420 taatccgctg cacgagtggg agtaaataag ccagtgtctt tccggaacca gtctccgcct 480

ggatgaacgc atccgtctct tccttcagga gctgcgttat tgacgctttt tggatagcag 600 taggagettt aagttegagt ttegtgagea ggtgtgeage gagggtagge gacaacceaa 660 gattcgtgaa tgtgtccagt ccgtcaatga gcggggcgtt agtcggcttc gcatcttcca teggetegte gttettgtet teetecaeag egttgegggg tegeggattt ttegagaaaa 720 780 gcgacgaaac gacagatcct ccctgtcctt tcttcggtcc ctttgattgt ccagaacctt 825 gtccgtgtgc ttgccttcac caagtttttg gaacccccgt ctgtt 1886 <210> <211> 3501 <212> DNA Aspergillus nidulans <213>

<400> 1886

gatggcagag agctgactga agatttggtt acatttgtgt agaaattggc tacacccgag 60 tgaacaacat tatatgttcc tagtatcgag aggctggatt gctgcctgaa tctttggcga agcctgtcct aggccccagc aggtgggggt ggggcccgga aacattggtt tcctatacgg 180 ggttcaggga cgaaaatgca acgttttgta tccatgtaga tatgtgtggt tccttacata 240 tttgattacc gtattctcta taagctctgc cgggcctcaa cacctggtaa tatcaagatc 300 cgcctcgaaa gaacaccaaa cacctcttaa aatgcgctca tggatgtaat catcaaaata 360 actaacgaga ggagacaacg atttataatg ttatcccggg ctctccctcg gcatctgggc 420 taccgcccac tctaggatgc tttcgtagca aagtacaaac tgacttaagt tctgaaccac 480 gctcggtctt tgcgtgcgaa agtcggacag tgttttcgca acaagatcca actgtccccc 540 600 geogageaac tggtegaatg geogteegte atgetgeeca cetggetggg caegttgaeg tttaagcaca tccaaaacac tatccacggt acaaaaagtc ccagtgcgac cacatcctgc 660 gctacagtgc accaaaaccg gtctgtttgg attacccggc gcagctttag ctcgcacgtt 720 tcggacttta tcacattgtt cgattagact cagaagatgc cttggctgag aggtggtacc 780 aaagtcgggc caatctgcgt actggatttg tgtaacttcg cgcagaggct cgaacggaaa 840 acccgagtgc gacaaaccaa agtgcctgac aataagcgtg gggttatcac ttgagtctgt 900 cgacgacctc tcgactacag agtcgactgt ttgtgaatct gttggcacca taggaacgta tttctttgag aaattgttca catggaattg cccatatgtt ccagttttcc agtaaggatg 1020 gcatttgacc tgtcctcttt caacctcggc agtcagggac actacaagac gaatgtcttg 1080 ctcccagata acgcgccaga aatcctatag agaatgtcag tcgatacact tatcatatgg 1140 atgacgaaca cgtcaacgcg aaaagcaaaa ggtagaactg acattaaaag tatcaggcat 1200 aggggcttgg gtcgctatgt aatgctggtt gctatactcg gcttttaaat aacttgcgtt 1260 cacgtagtca cagccgccat tgggtatatc atggagtttc actcttgaat gatcgtaagg 1320 atagatgtcg ttatatcggt tcttggcgcc cttttcaatc ccagcgacac gatatctcgg 1380 agacgaaggc ctatctgaac ctgcattatt gtcctgatcg tatgaaaaag cttgtttcat 1440 ccgttctagt tccgtcttct caatgtcgaa aaatcttgaa gcggccagcc gaccctgatc 1500 tgcagggtcg gatacctcac gcaaccaggg cgggagagat tgcctttgcg gggcaggtag 1560 atgttctgaa tgtttcagcg ggatttgtcc gacgccacca agaagatcca tgtgctgacg 1620 tatgttccca aaaaagggaa tcgcagcatt ggacgattcg ggtatattgc aaccaccagc 1680 aacaggtgcg gattgtggaa gatcgatatg cattgaggag gttttctttg accgtgcatc 1740 aagcgccggt tgatgctgct gttgtggctg ttgcgtgagt tcaggaaacc tagcagagaa 1800 agecttgaag ceteceatea agateatgee gteaceatte cateetteag etgtaaactt 1860 cttcaccaca ttgacgagag gggcagcatc tttcatgtta gaagttgcgg catcgtaaac 1920 gataatgtaa cggcactgcc tccaacggcc aaagttcttc cgatcagctt cgttggcgaa 1980 ggtgttcgct aatttcttag tatcgaacga ggggcgcttg aggagggttg tgggggatgca 2040 taggttcaga gcacctttga tatttcctct ggaaaaatgg gcgtacggtc gtacatccaa 2100 gagcataaga tcatccgcgt gtgatccaac aaactctgca caagcttcac ttgaaactaa 2160 cctcacgctt gatcccagga ctggtggaga gacaaacttc gttgttccgc tggaagtcga 2220 atcccccgcc tggcggttta aggagagtct gtagaccgct ggatcgggga tgcaagcagt 2280 ttttcctgat cctgtaccta tggagggagg ttgttggtcg gttaggtctt tctcggagat 2340 atacctccct tccggactat gattcggaag ggcatgtgaa aaatgtcctt tgcctttgaa 2400 attattcgaa ctttctgtat tgaaggagaa ataattgtct ggcagttccg ctgccgttcc 2460 ccggggaatg gtcccgcgcg ggctgaatct attaaaggat ggacgagagt cggacaacgg 2520 aaagagggcc gcaggactgg aaggaccggg gagcgcaagg ctttgggggtt cctggggcca 2580 cggtgatgtt ggcgatcttg ggcctgtcat cgcagacata acttttgcac cgacagcaaa 2640

aaacttttat cttgctctcg aagacgatgt cgatatgaat cagtcctcca accagcttgc 2700 catgtcgata tcgattgcga ttcccaagaa ggtgacgtga gaatgtaagt aggatcgtca 2760 aggaaatcgc aggtgtatgg acgggctcaa gtagagtgct gtagagcaga aatgctcgtg 2820 gggaaaaccc ggataacagg agatttggca aaagaaagac gttaaagacg tggaggtcaa 2880 atagggttcg ggtaatgagg gtcaaagagt tatataatgt ggatgtgtat ggataggtaa 2940 cgttgctgaa aagcgcgatg tggcggcagg tgaatgtaga agccgctcag tgagtgcgaa 3000 aaaatgggga tggaatgtet egtteecagg eggeagteeg ggteteetae acaacaaate 3060 gtcgttccca ccaagtatca cataaggtca aatccagttg agttcctggg ccaatcgagt 3120 ccgcagcaaa gcagtggggt tgaagctcga ctagtgagaa ctgcgaagga gtatcattgt 3180 cgacccactg gtgtcattgt tcagaaatca gcaggtcaga aggctggagt caagcagaaa 3240 aaacgggggg cgtgctatga cgttatgggc ggagggccgc gggcggcaaa cttctgtgct 3300 agccagtage cacaaccagt teggtegegg tetggeecaa eegeecagag tgagatteat 3360 tacgggttgg ctggcactgc cttttccttt cgccatttat tttttgttct ttttggttga 3420 agtacttgtc gccactcagg cgaacacctg gttgaccatg ggatatcgat gaggaatttt 3480 3501 gattagagta cgggtgcagg g

<210> 1887 <211> 2465 <212> DNA

<213> Aspergillus nidulans

<400> 1887

60 ttteeggeae agttggtett ttegaeeegt atgeeeacea aaatatagte ateetgttea gccttgtctg cactacaacg tcggttccat gctctggacc ggatcttctt gcgttggagt 120 tctataatga gcatggggat gatgacgtat tcgagcctga ttgtacactt ggccaatacg 180 240 ttgaagacat ctgtctcaac gcaaatgcta tatgtaccgc caatggttgt gaaaaacgga 300 tgtatgaaca tcatcgccaa tatgtgcatg gtgaagctca gattagtatc tttacccagc attatcette aaagettegg ggtttecagg acacaatett gatgtggage tgetgeaaaa 360 tatgcggcaa cgagacacag gtgtttccta tgtccgacaa cacctggaaa tattccttcg 420 gaaagtacct cgagctctcg ttctggagca agaacctccg tgctcgtgcg ggggtttgcc 480 ctcacgacct gcaacgagat catatgcgct acttcggctt caaagatatt gcgattcgga ttcaatatga tcccatcaat ctgcttgaaa tcatcgttcc cagaacaaga gtgacctgga 600 aagttgataa tgacttgacg ctcaagaaag acgtctactt gaaatgtgaa caacgtataa 660 ccaaatttat gcagtccgtc aaggcacggc ttaaggcaat aaatgttgaa agtgttcttc 720 780 ccgacctcat ggaagattgc aaggcggaaa ttgaaaatat gaccaagaag gccaacgaag atcacaattt gatgatcaag cagttgcagg aaagatatat gaattctcgg tattgggagg 840 tcatcccgtt gaacaaagca atgagatctg tccaagaaaa ggtcgtcgaa tgggataccg 900 cgtttgctga atttgaaaag aatttcttcc catcagagaa ggatatcaga cgattggcca 960 ctctgcaatt gaagaagatt ttcttggaca gagatgcctc ggtgacgtct ttgacttcga 1020 atgatgaaca gccgacaacc ccaaccgata cagagaatga gcgaagtcag accccagatg 1080 gtgcccgaat agttcgccgt atgacgctgt ctcctgagaa aactcaggat tttctaacat 1140 cggttgtcga agagcactct ggggagaaga atagagagat acagcccgaa gatcaagtta 1200 accttgacga gatgcgttca gctgccgcat ctcctattcc agaagagacg ccggtatctc 1260 cgtcacaaga atctttccat ggaggagctg aagcagagaa caaaacccag gatcccgact 1320 caacccctga aaagcaacga gatgatatag ctccgtcctt aagaaccgaa gacattgcaa 1380 agcctacatt ggaccaagac aacttggaag caacccctga agcctcggaa gccacccagg 1440 aaaagggtag tgatgcgagt agcaggaaga gcgatgaact cgaacagccg accactggat 1500 taccttcaac accacaacat ggattctctt caatcccacg gccatcagag ggctattctc 1560 gtcgtaatgg gaagtccact tctccgccgc ttttgcgtgc gcggacacag cctgccctgt 1620 ctctcaagga cattgggcca gaatcgatta aaggaactcg acttagtcca ggaaagcttc 1680 aacggcccag tggcactgtg agcccacctc tggagttcaa atcgaagaac tcagataaaa 1740 gactgtccga gcgttttaat ctcaacgcgt tccgaagtgc acggcttaca gcaggtcaat 1800 ctttgatacc tcgctcaata cctactaaga aaaaccgcgt ttcgtctctg gccaaacact 1860 ttgagcaact gagccgtgag tttgagaaag aacgacagcg tgacgatgcc cagagagctg 1920 ccaaaggtag ccactcccgt gcgtaccctc ttgcttcgtc aaagcctatt gtggaagtgt 1980 acaagaatgt tcgcgaggcc gttgaggaac gggaaccctc tgctgagggt gatgatattc 2040 tctcatccgc tccgcggcat tcgacggacg actcagctcg agggagtcag gattctgcga 2100 qaqcacette aaccqaqqaq cagagtacgg eccegcattt ecagacatea ecteetgage 2160 cgacggcaga ccagccccag gaggttgatc agaacatatc tgaaggtgag gttgaggagg 2220 ggcacagtga cgaagaacgt acctcagtag acgagcatca tcttgcggat cccagcgatg 2280 agttgactaa ggactcccct gaagatgagt ctctggacct caaggagcta ccgaagcacg 2340 aaagaagtac gctcctgaaa ctgctaacga acttctggtc agagcggtca gccagcggtt 2400 gggcacctct agattatccg ctcactatgt ctgatcacgt ctttgcggac tgcgatatcc 2460 2465 tcgtg

<210> 1888 <211> 3053 <212> DNA <213>

Aspergillus nidulans

<400> 1888

tegaagaatg eegagggega ggtegeaaga tataaceetg aceteteaac teegggttet 60 gcqtcatccq tactqccacc ccaaaqtcac ctcacttcaq gcaaaccagc atcggggacg ttgactggcg atccgtcgac tcagcagctg aacgcgggcg tcctgacaat aatgggcgcc 180 taccaggtgg gcacgaagat gtgtatatgg atctcaacat gagtcattcc ccacggcatc 240 300 gccccggtga tggctgagca gtggccacta agcacagtca ctggacggca ctctgagtct 360 gatataaata atcctttcga gtcagaaggc tttttttttgt gctctgagtt gtggctgcct attggtgtgg caaacaatgt ggcggagccg ggtttggtaa ccgctgagaa cgtagaggca 420 480 ggattgctgc atgtgcagat aggagcatgg gcatcaggta cggtcgggga gagcgactgt 540 ctgacatctg atagaccgtg gaagagacgg gctgcatccg ctgcattcca tgggtcagaa taagctcgtc aggtaaccta accagtgaac cagctcctgt tgggctgcac gatgggctta 600 ccgctgggca gccaccacac catcaacaag gttttgacac cgcaactcta tgtactttgt 660 720 aaggacagca tcctccagga tagaatccag cgcgccaaaa atgagcgctc aacctatcag ccgactattc cagatccaga gcggcgtcct cggtgtgcga agagttaaag ccagtgcgac 780 ccctggcata tcacacaaaa gcaacgagat taacgagatt atcaacttcg accttggcag 840 900 agtggtctgg atgctcgacc gcaaccaata gcgccaaatc cccgatggaa aagatttaga gtctcgctag aagtcgcgga tcgcagggtt atgggtccgt caggacacga taagtcaatg 960 atcagtcogg ctcgccaacg gcctgcatcc attgcatttc caacataaaa gctgaccagt 1020 ggctacatct ttgctatcta actgaccagt gactggtgag ctggactctg atattgattg 1080 tegeogteat egegeattat eaggtteeca etaagttete etttetgetg acteetttee 1140 tcctctgcct ttttatatta cccagagaca aagcccaagt ttgagccgtc tgagacctgg 1200 tctgactctc acaccgtctc tcacaatagt gccccactgc agagttttca cccccagacc 1260 cettqcactg gatetettea tttgattett tetgtgcaat cacageettg gatttacaat 1320 ttaatattgt tttatttata ttccgtccaa tcttgtgtgc catgcccctt tatccgtacc 1380 gtacggtatt ttcgcattac cagcatatct gagagccacc aataccacat accttgattt 1440 ggcgtccgtc catcccggtc cttttatcct cgagtcgact accaagtcca agaccaaggc 1500 atgaatggcg agtccaccaa ttgccatagc cggtcgcgtg attcgcgcat tcccagaatc 1560 agaaataccg teceeettte teaatgtace egtettttag tetagtgtet teeteteagt 1620 cccaactcag ctcgactggt cgggttggtt acactgtcta aaaagaataa tttctcgatg 1680 acgcctatgg taacaggatc caagcctcat gccgatcagc ggcaggcgaa atgaaaataa 1740 aatgagaata agaaaaagca aggaaacgtc gcttgctgtt tcatttcgaa cagaaggatt 1800 gtgcggtgcg tcaatgctgc agcccttgcc ctgagcccta gatcgctgcc tggttgttcg 1860 gactgcgaag gattggcgct gcagcggtct gcaagctgca gcctgcatag gcaggggact 1920 ttcgttgcac gttcaggcca ggccagaccc atacttttat cgagtcggct cgtccgttta 1980 cctggttggg actggaatca tgtccaagtg agaactgggc aatctcaaac ccttacgcat 2040 gaacatgttc ttactaaaga tgtctctcat gtcattctgt taagtcacaa tgtatatgca 2100 ggactggatg ctgcggccaa actgcggcca aactacggcc actcatcttt cctacaaaat 2160 aatacgggtg ccttaccgac tccttttatt tagccttgca tatcatectt gaatacgaga 2220 gcgcctacgg aggacatgta ctttccaggt tacgttggag taaaaaaagt actactttct 2280 caccaccage caageaaact ageegegaca aegeacaate ttaateaate ettetgatgg 2340 attgttctcg gtcgcgtcat caatattcgc ccatgagctt ggtacttggt actccatcat 2400 ccgtacgccc acgcctactg cttataaacc acatgaacag tcccagcacg gtaatgacca 2460 agtaatttgt tacctgcacc actgcaaggc tgcaaggctg gaccgaactc ctctaaccaa 2520 actaactttt ctccgacatc atgtattaca cgacataaca tgtgctgctg tccaacgcag 2580 tggagtgggg gatatccccg caaatgaggg cttgacacgc tggctcagac tcagaataac 2640 ggtaggatcg ttcgtaactt tgtggtggat tggcgctacg gggaatttct ggtgatcggt 2700 tttgaggttg tggaggtccc gttagatagg tagtcaaaaa accccacttg caaaatggaa 2760 accattgcat acctcacgct gatgtgactg atgattatc ctgacgagac tggtcatgcc 2820 ctggccggct agttatttc ctggtggccg gaggcccaaa acgggtctaa acctagcggt 2880 gtctcaaaa ggtattcggt accaatacct taataaagaa aaatcatttc cttaacatcc 2940 aattgttggt ggtagatacg tgcctcttt ctttttct ccacctaacc gtttgttca 3000 attcccatgt ttctactgt tcatttctc atattctac ttaatacact ctt 3053

<210> 1889 <211> 2956

<212> DNA

<213> Aspergillus nidulans

<400> 1889

tactctccag gtccgtacat ccgttctcgg cgtccggtta tccaagtcac gttttgttgt 60 120 tttcgagacc acggataatc ctttggggct ggcatgtctg ggacagaagg tattggcatt 180 tcctggtcgg tctccagggc aagttcaact tgttgaactg gaaacgggga atgttagcat 240 300 catacctgct cacagtacac cactacgtgc catggctttg agtcccgatg gagaggtgct tgcgacagcc agcgaagcgg taatccctcc ttgaatccgg ccagcactca attccgctaa 360 ctactggtcg cagggcactt tggtgcgaat atttgctacg agcaactgtg caaaaatggc 420 cgaactttgg cgcggagtgg atcatgctat tatattctca cttgccatct ggccatcaaa 480 caacctattt agccgtgaca tctgacaagg ctaccctcca tgtgggtaac ctcccacatc 540 cccgcaacgc cccgtacagc aaccagcaag catcttcatc tgacgacgga gtgaacaaga 600 aatggggtat acttggaaag ataccgctgc tcccgagagt gttctctgac gtctattcat 660 tcgcaagtgc acattttgaa ctgggagaag aagagccagg acccacatat gcaccccgt 720 tgggcacagt actaggacga cctccgaaag gtgtaatagg ttggtcgaac gataatacca 780 tactagtcgt tggctctggt agtgatggca ggtgggaaaa attcgttctc cgtgacgacg 840 aagaagggaa gaaacactgc ataagagaag gctggaagaa atatctggga agcgggagct 900 gacggagacg tcggttggcat acatgctcaa cgtgcgacaa gatagcaacg caatccgaca 960 atgtcaacta aataattccg gcgacaaccg ctaccgattg aattctttag caatggcgac 1020 atcacccaag tgagcagtca ttctcaacaa cgtgcgagac tgagaatacg ggcggccgta 1080 ctggttctac tatcagtcta gctccagccc taaagtccgg cagtagatat cgggtctgaa 1140 cgccaatgag ttcggcaaca tattccgcac gcagcagtcc tattattcgc ttggcttgtc 1200 atgttcactc ttaccgacga cgatcatgtc tatctcggtc atggcggggc gcaggggatc 1260 gagagegtte eggagatttg teeetgtaag acetateteg teggettege tetetgtagt 1320 egeggetget tetttetetg gaacgegate tateategtt atgteggegg tggeggtgat 1380 ggtgtcggga atgacgactt ggtctctctc ggctagactc gcgccgtcgc gaagatctct 1440 cttttcttgc ttcttctcc agagctcggg ccacttcttc tttcttctcc tcaatgagat 1500 attectteat agggteetea tegteatgat teettateag eteetetaat teaateteet 1560 cttttagaag ttggcgcctg ggttggtccc tctctccgct atgtcctctc tttcgtcttc 1620 ttccctcatc gtccgtatcg ccgtcagcct ctttaccagc cgtctcgccc aataacttgg 1680 caacattatt tgtatcctca tcttcgtcgc gctttttgta tctcgtatgg tccacacgta 1740 gtaccctgcc gagaaccgtc gctccaccca agttgtcaac tgcgaggtcg gtactccgct 1800 ggtcttcata tttgagaaaa gcaaaccctc ggctcttccc cgtttctttg tcgcgtacta 1860 ggtttatgtg taccggctca ccatactgcg agaatatggt aacgatgtca ccttctgaga 1920 gatcgaaggg aaggccgccg atgtagatgt aggctgtgtc tcgataatcc gcgtgccagg 1980 aagcttccgg gggactggaa acggccatat taggagctgc acatcaagca aaaggaggta 2040 tatacataca eggeatgete tagetegege ttgtteageg ettggaettg gegaatattg 2100 ttcatgttat ctgtggtctg tagtagaaag aaacgttgat ctctgatgtt ggccaatcga 2160 tagetteege gggtatetet cateaegtga etttaeette eeaaaagaga tgggatattt 2220 gggtaggtgg atcctcagga gagaggacat agaataacac ccgctggcgc gatgctgaac 2280 ttgttgattt taatactatt tactacatga cgccccgaac atctgactac accagaatct 2340 acgctcatag tacgctaact tacaatctcc gctagcataa tctcagaaca cgttctttga 2400 accgetetgt ticeactetg titgeegaca ecceegitee teegeetiga acaaegegig 2460 agattegetg gagetgtgaa atettaeeta gaaggtttgg atggtetgeg etagetaaga 2520 ctggtcagtc tcggacagac gatgtctacg tcaaaaagat ccagcacggt gtccagtaaa 2580 gatgggctga agaagaacat ctggtcttcc atgctggata gcgctgcgac tggaaagcgc 2640 ttaccggaaa agaatctgtt gatactaggt gcgacagctc ttctgagttt cgggtcgtcg 2700 ctaactccgc cttgtttagg aggcacaccg gagagccagc gagagttcct agaagcctac 2760 tctgcagaca ccttggattc cagtctatcg aacgagaagc gaaaaggaaa agggaaagtg 2820 ccacctgttg cgaatcaatt cgccctaggc tacacgtacc tagatgtgtt ggatgcggac 2880 caggaaggta tgtcggcagc acagaattgc ctacccgcaa tgggagtgat aacggatgct 2940 aagactgtga caagat

<210> 1890 <211> 1534 <212> DNA

<213> Aspergillus nidulans

<400> 1890

qaaqqcqqca tctqcaaaqq qcaaqtqaca ccqqtttqqt tcacacqqct ccctcctqtc 60 teagtettet tggacagete gegtteeaca accaeggtag ggaattaaat accaggeeac ataggcacac tccaatccac agcgccagtt cggtgccgta gataaccatc cccaagatat 180 cgaggcacgg ttcgaacact gcgcgtaaag catgagcaag gttctatcta ctcaaatcac 240 tgtgtacggt gatatcaagt acataccaac agaaacgagt gagaacagat ctccqqccqc 300 gtcgatcgcc acgaagataa aactgatacc tcggacggtc cgatgcacgt agatgtccca 360 420 gtagtggcgc agcacgcctg cggctagaaa gcaggagctg aggacggcca taatggttag cggccatttc aggttcctgt ctttggcgct gcgcagagcg aataccaggc cggtttcaat 480 ggccccaagc aagagaagca gggagaggac ggcaccgatg cactttcgga ttgagtgttt ctggtaaaag cgtgacatcc cgttgcgttt caacttaatg gtatgaaatt cgcatacttt 600 cccatagtac aaacactgcg cccatgtgac caggctcaag aacgtgagaa tctgggcttg 660 cacgcgaagg gcgatgttca gctctgagac gatgttgtac acaccgagcg ggacaccggc 720 gattgcccag agcatcatca tggatgcttg caggccttcg gtgtcatggc ggcgataatt 780 gataataatc tgagggagga gcttggagtt cagttagcgc tgatatcggc cagcgacttg 840 ttaaaaggcc atgtatacct ggatggacca gcagacctga tttggttcgt tagagaagct 900

<210> 1891 <211> 1211 <212> DNA

<213> Aspergillus nidulans

<400> 1891

actatgettg tgetactact tttettegge aeggtggttg gaattgeeac agttggeatt 60 cgattcttqt ggattagtat ttttaggatt cgactgggtc atacttcccc acaagcctta 120 ctggtaatga cggccatatt aatgttgtcg attctggctc tcaactactc gatttccatg 180 240 attgttgcac cccagtatgc gacatttgga ccacagacat tctgtgaccg actgtccggt tectetgtgt tacetgaact acaatgegte gteaagegtt geteggaage etttggtage 300 gatgccgcca agaaggtctg tacacccagt gttgccagca cggttttaaa tagggtgacc 360 gtaagctttc ctttttttgg tgcaatcttc ttctggagcc agtttgcttt catcggttag 420 taacccctag gttatttgct gagtctatac tgatcacttc aggggtttac ttgcttgctc 480 ttatcacttc gcttttgcgt tctccaaagt tagacgaaca acaactggat gaggatgcgg 540 aagaggetga qgaggagget ttqctatcag qttctaqqaq aaacatqqat qatcqatqqc 600 aaagtattgt tggcagagct agcagaagtg aggacacctg aaaagtagta ggaagtcagg 660 cttcttatga tacaaactgt ctcagtaggt attggatttg gcaatctcaa tttcattgat 720 cteccatgac tatgggetet tetettetga tetgeetetg agageataca gtacacagea 780
aaaacatgga ccagteacgg agcacteaag ccagagttta agcaagaett egeetaaggt 840
ttegeacgat catteaaaag tgeaagtgea egeteaaatg cattgacaac atceatatet 900
gtattgagee attagaggtg aatgtaagee agtaceattg tgacttacag ggtettetet 960
tetteteeag actetettga gaattetgga eatggtgeat etgegttetg aacetatgga 1020
tagggteaat ataatgeaac etacetattg aaagagacaa ecaacettt eaeggetetg 1080
etttegtegt gtacaacggt agtetgagae eaggatgtaa gtatetaaag gteaaatgtt 1140
agaaateea ttgegeatgt tgatategga eataataege tgageagtet eagtatatgg 1200
ttgeggaget e

<210> 1892 <211> 4498 <212> DNA

<213> Aspergillus nidulans

<400> 1892

eggegegteg agetegaggt gegegtgatt cattetggat etgagggaaa etgeetetgg 60 agtgctctgc tgcagtgggg tcttaatgaa gcggaccgct tgggcttgat aacatacctt gaggcaacgt aggagggag gccactgtat gagcggttcg ggtttgaggc tatcaaggta gtggagtttg atgccggtgc atttggaggt gtagggaagc accagtatac cgtaagtgaa 240 gtggtacgat ccactcatgg aatcgctaat atggatagtt tatgcttcgc cagccaaagg 300 ggtttcgcta gtagtacata ctttatccgg tataacgagc aagcatggtg ggagggcggg 360 420 ategeotget attgtgattt tgaceggeee tatgcattat gateettgtt egittetttg ggctctcctg cgctcgggat tctgcatcct acaaggaaag taagactgaa ttctttgttc 480 tcaagtcagc gtttgcggaa acattcaagt acagttccac tagttgtccc aggtttaaac 540 atagattgag gaaccatgaa tggggtttgc agtaccetcg cgagcactag ggcttgatgt 600 tettggtatt teaetgetea tgaeteeaca aaacegegta gatgacattg actetageea 660 ataaatgatc ttcaaaggcc ttttggcatg gcttggccat tqccggcagg ctaaatattt 720 tgtcttcccc agacacagtg taactaggca cattatacgt cggacgcccc gttgggccac 780 gccactgcag ccccagcctc tgatcggcgc tgcaactgtt caccccgctt caagaggcaa 840

agtctgcatg attccgacga tcactaggtc tggggcactg gggcttgaca tctgaatcga ttggtttcgg gacaatagee geegeatggg tttgacatge atgteateea ggtetetgaa 960 gttaccgaaa ggcgattctg catttcctct ccaccggatt ccccgcgtcc tgcaagatgc 1020 ggtgatcttc tgaatggcta tggagcacca aaataggatg atctttgcca tattgtcttg 1080 ggttgggtaa aatcttatcc acggtacttt aagtggcgcg tcactgaaat agcaagattt 1140 cagatatata taattactcg teeteeatet getetgeaga tgaaaagtea ttacateeca 1200 gaaatgcagc tataacactt atgacataga tcatcttcgt tgccaaaggt tgaactactt 1260 atgaaaagac tttatcatct gagtaaaact cgagtgacac aaggataggt ccgtgtcgtg 1320 aacatggcaa gcagcaagac tgtaatctac ttgagcgagt aatcagtcta tgtctgggac 1380 tgtttcgtgt acgacggcac cgtctagaat gcctgctagg gtttagcgat agacaaggga 1440 ccatctgcac taagtgcctt tcgcggccgt cgttgaatgg ccagaatacg attctcgaac 1500 agttcgggca acgactatta tctactgggg tctatgtaca accctcagat cgacccgatt 1560 ttgtaccagc accaagtgga caaagatcaa gcgcacgtac tctgtcctac aatcttgttt 1620 cctcagcaga ttcttcgcat acgcaaacaa gcacaattat aataatatta tcgtcgatct 1680 cgatcttctg tttcctcaac gcctcgatac cttaccgcct cgattgtgat atggaccaat 1740 ctctgacgtc gtgagcaccc agtgagcaca cagtgggcgg aacgggctaa gccttaacaa 1800 gtcactgagc tctgaaacaa cccaaccaca acatcttact aagtcctctc aagaatgagg 1860 tttcacctca tcgattctca gtctcggtcg ttgagattcc cgttccgaga atttcgatcg 1920 gcggctaaag aatgggtcgc cggtcggtcc caattccggg gcccaattcc caatacaatc 1980 gctgggtcgg agatgaaaat tgtgggaatg ggataatgat gtggattgtg gaattggtgc 2040 caggtgtccg cgatgatctt acctgacctg attctgaatg ccttgcacat gcttcacctt 2100 acteggtega caagtgegeg tacatateee etgtegatet eagtgttgga teateattea 2160 gcactaggca gtgagcactc gaggagaact cctctcttga cttcgatacg aagatagtca 2220 agtgatgagt cttcaataca tatgaaggat ctactccgta gggtgtgtgg tttacctaat 2280 atttcaagga cgtcagtgct cttgccctat aggaaatgag gattaggata tatctcgggc 2340 cctcttcggg atctgggcgg ccggaatgga atatgctttg ggttagaatc gtgtatctta 2400 tattgaggec tecatetgea tetecatett cacetaacte tetatetatt etgeattett 2460

tccgagccgt gcatatctag cgcttaaacg ggctcaatgt cggatgcgat gtagagtacc 2520 atattccgac ctcagtgata agtggcggag atgcggtcag gcggccgtca tcttcttcag 2580 attctccatg taaatttctg actttcggtg atatccatct gtgaaatcct tcagataata 2640 agttcggagt actacagtgg aagaaaactt caaacccgtt cagtaatgag gttcactggc 2700 catttgatat atcggctgct ccgtacgctg gtccactttg atgcagcggc agccgtccgt 2760 acatatccac catccatcta cggagtaccc accgtccatc ttacagagaa tgtcttacag 2820 agaatggtcc tgagtcgagc tctcgggcac ggattctgcc taaattccag ctcttgtata 2880 tccctatatc taatgcgtgt gctgcatcga tcagcaatcg ggcggatcac gtgccacgtg 2940 attgacaggt cacaagtcga gcttgaagat gatcccacgc ctgacaggaa caggttccaa 3000 gttgccttaa gtttgcctcg acaaggaaca tcgcatcgag tcattgactg cgccgttcgc 3060 gtagcaattc cggaacccgt taggtactac gaatgtagca ttattaagat gaaagaaaaa 3120 actacgactg tgtgatgtca tggccactcg cttagttaaa tgagccccac cagacccgag 3180 ttgggattgg ccgctcttgg cgccagtgcc gggacacctg cccgtttccg gagagtgcat 3240 tgcgacggtt tcaagattgg ggacaaagac tggcgtgaaa gtgaaggatc cgtgggtagg 3300 attatgaggg actactacta agagttggcc aagattcttg ttcggacgtc gaaccaacct 3360 aggacgcgga ctgagcgcgg tcattggatg cggggtgaac cccaggaaac ccagagacca 3420 gggcgctcag cagcaggggc agccaggaca ggactcgacc gtcgaggctt tgtccacggt 3480 catgtgcagc gccatgtgcg ccacagtgcc gctgagggta catgcgaaag ggtaggttaa 3540 atagacggta cagcgattag taatcggcgc cccaccggaa gcactcatcg agtcagcctc 3600 aggcccccag cacgctccgc cgaaagcggt aaccctcggc taacctactt gatggcctga 3660 tctggtgcac acttggcccc cgaaccgggc tcaacatccg acaaacagcc ggggacgtag 3720 acgggtcacg gcgggggata agatttcagg cgccgcgcca tcgcggatta ggcggttcgt 3780 tttttcccca ttaaaatcac tgattgggac agagaatacg tagaaaagcg aaataaatgc 3840 gaaataaatg caactaaaag caatccaacc acacgtaagt gcctgacagg ttatggggct 3900 ctcgggggct ctccattgtt gtactgctaa gtctccgtcg ggaagagccg gcgttgtaac 3960 actgccatac ggggtattct gtacagaggc gtcgtcggac tgcgagcgcg aacccgatcc 4020 ttctcggggg caacactgtc cagcgtgacg gcattgatcg gcggcgcaaa gacgcctctc 4080 tggccgtagt ggttgccgcg aagcagcacg aaggattgta gcgacaagta agtggtggac 4140 gttgacgcag gtcaagagac ttggctgttg agacgcaacc gctgaggaaa aagtgtgcga 4200 tgcttatgtg gagagcacgg ggggatgata cggggggaacg gatctgattc gcttggccgt 4260 cgtcagcggc gccggcaacg gaaatgtcgt cgacggtgcg tgtgtgtgcg tgtgagccag 4320 aggacgacgg agcagtgtcg gggtacggag tagagtagca atggtggctt cgggggagtt 4380 gccactagcg acgcctcttg gcgctagacc atggtgggtt agccaagtcg ccagagttgc 4440 4498 ccttgcgggc tgtggggccc gacactgtct ttactcgcgg gggcagctaa gattggct

<210> 1893 <211> 1489 <212> DNA Aspergillus nidulans <213>

<400> 1893

60 ccgtgacact ctctctcatg atccgcgtac cagagetetg gatttgggat ctttgcatgg ctgccttaca agtatattct cagaagcggt gcccaaagtt ttaatccaac agttaatatg gatatcttcc tacctccata tcagcagagc agcagagctt caaagtttga agataatttt 180 240 cagactegga ggetgtgaca gtgacactag etgtegettt atgetttaac tteecteaat 300 geggaaatee ttgetagtgg teegeeete tttttteget getttttget tgatteegte 360 geetteecte tgacatetet tetteteeat atttteagae teeatteett ttgagtetgt 420 gtttctattg ttccttcaga ccaactctat ctgagttaca tctgtagcgc gacccctttt 480 tttttgtgtt gtgggttgtg gctttaaaga gctttgtccg tcaactccta attacggagt 540 agetgaatee gaateagatt eggattegea agettttett eeagettgae gaettaeeee 600 tgtatctgtt tccagagcgg atacatctat cagaacttga attctgtgac tcgaactgat 660 tgacgttcgc tttgtttctg ctaagtcacc aactggttac gtcaaacaat tctgcggcga 720 gctgatcgca gaatttgcgt cgaggagtct tcttgaagaa atctccccgc tgcaatcacg 780 840 qaqcqcaaqc gctcctattt gccctactca gtcaagttgg cgggccttcg ctactcccag 900 teatecttet tgeacectet cetgggeece aagtteaggg tettetgegg gggagaeaee aggccccct aactaggctg tcataaacac atcgaatctg gcacacggtc gcccatcggt 960 aatgccagg ccttgcgagg ggtctggcta atggatggag gagcaacgtt tctcgggact 1020
agttaaccca tcctcgttat tgtgattgga cacgacacgc cgatactcga gacatctcgg 1080
tgacattgac cgtttgaaat catactgtgc aggctcagaa gcggccttcc cgactacata 1140
ccagtttact ccactagcga attgcacgaa aatgtccgag tccgcaaagt cggagaagtt 1200
catggatctc accaggttca gcacaccggt gcctgaactg gatgaccatc ggttccaatt 1260
agataatcaa catcgcatgg aagcgacact ggatgtgact ttgagccgtc aaaatactgc 1320
gcagcaaggg atagcagaag taccccagcg ccccgaccta cttcaagtcc aggatgccta 1380
cagagattct ggaccgttt tgcggactt cgaacacgct attctggacg atgatcggtc 1440
ggcgaaagac gtgaatgctg tgggacgccg agtatctgtc gatcccact 1489

<210> 1894 <211> 2028

<212> DNA

<213> Aspergillus nidulans

<400> 1894

aaagatttct aatagaagct cgagttcaaa ctcgccagtc ccaagcctga gccggccatt 60 ttggaagaaa agaaatagaa actctgtacc cgtaactctc tgttttgcta gtcctgtatg 120 tacataccac cgtgtctacg ttagatggaa ctatcggtgt ttcaatgctt gctattactg 180 ccataaactg tacagaagcc gtaagcaatg ccctgaattg atataatttt gcgtaggccg 240 tagaacaatt gatttcatgg tattaaaatt aatcaagaag tccagtgtca aaatctcttg 300 360 gcatgcgcaa aaccgaaaaa gcctcccaat tccgcaaact ttcaaccacc gtcacgaatt gctaacacca ccaacgttcc tgaagacccg gacaatatcc ctggacaaga caggaaagca 420 atatttggca aaatgcccaa acgcaaactc tccgacctga ccgacacgaa cgacacggcg 480 caaccgcaga aaccaaagtt atctgaaaag gaataccaac acctgaaact tcaaacggcc 540 cggctaaagc agaagtttga gttcggggtt acgtcgctat cgcgcgcact caagaccgct 600 660 cggggctttg aaaggcagaa gctcgggagg aggcagaaag tcgcaaaggg aggaccagga 720 acggagatcg cagttgcgca tgcgaaaaag gcgaagtcga aaccaaagtc gaatgttagt 780 cctqaqqaga ctctcaggag gatcgaaggg gagattcagg tcttgaaggt tggttcaacc ttttccttcc ccgtgtattt cgttgatttc ggaatgagct cgtttgactg acttcggtgc 840 agageetega eecaaetaeg aetgeggaaa aatatetett eaageageta geeaaaaega aacggattgc cgagtcacct gttttctacc gtttcaaaca atctaaagaa aagaagatca 960 agcttgaggg accaaagagt acggaggaag cgaatgttac agcgagactt tttaagtcga 1020 atcccgtgca gaatgtcttg ccgggtatta tggagggatt aaggggattg tttggattgg 1080 aaggagccgg ggcgaagggg aaaaaggacg agagggacgg tgggaagagg aaggctggag 1140 aacaggctgg gggtagaaag gatgtttccg gggatgagtc cgtgtctggg tctgaagatg 1200 aggatgaggc cgatgcgcga gacgcggagg tctggagcgg gatatagaca tgaaggatgc 1260 agagagtggt gacgacgaag aggactactc gcacttcgac gcacgactag cctcagactc 1320 ggaagactcc aacgacgacc tcttaagtga agacaacgat aataccggat caagacatgc 1380 tegecgetee tecatgteca tetegetete eccateaege tegecetece categeaate 1440 gccaccacca aagaaaccca agtctacatc cgcttccaag acccccgcga caagcacaac 1500 gctcgaagaa gccccgaagc ggaaaaaccg gatgggccag caggcgcgtc gggcactctg 1620 ggagaagaag tacggtgctg cggcgaacca tataaaggcg gagcagcaga aggggcagaa 1680 aggtaaagga aaagggggca gagatgccgg gtgggatttg agaaagggtg ctacgggcga 1740 tggggatagg gatcgagatc gtggaaggaa gaagttcggg actgggtcga atgctatggc 1800 tatgagtggg aaggataggt ttgggagtgg tactagcacc gctaaagaga gaacgactca 1860 gggtgcgaag agcaagaaga caaagccgca ggatgataag ccattgcatc cttcttggga 1920 ggcggcgagg aaggcgaagg agcagaaggc gacggcatcg tttcagggca agaaggttgt 1980 2028 tttcgattga taggcatgta tatatatcta taatgagatt ctacgtga

<210> 1895

<211> 2408

<212> DNA

<213> Aspergillus nidulans

<400> 1895

cattaacttg tggggcacgg catgcgaact ggagattcgt ctccacttac aagaaggaca 60 gactggttac ggcacagaac ccgccaaagc tctggccgat gatgctccat tttcgcttct 120 cttctgggta gtccgttgtc agacagcgac ggatagcttc gcagtctttc acaatgctat 180

cagcccggaa ctgtttgaga tactcggcct gtttaatggc attgccctgc agagccaggg tccttgctgg gacggttgaa cttaacccag ttccacgctg gtcgaggaac aatacctgtt 300 caaggtcttc aatcaggaga ccagtctctt atacataatt ctcgggtgaa taaaggacaa 360 taacagcata cctggtatcc tttgtccagt gctgtcccga cccagccgta ctcctgcggg 420 ggacgacaac ccattcctgg accaccctgc aggtagacaa gccaggggag aggtgactgc 480 ttgtcatctt taccagagtc aagtggtttt gccgaacgac ggacgctgcg agcgaagagt 540 cgaagagtcc catctcccgg tcggctgtag ttgaggggaa cctcgaagaa cagctctgcg 600 acaagcagct ttcctgggcg aacgttagca aatgcgggcg atagagcaac tggattatcc 660 agtgcgtctt tgaagcgaac ctgagatgtt gtgtaatttt cggtcgatta gtttggcagc 720 catgatgttg ttgtctctgg aagtctgcag ttggtgtgtt gttaccccaa ctttagccag 780 ttcgacagtt tcaggcaccc gccaaacgga tcgtttctca gacttccacc atacaacttc 840 ctgcacccac agccatgtca acaatgaacg tggacatcga ggccaccgca aaggagcatg 900 gtcaactcca ccaagatctc tgggagtttt tgaacacaga gcagtcaaca gtactgcctg atgcttcaag cctggctcga gcaagatcgt ctctcaggca atcgcttgat gacaagggga 1020 teggatacga ttctacaagg cgacacatcc tggacgacct tgtccccgca ttcaatctga 1080 gcagcattag cccgctttac tatgggttcg ttactggcgg tgtcacgcct gctgcgctat 1140 ttgcggacgg gatcgtctct gcatacgatc agaacgttca agtccatctt acagagcaca 1200 ccatagcgac agacgttgag tacgcgacgt tgggggcttct cgtcgatctt cttcgcctag 1260 accatgattg gcacaatggc acttttacga ctggcgcgac agcaagcaat atcttagggt 1320 tggcttgcgg acgggaatat gttgtacgcc aggcactgcg gaaacgggga ccagcaaata 1380 cacagggcgt aggagaaatt ggactctttg aagctatgca cgcggctggg ctctcgggga 1440 tacaagtgct ttccacaatg ccgcactcgt cgctagtaaa ggcggcaggt gtcctgggta 1500 teggeegtge caaegteeag aaegtttetg atgataacea teetettega ttegatetgg 1560 ataaggtaaa agctaagcta ggcgacatgt caaaggccac tattatcgct gtatcctgcg 1620 gcgaggtcaa caccgggtat ttcgccacgg gtgggctgga tgagatgcaa aagctgcgca 1680 agctatgcga tgagtacggt gcctggctac atgtggatgg agcgttcggg atctttggtc 1740 gtgttcttcc agaaaccccg gaattcactg ccattaaaca aggatgtgaa gggatggagt 1800 tggcagacte catagcagga gacggccaca aaatgctcaa cgtaccctac gactgcggat 1860
tcttccttac tcggcaccga gatgaagccg tgaatgtgtt ccaaaatgcc aacgcagctt 1920
atctaaccgg aggcactagc gatgctccat cgataccatc acctttgaac atcggacttg 1980
aaaactcacg acgattccgc gccctacctg tttacgcttc cctgcttgca tacggaagca 2040
ggggatacca aactattatc gaggagcaaa tccggctagc taggaagatc gccgcatggc 2100
tgtacgacca cccgaagtac aatgtgctac cggaagtaaa tagcaagcac gaattgctgg 2160
ataagacata tatggttgtt ctgtttagtg ccaaagacga taatctgaac tgccagcttg 2220
cggcaaagat tgatgagact cggaagatat atgtctctgg cacctcctgg cagcaggac 2280
cggcttgccg gattgccatt tcgaactgga gggttcaggc tgatagagac ttctctattg 2340
ttaaaggggt attggatgag gtggataaaa atggggcttg atatctgcta tatccagtcg 2400
cagtacag

<210> 1896 <211> 4088 <212> DNA

<213> Aspergillus nidulans

<400> 1896

aaagtagaaa totototaaa ggttototat gtataacatt catgoagaga agcacgatto 60 gccagaaaca agttaaccgt cttcacgagc gctatgcact gggggaccag gagtcacaag 120 accgccgcga cctggctgga cgcccctatc aggacgaacc ggatgaatca acatatcaag 180 gacgtctggt ggtaggacca attcataccc ttctcgccat tgtagcatat tcacgtcgcg 240 catatattgt acctccatgt gtcagctcgt attcatttct tgatcccgat aacagccaaa 300 ttcctagggc tctggccata atcaaaaaca ggctcaaccc agcattcttt gacgcaatcc 360 tgttcacgga ggaattgcca tcggtcgaca gcaataatag cttcggcaac tgcagcgcag 420 aacgacatta atgtccaagt cacgctgagc cgtttcttcg taggccaata ttcgqtgqcq 480 tagcggtcca gctcttcatc ggtaattgtg accatatttt ctttgatctt ctggccgtag 540 accggatcac ggctcagctt cacaacggcc gcacggacat atgcttgaaa cgaggtgaag 600 gctgccttgc gcaaggatcc aacaataaga gggttcccca cgtcctccag cttctcgggt 660 teggtaetat aaagatettt gggtaeggat ggttttggea etaeteeeeg gteeactagt 720 actcgctgga gcagtgtacg gtagtaatga cgggtgaaga aatcttctgc gtcggcggtg ccccagttgt acggagcttg gacggccatt gatctggcgg tgatgttcag cttcacaccg 840 gtcccaccat cgtgcttaaa ttcttccaag cgtcttgaca ttgggaagcc gtgagggtcg 900 tatgcggtag cgtctttcga caaacgagga tgcatggtcc gcaaaacagg gagcttgtac 960 gtagcagggc cgagccgctc ggtcatcagg ttatagcaac acccaatcat ggcaattgcc 1020 ttgaccgacg gattcagaac caacgcgcga acaccatggt gaacaagatt tccacatgaa 1080 tgcagcgaca ccaccatgac gttcacatct gaggcctgct cagtattctc tacgtcgtcg 1140 gtgggttccg ctgatttctg gctgctcggg gcgacaacat ctttgatgat cggctccagg 1200 taaccgtcct tgatttcatg ctcaatatag ttcatcgcgc ctcgtggagc gtctgtattt 1260 gtattcgtta ctggcttctg aacagtcccg ccggctttag gaaaggtgcc gagctcgtcg 1320 gaggtcacgc tgatgtcgcg gaatatgcta atctccgcaa cgccctcatc gtcgttccca 1380 gtgtcttgtt cgtccacgtc gtcgctcgtc cgctccggtt gcgagtctag cttttccact 1440 ggcatgtctg gatcttcgca ggtcttgcat ttatccagct tcttattgta taagcgcacc 1500 ttcttcttct cagctagctt cgcatagacg tccatcctgt tggccccatt gataaactgg 1560 tgcctccgtt caatcgcaac gatgttcctg ttatacggag gactggccaa tgtccgccca 1620 agataattct gcccagatcc aaaatccaca atgtgcgtaa tctcctcgcc ccgctcccga 1680 tgcacggtat cacatagtga gttgacatat ttcgagaaat gagcaacctc gtgatatttc 1740 ttgactttca ttccgaccgc aatccgcggc ggtatggtcg ccttcccaga gccgtgcggc 1800 gtgaactccc tgcgcaacgt aagtcgacgg atttgctgaa tgaactctat cagagacagc 1860 ggagggagaa ccgcaactcc tctccactcc tgccctgcaa gatccccctg cttgtaggcc 1920 gctagcatcg gttggatatc gtcccgcagg agcaggtcga tgatgtccgc aatattgtgg 1980 tgctcaaaga actgtctcca atcttcgggt agaagtgtag tatagaggtc aggctcgcgc 2040 gtaagaaaat ccagcatatg tacgcccccg cagaggtgcc taaataggtc ggatgaggta 2100 gcaaatgaca gcaaagcttc gacgtaggcg tctggatccg tccagccctc agggagggga 2160 agactcctcg tggctgacat tagtcctttc tttttttttc ctttttcgtt tttgtagcgg 2220 acaggactgc agaggggtaa cggttcggag ggcgaagcgc gacttgatgc gaacgggacg 2280 acggtgggga acggggtttt ctagaaaagc acgaccaata acatttggag catagagcgg 2340 cctgaagtgt ccaaaaattc gagagacagt gttgttagtg taaagtgaca gtaagtctta 2400 gactetecaa agatttttgg eggacaaact tttgegetgg egggtggtta gaaatgeagt 2460 ggaatgcggt ggggtggatc tgacgagagt ctgggggagac tgcggagtct ttaccctctc 2520 cctcccttcc tagattccca agcagctcga atgaccgcgt tcgccacgac aatccgagaa 2580 ggttatgtca attatgcata attacagaac cgcccgggca tgaactgatc gtcgagagat 2640 cgacgctacc ttcaggagct tctattcagt ccaccggttc ctggcggtgt gcccgtcgcc 2700 atgacaccat cacaacagcc actagtaagc tagcactatt ggcgcagcgg agaactagtg 2760 gtccaggaca gttgctgatc ttatctatag tccgctcaca ggtttcatat ccttttccct 2820 gatggctatc gcggcagtgg cttcgtttct gtgtgacctg ggcgcctggg cggcagcctg 2880 acateettga teaaggatat gteagggeae gteeceeggt gttgeaggga ggagaagaga 2940 cggtagggat aagaccactc cacgtatgaa atttaatccg gcggcaatct cccctcgttg 3000 gecettggge etggegteet geaaacteeg eteettggtg caceggtetg egtegeaggg 3060 ggcaggcgat tcgtcatacc gttgcacatg atacctcctc ctatcctacg ctagctcttg 3120 cgggaatttc tatatattga gacattgctt ttaaggacag gagacaggaa ggcttcgagg 3180 gatcattcaa tggaccttct tactctttac ccccagaacg ccatgcaagt cggatgaggt 3240 cggaaacatg gtaagaccaa gaccgcgaag aaaatagcac gcgacactaa tccagtctac 3300 ttcctagagt tcaactcgcc ctcaaacagc tccaccattc ggatttatcg ccgatatact 3360 cttccaaatc atcgtcaatg gtgaagtcaa cactgtgttg accetetgee ttetcaacag 3420 ggccacgtat gataccatca aggtcttgga accgtacatc tgcaagtgct ttatgcgcct 3480 ccatggcatt gatgccttca gtccaatatt ccccctcgac tcagggatgg gtcagcaaag 3540 cgcgctgacc gtgcatgccc ttgtgagatc cttgtatcgc catgagctcg cacgccgctt 3600 gtcccgtcac atcgtccccg ccgtatgggg gccgttctac gacgatgaca aggtggatat 3660 gaatttcgag gccgaacgca agctctctag acgtttagaa cggggcctcc acgtgctctt 3720 tcacatggcc gacatcgcac gcgacatcaa acgagaaccc caggaacttc agaaaccctc 3780 gteetettea tegtttgtet caaaaegett caetgteete acaaagetee tegaagatta 3840 cgatgacttt gaccctgact ttaacttcgc ctttccgctt aacaaggcca ggaccaataa 3900 caaacacaaa aagaaacaaa acctcctgat ccccccatcc tcatccactc catcatcgtc 3960 actggacatc aaccacatcc acacaaaaca tcacctcaca gctatcctta aatggggcca 4020 cgccgagttc gaaatcggca agcgccgcct agagttccgc tccaattacc ttaccgacac 4080 cctcgagg

<210> 1897 <211> 3439 <212> DNA

<213> Aspergillus nidulans

<400> 1897

gtcccagttg tcaaaattcg tcttcttgat cacccggcgc atgcccaatg cgtacgacgc 60 ggagaagacc acgttcgtcc ccatccaggc gtaaccagcg ttgagagccg acagggtcgc 180 cactgccgag tcagagctgg cttttcgcgt tgcggcggtt gcgatctgga tgtcggccca ggctgccacc acggagctga gcaccatcaa gccgaaagac agcagggcaa gaggcttcac 240 gctgcctccg accatgaaga cttcgccgta cgcgatgacg atgattgtca ggttcttgaa 300 gatcgtataa acgggaacag acaggaattg cagcgctttg ttgcccgtat aaatcattcc 360 gaccagcagt aaggagatcg gcaaccctgc gattgaaaag gtcagcgttt gcataccgct 420 480 gggccttggg tggaagtctc ctacacgtct gagccttctt caagtcaaag aggccgaggt 540 tctggataag gccagccttc ttgcaaacca ttatcgctac agtgccaatg aaggactcgt caagttaacg tccatcttgc ttttatggcg taaagaaata gtagaagtca tagaaataat 600 660 aaatttttaa atttattatt gttgttttta ccaaaacaag acaagcaaca cacctggata gcgagataaa gaaagctcag gttccagctg gcgccggaaa cgacgtactt gttcaccagg 720 gtcatgctga tggaggagag gcagtacgcg agcactgcag cggcggcatt attgcttatt 780 tttgacgcga agctcgtcac ggatccagaa ttctcgacat cacgctgtga ctgaagctcg 840 900 taggtaggaa gcaactcgtc cttgctaatg ccgtttcgcg tgctcgccat tacgctcagg gggagaaaca agatggggag agttgccagc cggtgcgagg cacgtcactg taaaaagagg 960 aaaacgaggt agcgagggaa gagtgcgata gatgcgttgc ttagggtaag aaaaggcaga 1020 aagagatgca aaaagtgcaa aaaaaatcaa ttgaatctga caggataatt tcacaattca 1080 cccccagtga tggatggagg tcagctgacc tgcagccctt gcagagtcga ctaaaccaga 1140 ttagggattt agatacattc gttcgaagta gaattcttat actaatttca tgcatcagca 1200

aatgggegat teaggeacea caaccaggta gaaagaaaga aggegatget geegttgege 1260 ccccaatgct gtggcagagg cggagacttc gatcggtgcc ggcatgggga aaacagcaca 1320 ggcccgacag ctctgaaaat gatttgaagg gtaatgtctc gttgccagag accacagcct 1380 ggccgctttt cttgggaaac agctaaggaa tgaccagctt ccgagtttgt gtacaaccat $1440\,$ tagacgetga cetcaaccaa eggaacegea gggeageata aetggttggg gttegtgete 1500 gctgctactc tagttatatt gccctagacg agtacccaga ggatagcttc ttgctctgat 1560 aggggcctgt ttcgggcgat gattagggat gtctaatgat ccgaattgca atacgggacc 1620 aataaacctc tgtccatcca gcgaggggtt cctggcccct cactactgca agggcagtgg 1680 taaatgtaca aagaaaaaaa tgagtgaagg gcaagaatag agattcccac aaaagcacag 1740 ggctggcgtt tgccgaatcc cctctaacag gagcaacata cggcttttac ccacctgcaa 1800 aactcgatge tggtcaactg egetaeeega egetetteet etagataggg cattteggtt 1860 tcctataaca taagattgct aactggtgtg tccaagtatg agaccatatg ccacacca 1920 gactacctgg ctcatattta agaattcagc tatcaatgaa tatcgcaaag gtccctgctt 1980 acagaccatt tactcaggcc aggctacggt ataacatatc ttgcaatcag attgatatac 2040 ctttccactc tcttcgtcgt caattttcag gcatatgttg tttgcagtgt aggaattagt 2100 cctacttctg cagaggtgaa tggccataaa cggaggtgag cattccgccc tgagacgagt 2160 acatggetca cageggeegg atatgetggg gaattggeae acteagtatg etetacetag 2220 gctaagaaac atgggctctc gaataaaatt tgaagatagg caatgcattg ctagacgatt 2280 ctacacaact gcgatcataa ggaaatccaa atatacgcac tttgtgaatc ctcatccagc 2340 aatageggat gactagtget agttaaacca agaaageatg eggaaagaag agetgaaega 2400 gctaacacta cgagttacgg accggaaaga gaaaagggat atagatagag ccgggccaaa 2460 aaagcaacag aaaaagtccc aacactcgac ttggatcatc ctcatatcaa gacattcaaa 2520 accttcatta gtaaactett gageggette getggtgeaa geggeagaee eateaactea 2580 gcaacagcaa tetgtgcaet atgcaegetg tactegatat ecaatgtgga atetgeggga 2640 atctcgacaa actgacccac gcagccaatg ttcgtcgtcc acctcggaat gacaggggga 2700 cggtcattgc agctgcgggt aagaagagga gctgtgccca gcggcaggcc gcatgggatg 2760 gttctggctt cagcgaggat ggtggtagct tcggtggaat cctcactgca acagccaaga 2820 tggaagagaa ceteetttaa aatetettge eeegtgeatt gecacattte tetttgaca 2880
aaattgeeet egaegeeggg atteagtgea tateecagea ttatggteae attteeggae 2940
tgagtegaga agaegggttg atgeeggaaeg etgategtea eaceeeagtt getteegett 3000
agggaagagga aggeeeetgt teetggette teetgagtaa geetetegta gatgttggea 3060
aaaeeaggge etgtgaatgt tgttgtgaag gtttegaegg tegaetetgg aataegagge 3120
aaaaagttea tagggttgee gaatttggag gaettetggg eeagtttete eeagagette 3240
gaeeecatgg eageeeetg tteeeagttg gaagtgagee etteaggegg egtggtatet 3240
gaeeecatgg eageeetga agtagttgaa eeagagtta eaataaggat atettgegga 3300
teaagegtga tgagtteetg attteegget tetgteataa eeteaattte agaaategtg 3360
gtgggteege etteaggata ggeettaaga tetgataett getggtaaa gegaaagtea 3420
acaeettgtt gettgagaa

<210> 1898 <211> 2848 <212> DNA

<213> Aspergillus nidulans

<400> 1898

gacaaaggca actitgttit gagcagagac tcgctgaact gttagatcct gaggctitcc 60 cagttgttcg agccattccg tctcagtgcc ggccacaaca tagcttcgga agtcaaagtg acttettegt gtegecagaa tgtgacacaa egagteagte acegtaetet caettttatg tgacagggag tttctcatga agtacgatgc ataagagtct gcgacacggc gaatgccggc 240 ccggtcatgt gctgagagca caaggaggcg tagcctttcg tttccatcag catcctcgga 300 eeggatgtee geeagagaet gaegaggate tgtaatateg aggeeaggea tgtggtgeat 360 420 ttgcaagaag ctcttagcat cctcgagtat agcatgagcg ttggcaccac caaagccaaa 480 egaatteaca etggegegge ggaetetgte etgeggeeat gecatattet ettgegggag 540 tgcaatatte catteegtea ategaagete gggattgace gtegteagae cagtgaegge ggggatagtc cccgcttcaa gacataggac taccttgata acccctgcca gcccggcagc 600 gccctctgtg tggccgacat taggcttaac actacctaca taaagtggtc cgacatcgct 660 atctctgcgg gcagaggcta cggtctgcgc gattgctcgc atctcgattg ggtcctgaag 720 atgtgtgggt tagactaaag ttttcggaaa agggacaggg gcatcatgga cgtactcctt gtggtgtccc tgttccatgc gcctcaaaat aagcggtctc ggacaacggc aacccagcct 840 tctggtatgt ctcgcgaatc aggaatgcat gagcatcttg gcttggtttt gtaatgctgg gcgttctgcc atcatggttg gcggcagtgc cgcggattac ggctcgaatg caatctctgt ctctcatggc atctgccaaa cgttttatca ctacacaggc aatcccttcg cctcggccgt 1020 atccattcgc cgatgcatca aacgagcgac tgatgccgtc ggggccaatc atgcccattg 1080 ctgagtactg cgccatgaag ttagggtgca agatgaggtt cgtgccagtg atcaacgcct 1140 gcatatccat gttagattta acgaatcctg caaatcttga tggtgaagga ggagacctga 1200 gtgcattcgc cagactttat ggcctggcag gctagatgaa gaccgtatag tccggatgaa 1260 caggcagtgt ccagagttaa gctggggccg gtgagatcga agaaccaaga gatacggttc 1320 gaaatgatgg ctttgtttgt gccggttgca gcatgggcgc ctagttggta gatatcatgc 1380 teggegatet ettggtagte ggeegteatg acgeegetgt acaetgeegt eetgettete 1440 gctagctttt ccattggaat gccagctaaa tggtctcagc ggtgccttgg catacatcag 1500 attctggtaa aaggggtggg ccgaagtacc attttcaaag ctttcatacg ctacttccaa 1560 aacgagacgc tgcattgggt ccattacttc cgcctcgcgc gcagtgatgg agaagaaagg 1620 cgcgtcaaaa tgggggacat cgtcgaggaa gaagcctgag gtcgtgcagg tctgggatac 1680 cgacattcag cattggctaa tctgtattag aggtgctctt gcttactgcg cccagtcgtt 1740 gccttgatgg atggaaccag gcgtctgcat cccaactccg cttagggatg cgcgagtgac 1800 cagtgcgccc ctgctggatc atctgccaga actcgtctgt ggatgaggcg ccggcaaagc 1860 ggcaggccat gcctactatt gcaataggct cgttgtcggt catgttgctt ggtgaaaagg 1920 tcgtgcggtc aggaaatgac ggagatacta gaaaaaacac aaaacatgca acttatgtat 1980 aagctcaaca ccgagttatt cgcagagtca ttgatctaga gtgtccacgt gcatttggat 2040 ctccatccgg ggagcgaagt ggagccatac attctgagat gtaacgttct gcaggcttta 2100 tctatgttcg ctgcccggtc tcaatctata ggagttctag ctaatttact tgctccgctg 2160 ccatctcatc gttgtccgga aggggactat caacgcgttt tccatgtccc agacaccttc 2220 ctttatatat acgtcagacg acagcgtttg cttcagggat tccatgtctt cttcgtttac 2280 taccataget gacceettga acggacgttg aatceeetca etaacatget teteaaatag 2340

<210> 1899 <211> 3776 <212> DNA

<213> Aspergillus nidulans

<400> 1899

gcattgtgtt tttactccca acggattagt ccggatttta agatcgcggt acatgcattt 60 ttcaaacaca ttaaggataa ggggacccag catattttat caacggtttc gctcaagtca 120 gacatataag ttggcgggtt cattggcgat catgtcttta tactggcgtc ctatgatttg 180 240 aagaagtctg attgatcggc aaaccgcaaa tttcagatag tccgaagtga gagaattcaa tgggcctttt tttaggaaaa gaggtcactg aaccccttgt tcgaaatgta tgtgaggaac 300 360 caggcaacgg ctctacttga agagacggag cagcgacgag acgtgctgtc ggcgagctag tetttataaa ggtttteeac tatgaagtga etggeatetg getggagete tttgtatett Cactttgggg gtcctttcca atactggcct gcgatgtcca gtcgtccggt tgtccgtatg 480 tatgggtaga gtggctggct gtaaggtaaa aggtaagaca agtgtgaaag caagcataaa 540 aacetaetge ctaggetgtg geetaaegea geatteagge geetteagge gtggtggega 600 ttcagggact ggcaatgatg ctccatagtc accattagag ctcttcggac tgaatccgtg 660 tegegetete tecaagtgea aacaagggae ettaaegttt egttgettga tttggattgg 720 780 ccacgttgag ttgagctaga tggaatggat gtcggaaata gcacacgtat atatctgtgt gtatgatgga tggtgtatgt acatgcgcag cggtattata tggatgtgta tatgaaatga 840

acttaggtac ggtagatgaa atacatgtac agtttttggg aatgctcgag gtaagttgca aggcaaacag aaaaaaagag ggaaatagga aaaacggata gacccggctt tggtaaccat gcctaacgcc aatttccgaa agtacggggt aacaagcaga gagaagacaa gttgaagaac 1020 tgtgatgagc aacaatagga aattgtgcaa aggagaatga aagaacagtc cggtttcaga 1080 gcatgacatg gataaagatc agggcgagga cggaaggtga ccacaagtac tccaggcaat 1140 gcgttcgtaa ggatgctatt cagaggcagg aaatggggcg tgaagatttg gaggagagaa 1200 gtaggcgaca cgctttccga cgaaccaagc gagagaaaat ccaaactcgc taaataagat 1260 aacaacacaa cggtaggaac attgctttgc ttcgcttctt tcggatatga ataatgatga 1320 attcagatca agatcggtag gagagagtcg tgagatacga taaatgaaat aggttgttga 1380 tgttagaaac taaaaagccc gctgcgcttc ttcccaagcg gataaaccac caaagcagca 1440 agaaacagto ccacagtaaa cocaatagoa acotgtacoa tocogtatoo aatgtogaag 1500 acgacaccct ggaaaggatt ctcttggtag ctctgctggc ggtgctcagc ggtcatgttt 1560 ttcgccgcgt cgacgaagct ctgcgtgccg ttactgggca ccgaqaacgg cgtctqctgc 1620 gtggtaattt ggcctgccga tgcaattccc gctaccaatg acccactggc tgcgaggcca 1680 gatgggacaa gcacaaagat ggcagggagc atggctgctg ctgctaggcc gtgccgaaga 1740 cgcgaataga ggtttgccat gaccccaaca acgaatgctc ccagggcgga agagacctgc 1800 gtggaagagt agaagcgttt cgcgccaaag tagttggtaa tgtatccggc aaaagcgata 1860 acgagcatca cggggatctg cttccatttg gcctggttga ctgtggcgag gcagaaagtg 1920 aagatgatga caaagggaaa gcgctggagg tactcgttcg tgatagggct ggcagggcat 1980 gtatagtetg ttgaggegtg geggtetaaa aggeegtaca egeagtgeeg attgtgatge 2040 caaagccgag aaagagggaa tagatgatgg cgtacaccat gcgaacggag ccggcgacga 2100 tgctgcgtga ttgaagctct aggctggcgc agagaacgag gtagccgggg agaatgagag 2160 cgatggagga ttgggcgagg gctgcaaagc agaagagatg gccgcctttg taggggatac 2220 tgccaaatgc gcgagcgagg aaggaagtga gaacggcggc ggatatttca aacacgttgg 2280 agtagaggtg ggagcgaggg gagaggacga gctgtagaat tcctaggagg cacccaagga 2340 cgaaggcgat gggcatatcg atgggacgag caccaaaggc aaaagggcca acagatgcgc 2400 tggcgaggcc gtggaagaga ataagaagcc agatggggta tttgttgtcc ttctgcaaca 2460 gcttgcttag ccgctgcatg gcctcttcca ccccgatcac gtcgtggatc acttccttat 2520 aaacggtgtg tgcatcagag agcttgccca agtcgacacc ctggttcacg cgaacaagtt 2580 tcacttctgt agtgtgggta gatgcatcat caaaggagac aatcatacag ccgggcagat 2640 ataaqaagtt ggcattgatc tccagcacgc gggccgtcat cttcatgtac tcctcaagtc 2700 tatgggtagg ggcaccaaac ttcatcaggg ccttgcatag tatgagcaga tacctctggc 2760 gcqcaaqcaq ctcqqcaatg tgaacagtga tgcqqatttc atcttcqaqc tggggcttcc 2820 ccatgcgctt ggacatcccg gggatagccc cgctactgcg ggagcgtctg agcattgaaa 2880 atggcgagct gatggaattc ttggctgtcg aacccgacaa ggaggtgttg gactgattgg 2940 ccgacttctc ataccacttc ctgggcttct gaggagcacg ccacgaaggg tccggggaga 3000 ggccgcgggc actcaggtca ccagagctgc tctggcggga gtggccatag cggccccggg 3060 gtagattcag ggtcggctgc tcgtaaagct tcaggagcga ggacagaatg ccgccgcggt 3120 agtgagtcgg acgctggacg taggcgtcag gatccctttc ctcgataggg gtgaccgggc 3180 cagagegeag geogetggga gaattageac tgatgeggtt cagaaggtga aagtetegge 3240 gagtcatctg ttcaacaagc tggtgagctt cagagttgcg gttgtgaggg cgtccatcta 3300 ctaggccgta gtagtcatcg tcctcgtccg aagggtagtc gagctgtttt tcagggagcc 3360 ggatcatcgg aatgtcatca gcatcctcaa atggctgtga cgcttctgta ggagacgaag 3420 caacagatga cggcagactc ggccacgggc tctgactggg agacttcgag ggacgtccca 3480 aatgggatge caacttetgg getegeteet gegetgagta ggeegagtgg atageeetge 3540 ccttctcatt gctgacttca tcggtagcaa cgatccctga ggagctatcc ctggagtaaa 3600 cageggtace ggcagaaagg tegagetagg tececattag gaaaggggtg gggateagat 3660 geggtteget cataegeegg aatgetggea gtaggeageg gtetetgegg cagaggegaa 3720 3776 eccetteget gtgaegtggg gggeagggeg cetegeegae ggtgaacttg accegg

<210> 1900 <211> 3562 <212> DNA <213> Aspergillus nidulans

<400> 1900

tetteaggga tgeggatate caageeegtt tgaeteggee egatateeae gttetegagt 60

120 gcatcatgga gcaatacagc agcgtgaaat ctttctcggc gaagttgaag gagagtattc cgcgcgtcga tatcctcatc cttaacgcgg ggatccacag cttcgtctat gagaagacct 180 eggaeggeea tgagaaagee ttgeaagtaa actatetate caatgttete etectegeeg 240 agctactgcc attecttgaa tecacageeg agcaaacegg eteggeegtg egcataacet 300 ggctcggcag ccgcacatac tatctcagca acagcctcga gaagtccgat atcctcacat 360 acggcggcgg gatcctgcaa tacatggatt cagagaaggc gtctgccagc gctgggatga 420 accaqtacte tgategaaaa ettetetgeg egetgtttgt etatgagett gegteeegae 480 tgaacaggga caaggttact ctcaacctgg tttgccctgg catggttaag acggacctag 540 gcagtaatgg gccattgtgg attcggacgc tgattgaaat tgtcaagata ctccgggcta 600 660 ggceggtega agttggegga tggettgtge teaatgegge ggttgttgee gggaaggaga 720 gccatgggag cttgattggg gataaggaag ttaccgagta agttctttcc atcgttccct agacataggc aggtagtgag atggcaggtg acttaacgtt ataacacagg cctaccaagt 780 ttatcaagte gagegetggg caggagetge agaagegget etggaaggag acagttgagg 840 900 agatggecae getgaeggaa etgettteag ettttgteta atatetaeca agetateace taaatattgt catctcatcc cggtagtctc cctaattgca tgtacttccc gcccactcca 960 atcaaacatc tcatttagga attccgtatc caattcaaag caaccgttgc cgtcctctct 1020 ggtegtgegt ctaccattet egetttgeae teteacacet eeaggettat titgtgaetg 1080 tegitgitea aggeeeteat acteaacett eagetggite igteegitea teateigiat 1140 gccatgcctt tgccgctgca actcccagtg cgcaaagaca tctctcaaac agttcctact 1200 caatccagaa tatgcaccgg tagagccagg ccaatggcac aagtatgata ccaacagaga 1260 agcacaccga atcggttcca cacagcgcac gaagaaccag aggtgtggcg caaatgcgga 1320 agacgatacg atagataagt agattcggag gtatcggatg cagaggcgaa ttatactagt 1380 ggggcagaat tcacgtaccg attccacaac tggtcttgac cttgatcgat gccgatattc 1500 ggatctgagg aaggtgttgg ccgtaacggg gatcgtaaga aaggactgtg gatctggatt 1560 gccatgtgca ggtgaatcaa cgtcgccaac ctctgagccc aggaatctac ctcgctgttc 1620 gtggtagtcc ctgcggcgga ctccatcgcg tctctcgtta tccttgcatc tgaaacaaac 1680 cctcgatata tctcctctga aatcaaccct gtacttgcgc ttgcgttatg aacagtgtcg 1740 ataagccgat gttgaatacg agcaatttca ctgcgagcct gaaagagtat agcagtatcc 1800 ccggccagag tatcaggccc tgccccagat attggcgtcg gcaaagaacc aaatctgctt 1860 ccqqctqttq ccqttactqc cagtggtaac ccggtcagga ggctatgctg aacatccaac 1920 cacacgatat gegeceatat tetaegeteg agtetegett ecaaggetga acegaagtet 1980 atatetetat ceggtgtaac atgeteetge egatgtagee caatactetg ageaaggegg 2040 actqtcqaac tcacccacaq cccatactct agtgatccga ggtccttgct catgaacggg 2100 tegataatea gegaggetge gaeagtgtte actgteggae ggegaagatg gtegeaggaa 2160 qtaaqqataq ccqaaaccqc tgattctaga ttcctggttg tgactgattc ttgggaggta 2220 tgtgctgaag cggcagctcc tgcatacagt accgcaaaga gcacgcagtt catagtcacg 2280 tettecagea gggtgttggg gataatagte gategtetat eeceggeete atggeaceat 2340 tqccaqaaca cgqcatacca ggattggaaa tctgggaggt caatgagcgg gtacaggggg 2400 tagacggagg taatgaaagt ctgcacaaag ccgtcgcatg cgtgcctgtc aggaatcctc 2460 tcgaagacgg atgcgatggt caggaagttg atatgaggtg gaagagggtc tacagttgct 2520 ttcttgcgaa atggcatcta ggagtgttag ggctgttagg gctgttgctt cgacatggct 2580 ggctgataca gtggcactcg acataccaag ccaaggageg agtegttgae eggcetgaet 2640 ctagagggca atctagaaac aacgtctaac cgagagacat tagagcggtc tgtatggatt 2700 tgatcgtgtc tactctgatt atcagaaact ttgctggtac tttgatattc gcacacttta 2760 ttcatccgtc tgcagttggc gcattccggc cgttctcttc cacatcgaac tttacgagtg 2820 cgacatgtca gacagctgaa agcagggcgt ggttttttga caggtgccat actcagggtc 2880 aggtagtgat getagaageg cataaageag attatteggt etgteaatgg tatteeggga 2940 ggaattegtg gtttgtggcc gagaaacagt gtcgcttaca aattatgccc tgtttaaata 3000 tccaatttgc tgggctgata tgtcacggaa tgtcttctgt ttgccagtga cctggattat 3060 acctggttgt gcctttgcac caggtcaacg cgtgaagccc tacaaaaagg tatctacaac 3120 aacgatgggt acttagaccg atacatagcc aatctcttct ctagtgggct ttctgataaa 3180 teeetggget gaeetgattt eeeteetttt etaaegeage ateeaeggea eaactegaag 3240 caagaggtta agaagaccta tgtatgtctg cggtaagcag gttatttcat agaataagag 3300 cgaaacacgg gcggaaaggt atgggtatga tgcgatcttt gagaggcatt tccctaacat 3360 ggttgggaga aggtgagacg taggagagac agtcaactct atatcatagt acacttccaa 3420 tcaacagaac agtatagttt tactctagcg gcggcgtatc tgcgcacata gtggccatta 3480 cgctgtttcc aatcagccac tcacatcctt ttgttcaaaa ataaaaaaga gacactcacg 3540 cagcaggata ccttgtccct ga

<210> 1901 <211> 3311 <212> DNA

<213> Aspergillus nidulans

<400> 1901

60 ctcccaggcc aagcacatgc cccagaatcg agattgccgc agtgctctgg gtgtatgata 120 gccgtcggcc aaaccagtcg tctgggttgt tgaacttctc catgaagaag tagcgcataa cagggtggaa tttttcgatt acctggcggt atgtccggac tcgttgctca aaggaccgtg tctgtacatc ggcaatatgt ttgcggcagg cgctgggctt catgtctcgg gggtagtatc tttgatgcgc aggcatcaag aagtcattga gcggtatggt attcggaaca aattcaataa 300 tgcccgcatt agaggtcaga ggaagaacct tgtaggctct gataccgaga ttgcgctgcc 360 gagtcgcttg atggtctttg aggagactgc taacttgctc aaatacttgc tccataatgg 420 480 cgtcctgccg caggtcatca ttgcctcctt tgaactatga tactgttagc cacggccgaa caacgcgaat atgaatctta cgagctgctt atagcgaaca ccattgcttg caatagctgt 540 600 aacaattttc ggtgcgctca cgccagacgc taccgtgaaa tcagggaggt acttagcaag cttgggcaca tcactatagt cgcagtcaac gcgaatatca attttcatag tcggtggtgg 660 tagccgctgg ttgacagcat cctgttcaag gcgtatgcca ggtgccaatt tattcagccg 720 780 aatctttgca ccactctttg ccttgtcgtc taaccgctcg acagcgaatc gaacgtaatt tatattggta ttgtggaccg ccacccacaa aggcccgata tgcctatcgt ttctcataat 840 atcagccaat tttgcggcgg ctcgattgcg tgatagagcc gactggtccc ttccaccctt ggatttgctg ctcgcaaaga tctggtacat cccatggaac gggtgatcag agcatatgcg 960 ataaatcagt tcggataata gagcttggaa atcgtctgac acgtcgagga gccgcgaagt 1020 cagctggttc ataagagggg cgaacttgcg actcgggacg cctgctatgt atttcgagac 1080 tgcactgttg gcaatgtcac tgtgagattg cgcaagccag agggggcaga agcgcaggac 1140 gtcgttgttg tatcgttcgc tttctctaag gcagataaga tagttctcaa gacattgctg 1200 caggaatgcc tcgcgcttcg cttgagacgc tgatactcac gatcatcgag gtcgaaccac 1260 tgtttcgtct ttgttctgtg aaatttgaga ttgtctcgct ctttcccttc tgctgttttg 1320 agcatcgcat caagagcaac tacttccttt tccttacgat tacgaagctg ctcaatccgc 1380 gcaaagtett ecageceate eggattttgt aactgetgat eacagaagat ggcaaateea 1440 tgatagactc gcccagcgtc ttctccctct gagcgaccct tcaattcttt gactgcaggt 1500 gtcaaatagt tctggatgat cgcctccggt ttttctaaac gagcttcggc gatatgatgg 1560 ccctgactct gttagccgct ttaacttcag tgaagatctg aatttgccca ccagggtgac 1620 aagaageteg geacgaetaa taggaattge ttgettgtga aggteattte tgtettttag 1680 ctgctggaga atttgaatcg agggcgccat ttcaccctga tcccatagca cattggccag 1740 gtcgaacttc gctacgcctt caatattgag ccctagcgat acactatggt ttgctagttt 1800 tgacaaataa acagcagatc ttagcgaagc ctgggcgatg ccgtgatttc tggcaatgtg 1860 tagggactgg cggattactt tcacttcaag aagctgtgca tcaatgtcac ttaagttgaa 1920 ggcagacctg agataatctt tctgctttat ggaagagaac agggtctcat gagagctcag 1980 aatctctcca acctcctgga cactacatgc cgttagtata acctattatt agcaggaagc 2040 gcacatactc agtattttt aaccaggaag teettgetga gattteetee eacttetgat 2100 cgatttccgc cgcagatcct gaaccaagaa cttcttctat ttcggtcaag atgccgagcg 2160 tecteatage ggteegeaat gaegtegetg ategaegate actattgata agatteaagt 2220 tgcttctata actctcgccg atagatgcac gcatgtcaac taacggccct ggagtattca 2280 aggcctggaa agccctgaat atcgtggccg gaggagatgt gttcaacgga gagataggta 2340 tttcccattg tcgcagattt gtagcggcct taagcatact acccagtggg acagcagtgt 2400 cactagaatt tccaagcgca ccgatcatag agttagcaat gccctgaaga ttggtggagt 2460 tcagtgcctt gaggacacca taggcgtttt cagatcctgt catctgaatt tcgctgtcat 2520 actgtgcgct ctggaaaagg agattcttga agccagaact ctcgtgctcg agagtttcta 2580 ttacggaatc cagagaggaa gtctgctgga ctccatagaa aaagtcgggg tcgtcaatgt 2640 tettgaaaat gteatgeage aggeetgetg ggagategta tttageaaca gatgaeegae 2700 gagagetgge egtacagega gaaacatgag titecaaaaa catgagegee gtetteggea 2760 ggeggeatet actagegget gaggaageta eegegtagtt gatatecaac eagteatete 2820 ggtecactat tgtteetea eeeggettgg gttggttgeg aaggtagagg acgeatitga 2880 tgataageeg agegtgaggg atagagtit etgeaceage eegtaaggit teatigaaga 2940 tttgegatat getgteeett aceteageea eettaceteg aateteegee ageagageat 3000 eatgtaggat gtagggeagt agitggaetg eeaaateagg aataaggitat aataatige 3060 teagtgaeee aataaceggg teeteggegg eegetitiga gagaaatagt eeeaegtite 3120 gtgeecagta agagggegaa aggetaagat eeeateeatg tacatitiet agitetitgg 3180 etteegagag gtteagagat ateeeeggae actgataegg geteeaggtg agageettea 3240 tgacagaagg ggaaatagea etcaegeaag gtteaaaate agggaagttg geeaggttae 3300 tgatgatgatge t

<210> 1902 <211> 3358

<212> DNA

<213> Aspergillus nidulans

<400> 1902

ctgcggagaa agtccttagc gaactgaaag caatgaccga gcattcttct gtttttttga 60 cccgcgttaa caaacgtgat gcgcctgatt actataacgg cgagttcgcc ttctcccttc 120 180 cttgtagctc atattaactc tgttttagtc atcaaacacc caatggatct tggaacaatg accaaaaagc taaaggccct ccaatacaaa tccaaacagg agtttgtgga cgacctcaat ctcatctggt cgaactgctt taaatacaac acaaacccag agcacttcct ccgaaaacat gccatgtaca tgaagaagga aaccgagaaa ttggtaccgc tcattcctga tatcgttatt 360 cgagatcgtg ccgaggtgga ggcggaagaa cgacggcttc agcttgctga tgacggcgga 420 gaagaaagtg acgatgagcc tatcatgtcc tcaagaggcc gaaaagcccc ggggaaatcg 480 tccaagaagg gtgctgcccc agcttcgaaa accccgagtg gttctgaacc tccagctggc 540 600 tccggctcac aaccgtcggc gcctgtacgc tccgactctg atgctgccgt ggaaggagta cagaatggat ttgcaacacc ccctcccggc acgtctaccc catccgaccc cgctggtgcg 660 720 ggtcttgcca catctggagg acaagatgat agcatggacc ttgatggttt ggtaacgccc

cccaccgcac taagcgcgtt ggccacgcct ggtgtagaac ttgccgaccc tgaatataaa gtgtggaagc aagtcacgaa gaaagacaga gcacttattg ctgcagaaag acatcgtctc 840 ttcaaaggcg ataagctgaa ttctgacgaa ccggctcttc ttcgcacgaa ggcgggtatg 900 agaaggtggc tcaggaacca gcaccagatc tcaaccgatg gcgatagttc gaatgacctt 960 gggccaaaac cgaatgccgc cagcgagacg ctagctgaag gtatagaagt tgaagaggac 1020 agagtaattc atgactatta cgatgttatg tctggtatac cagatcttcc ccctcatctg 1080 ttgtggagag aagacagcga gggaaatcta gtagacaact cagaagactt tttacgggtc 1140 cttcccaaag gactcttcac ccagccggac agcaagcttt ctcgaaagat ggatgcaaat 1200 atgaggcaaa tgcaggaaaac caggaaaatt tgctcaaaga ttggtatcgt caaacaaatg 1260 caactgcagt ctcaggtagg aacatggtat tcctacatag catcatgcta acttctcccc 1320 cagatgtacc agaaccagtt ccagaagtat cagccagagc cctttgttga acaggatgtc 1380 gaggcccatg ttatgaacga caatggtcct gtgatcgccc catgggtatg caaggccgct 1440 ctgcagcgtt cggtagcaaa gatattctac cacaccggct ttgaagaata tcagccatcg 1500 gctatcgatg ctgcgaccga tatggcttcg gacttcttcg tcaagattgg acagacattg 1560 aaatcgtaca tggaagcgcc gaaagttcct gtggcagatt cagtggaagc aactagctca 1620 ccgcagtgga aacgggcgta caccgagcca gagatgatgc ttcatactct gtcctccgtc 1680 ggcatcgaca ttgagggact agagtcttat atcaaagacg acgttgaacg tctcggaacg 1740 aaactcgtga ctgcacatga tcgcttacgc tcgcttcttt ctgagctcct tcgccccgtc 1800 ctgcaagatg gtggtgaaga tggctctatg gccttcgctg acggtagtga acaatttgtc 1860 ggtggtgatt ttgccgaaga tatcgacgaa gacttttttg gcttcaaaga gctgggcttg 1920 gacaaagaat ttgggctagc cacgcttagc gtgccattgc atcttttgca aaacaggatg 1980 tacaacgcgg cccaggcgca aaacacaaag taagttatcc agaccgctgc ctattcttca 2040 atactaacca agacteegae agtaceteec aateegttae agtettteec eegeeteete 2100 cgtatccacg catcactacc gaaaatgtat catcgcagat cggcttggtg caagcctttt 2160 ttaatgccaa attacaagcg cgcaacaacg aaccactggt cgaggacctc gaattacctc 2220 ctaagcaaag gccatcggct ggtcgacctc gtcttcctgc ttctgggaaa atcccgccgc 2280 cttctagtct tcctggacca acttcgagtc cacagaagcg gccactgccg ccttcagttc 2340 ctggattcaa cgcaaacaaa ccaggaagct ctgaacctaa taagaagaag gtcaagaaga 2400 acagtggcgt ggcgatgggg gttgctgacg ctcccggtga agacgaagca gcaacaggaa 2460 ccaatggggc gaaggctcca aacctaaaat ctgagggctc ctctaacgac ctcattaacg 2520 gcaatgccgg agctgaaaca ttagacgctc ctggtgctga ggattctacc aacgccgacc 2580 aggttaaggg taatgacaat gcagtgccca tcaccaacgg aactgcaggc gacgcggcat 2640 gacgtatgac catggtatag gtatagaact cttcgttaat gatctcttcg actgggtctg 2700 ttggacgggt atgctgcttg tttcatggaa tgcagcactt gttggttgtt tgtctagagc 2760 aaateggegt eggttgtteg gettateett teaettttte ttetgteatt ttetteetta 2820 aattcaccca tecqcctacc ttettcaatt etcatteecc atgtqttact tggacccett 2880 ctgcggtgct ccaacagggc ccttccagct tgttgttcta cctgcctacc catctaccta 3000 tacctataac atacaccgga atcacatctg gtctatatcc tatccctctt catcctccac 3060 ttgatattcc agcatttggt taggcagctt ttccttccgg tggatcttgt cagcattgaa 3120 cgcgagttgc aaagctctaa ggtggcctta tggaagtcga aactaatata ccccaccctg 3180 gagaaaactg catgtactgg gtctacagaa cggttcaaac acctcatcat gcttacggtt 3240 tttttccgcg ccgctaaaag gtcttctttc tgcttccttg tcttgctgca ttatggctat 3300 tatettttag tttgcctgac tttacctagg acggctggct ccgatcatat gttgtatc 3358

<210> 1903 <211> 3883

<212> DNA

<213> Aspergillus nidulans

<400> 1903

agcaagccgg tatgttgatt gttaattcca cgcgcttggc taatgtgcgc cggatgtaga 60

tttcacgcat ggcagtcaag cttgttgttc actgtcatgt tcgtaagctg tgtctggcca 120

ttttcctgag gtctcatgct catgcggtgc agataatcca ccttatattc tcatggtcca 180

gtttcttttc atggctacta tttatttgcg accttgcatt gatcggcttc ctcagcctga 240

aagcctatcg cgacggtaag agccaatcat cagatctccg tatagaagct cacagtcgca 300

gttgatacac tcgagcactt tgaggttcct gttattggcc ggctcgcgaa ctcgtttgtc 360

gacaacgagt aaatgagttt tgtcattttc gcaaaattct agcctatact aagcgacttc ttcacacctc gacttcctct atgatgttca ttgtatattg tttgagttga gcattttctt 480 tgcatactga actaccgagt tactagtgca tgaatcttca gtgtcttcag ccttttgaac 540 ttttattage gtgtcctagt ggttggatge attgtacata ctgagatatt gttctaattt gcaaataata tcaaatattt ccagtatact atactggttc ttatatgcat accettgttc 660 aacacaaatg cttcattgca cagttctttc ctttttccaa ggataaagct gcaatgtcgc 720 ctcctaaaca gtqcaaqcac gqcaacacaa tgacatttac cgctagatca acgcatatta 780 ceatetteat geteatette tteettetge ettatatget ttgeageege tettgeaege agtcattaaa gaagcgtcca gcttccaaat ctttctctct agacctgccc taccccatcc 900 aagacagact cggtcctctc gcccaaagaa cagtctcaca tttactctgc accttcctgt ctagccaaca cccatccacc ttggagagaa agccaaaccc gggaggccaa gatgtgccag 1020 gtccaacgcg ttacgaacag ctgtgggcac ataaacgacc acgtcctcat gtcctgctac 1080 ctcgcaaagg acgtcacgcc gtcccccccg ccttcacatc tctcctttac catcactaac 1140 ttccaagagt cgtacaattc cgcttcagct accttcgcaa tatatacgag tcagagggag 1200 cgccaactcc agagtgagga caaagaccaa ggcaaagacg aaagcagctc gatctggtct 1260 gggaaatcca ggacctcagg cagtttgagt caaggaccta actcgaacaa gaataaaaag 1320 gacgaggagg atatgattca gcgctttggg ttcgaagcaa ggaatcagcc atattgcaag 1380 ctcacggtcc ctaaagtctt gaactctccg gaaggattca aatgtatggt ttatgcgtgc 1440 ggaagggccg attaataggt ttatagcccg gggtgtcaat tttcgacgtt tctgaaactt 1500 ctacctcaaa acaaagtcat gcttcgaatg aggaatcaag acggaaggga tacgtaaact 1560 gatggtattg gcagtggttg tttctgtcat tttgaagaaa gggaaactcg atgtacggag 1620 tatagcgggt ggaaatagac tgacaggctg acagagacca tctcaagata accgtacggg 1680 gggttctagg gcttgacgac tccgatgttc tccgactctt tcgtcggagt tgaaacgggc 1740 tttcagttgg tcgagcttac atatcctttc ccctttaatc acttcacctt gcatattagt 1800 atattacagg cacaatggta tagtaaggag aaaaagtcaa taagtgccat tctgaaggac 1860 aaaatcctaa aatcaaatcc cgattataaa tcaaaccctt aacatcaaaa aatcccaagc 1920 aaatccagag cccaaaccat cagcataatc gctgtagaaa gaaggagaaa aggcaggaaa 1980 gattattatc gaaaacgaca gagtatgcgc aggtcatagt gagcaagagc gaacgtaagt 2040 aaaaggattg aaacgtgacg aaaacgggaa aacaatacat caaggtattc acttcgtgag 2100 cacatcatag aagcaataag gagtgaggaa caagatatct catcatagat agccatgaac 2160 atcagtaaat ggccggtagt gattgagggc aggtagggtt agattgagat ctaaatgatc 2220 tggagataat tgcttggcac caaccccgtc cttaggcggg tggtagtgac ttcagcttcc 2280 caccaaccgt catcctgaag ccggataacg gaaaggacat cacctttctg gaatccaagt 2340 tcttcaggaa tggcagcggt gtagctgtac agtgcgcggg ctatcaggac agtaaaggtt 2400 agtatgaagg tgtgcatgac atggatgatt ggccggtaca tctggtacat accaaagtgc 2460 aaaatggggc ggccatcacg gctaaactgt cttcctggat ccgcgaccgc catcgatcga 2520 ctcctggatc gactgcgctg actaccacca tcatagtacg acattggtct tctagattcc 2580 ctctgcgggg atgcgtatcc gtcgccgcta ctgccgtaca tatccggctg tgaaagctgc 2640 agetecatte caceggeget egaaggtega gettgttgee ggaactgagg etggggtgat 2700 acagecettg geatagagtt etgagaggge egettggega agteattggg tgagaeegeg 2760 cgtggaatgg acgtttgctg tcggtattgc ggctgtgggg atacagctcg aggggcagaa 2820 gcttgctgtc ggtattgcgg ctgtggggat acagctcgag gggcagaagc ttgctgtcgg 2880 tattgcggct gtggggatac agctcgaggg gcagaagctt gctgtctgta ttgcggctgt 2940 qqqqatacaq ctcqaqqqac qqaqqcttqc tqcttqaatt qtqqctqcqq qqatqcqqct 3000 cyagaagctg agctctgaga agatcgcttg gcaaactcct tcggtgaggg tgccctggga 3060 gctgtggttg tagttggcga tggagcagcg cttgcagaac ttcgctttgc aaagtcatga 3120 ggcgaatatg gagagtcgct tgggcgttgt gggggagtag agacacttgg ggattgactg 3180 tgacgactct tcacgctgct cgattggtat tggcttgtat tggggcttgc agcgcgactg 3240 tattgactca ttcgtgactc tcctcgagtg gccggttgct gttgcggttg cggttgaggg 3300 ettacgette geetaggage agegggtgat ggegetegag tggetteetg agactgeetg 3360 gggctgcgac tagacaccga gaccgggttc gctttgcccc ggagcatatt atgggtctta 3420 cctgtatatt gctgggtggt tttttgcatt tgctttgagg tgaaggccgg ctggggagca 3480 tegagaeget teaetgagge ategttatat geegggggtg gtgtggeeae ggagtttgea 3540 gtgaagttcg atgcaggtgc agaaggaact ggcgtagcaa taccatgata cctatcagca 3600

gagacacggg ttgccgactg ctttccagcc acttttagat ccgctaatgc gcgcgcgatg 3660 gggtcggtgt cctctccatc atttgccggc tccgcaccat ttggcgcagg tctacgatca 3720 tctggagagg caacatcaaa cacgttgttt ccaacatgta aattgaaagt tagccctagg 3780 atcaaccggt tcagcgatag cagatctagc aatatcatct gccgccttcg taagcagctt 3840 ctgaagaagg tgaggctttt gaggagttgg agctttgata gga 3883

<210> 1904

<211> 3070

<212> DNA

<213> Aspergillus nidulans

<400> 1904

aaagaaagaa aacttcaagg ctctcaccac cgggggacgc cccagaaatt gcagggctaa 60 gtcgccccct gcccttcttg aaggcccctt tggggatgcc aaagccaaac cgctcgtcca 120 180 aaaccgggtt tcggtcaaaa acaattaatg cccagctcct caagaatgac acaaacggta accaccgtat ctggatgtac tagagcgggt gaagtcatcc catcgcagta gagatgaccg 240 agtacatggt gagtctgaag ggtgagtacc ttgagattcc tcagaagggg tacgttgagg 300 gcccgtggat gttgaagaga cacggcatct attattttat gtatagtgtt ggcgggtaag 360 tetggtetgt tegeggatte ggatgeteat ggtteaeggg tetgteeage tggggagata atteatacgg ggttagttat gteactggte cetegeeaac tggteettte tecageacge 480 cgacccaaat tctccgtgga aacgatcagg ttggcaccgg cactgggcac aatagtgtgt 540 tcacacctga tggcgaggag tactatatcg tctatcatcg gcggtatgta aatgatactg 600 ctcgtgacca tcgggtggtc tgcattgatc gcatggaatt tgactccgaa gggaacatcc 660 ttccggtgaa cataaccatt gaaggagttg agggaagacc attgtcgtga ttaggcatct 720 780 tcgtaaacac ttgttatatt taggggacgc atatcctgaa tctatataat tgacctagcg 840 ttgcgtacgc atatgctcct aacacaacgc caaactccgg ggtatctgcg aaatcaacaa aaggatactg atgggcaaaa aagggaaagc gaaccgagac aggcagagcg tccatcaaaa 900 catggageta cgtttetteg acagetteec atecteagag acteqtegea geecgaaaaa actactocgc ttgttctgca gatgcggctt ggccgcggtt tgtggtcctg ctactggggg 1020 tgttagcaag gacattgtag acatttgacc gggcaattgc aggtacggtc gggagcctga 1080 gtgcggcatt gacggcccag catgattgta ctgaggacgt gggggtttcc ttggaggcag 1140 agetgaagte tgegeaegag ettttettte etetteaeea tagagettet geaaceggeg 1200 cgtttctttg tcaacctcgg cctgccgtct ccgatgggct ttttcctcct cctcaagcag 1260 tetetttgtt egtegetett etteetteet egeetgetee tgttgetttg taagetgagg 1320 actgtggaca ggtgggggtt gaggtgctgg tggaatatcg gtcaccaagc cgcttgggct 1380 ggcgggcagc ctattcgtag atggagtggt tgtaggagag ttggatgttg gtgagacgga 1440 ageggagttt tgeetagaga tgeggaagge etettttggg etggeaaaat acaegtegeg 1500 gatggtaatg gctccgagca ggagtacaac ttctagacct ttaaagtcct ccatctcgac 1560 acggtacagg tttggttcgt acaaagtcag ctcacgcaat cctttgaata tggagacagt 1620 gatatctggc tctttgcttt tggtctttgt ttcgggtatc gcagtcgttt tcccacgaag 1680 aaggcaagta aggtcctttg acagcttgcc atccttcttc caactaaagc gtagcttggg 1740 cgtcgtgtcc gcggcggcag gatcgatttg gacgcggtcg agagtagagc cggtgggtac 1800 ccggaaactg tgctgcggca tctcgaagga ccatgaaggc gggctattcc agctcttcgg 1860 cttgtagtgc acaatgacct gttggtcagg gttgtagagc tgaatcgtga agcgcgtagg 1920 gagaataggt totggoggag gggagacaco attgttotgg oggatagott cogoogatag 1980 tgttggctga gtccattcgg gtattattaa cacttcgccg tatacaacgt ctggcacgta 2040 ggggtcgtag agggctacgg cgaagcggtt cctggaatcg ggagaggatc ggtccgggta 2100 gcggagagag tacgctggtt cgggctcgtt gccaaactgg agaaggtaga tggtcgatac 2160 attggagtcc ttaaccggtt tgaggtagaa tgctgtgttg gttagttctc cgcatggaat 2220 tgcggacgac tgaggacgca ctgggaagat tctcgtcaag catttcaagc cqacqcqqqa 2280 agttatccag tagatgtttt gaatgcagga aagctggtgg tttgcataga tgtaagccaa 2340 gatacaattg aattgatggg agaaaaagtg ctttataagg aaatgaaaca ctgccgtcta 2400 agctccagcg actgggaaag tagatgacga agcatgatca gacacagcgg gaaggctgat 2460 tggctccctq catcaagaac ccgtctaagc cccctccgc acaccaaaaa tatcgccccq 2520 gcatacacag gcagagatat tettgecett cagecaaaga aagaceettt ategateate 2580 ataattaaaa gaccgcgtcg agccctcttc catccgaaac tctggtgcct tagctcagcc 2640 ccagcaaatc ggacatctcg gattctgcct cgtatcacca taccccaagc cttcgttctt 2700

cgcgctaagc catgatcatc cacagctagt gtacgaactg accaatgtcg gccgtgcgag 2760 cctcttcaat ctccattgca aagcatcgtc aatattcatt ctgtcaaagg aatcgcatcc 2820 tcgcaaagct acaccattac ccttggtgcc tacgcgcttt gtttacccag tcacttttga 2880 ttatatggct tcattataat actagctgct tcagggctca agcgaaagcc gccggggcgc 2940 taaatgtttg gttcttctg tatttgccat cagcgccct gtcgtctgac gatcaagcaa 3000 aaacgttacg acatcctcaa ctattgagcc ttggttgagt actcaggcga tctctctcct 3060 actttgctcc 3070

<210> 1905 <211> 3358 <212> DNA

<213> Aspergillus nidulans

<400> 1905

60 gctctccgtt ggatccagta tatgcccttg aaacgttacc aagcaactgt actgcgtcat ataccatctc atcttcgata tcgaggatct gttgttaatc ttgagcacgc atggaggtga 120 ataacaagca catttccgta aataatctgg catgtggtcg acatatttaa tggacgtgat 180 ttttcccata cttagagaac ccaatcttgc cgagattcct tggtcccctt aacgagcgaa 240 tagtattgca gtcaaatctc tctaaagtta tcgataagac cggcgtctgt tcctgagcgc 300 gcgttaatcg agctgtttct acgctgctac gatcgaactt gttgtccatg attgaaaaaa 360 ataggtaaga aggcgggtta gtgaagcaga gaatggggcg aaataacatc tcagaagccc 420 agatctggct agaacaggta catattatct tagtctcgta cctgtgtcca aaggaagaag 480 gttaagegae ategttteee cagetggaeg ttgtaggtge ttgecagtag gtaeggtgea 540 600 ttctccgcgg ttagacccaa ggtagagtcc aatattattc actctctaaa tctcatcgta tgattgtact tcacatgggc cgcggaatag ccttgattac tgagcagtcc ggaactgcac 660 gagagagtgg agagccggcg gctttcactc cgaagcgtta tttgttacta ggccctattt 720 gggcaggcaa taagaacatg cagtccccca gcctccaagc atagcccccg acgatcatgc 780 cctatatcaa gtcaagtgaa cctgtagaac tcggtgttct cacgtatatc cgtgactatt 840 cccccgctgc aaaagtacac taatagccta ccctggctgt aactcacgct tccggcatta 900 ctttcccgct acaaggtctt ctccaacctc taaatgttga acacatttat gtttgccact

cgaccgcgag gaggatactg ctggctctga agcataccct gggaaagggg tataatacac 1020 tgcttataca tgaccatatt atcaccgaag tggggtgcat tcgcttatgg cagcctataa 1080 tattaacgtc tcacttgcaa ttatggagac gattgagggg cagtggatga cttaactggt 1140 gggtgttaga tataaggtgc tgatggacgt aggtcgccgc tggtggtgca gactgtggag 1200 gtggaactgg cctagttagc gtgcgataaa gactgatgtt gagaatatgc tttcaaaaag 1260 gccacttatg gaaatggttt atttaggcta tgatcataag ctcatggcag cgtgtgtccg 1320 tagtgcgagc tcgaatcagg gttagtgtat ttgagcttga tgagagagat ttagtatatt 1380 ctcaatctcg ttttattgtc actggctcct gttttcaacc tgttaaggaa ttgaccagaa 1440 atactcacgg agcagattgt ggctctgcaa gagcaagcaa atgggctctt cagtacatct 1500 ctccagccca gttaccaagg actaaatata gccgttgcat actacaccca gtattactcc 1560 atgggaggtt cagctaaaag agcaacccct gaattagcat aatccgctcc acgagatagc 1620 tgagatgatt gtccaggtgg agttgaaaag catgggtata ggtgcagcgc cgcactccag 1680 ttgtcaggct atgacagtca cagataacta tccacgagct cgtttatggc accgtgggca 1740 aagggaaggt gggggggtat agcacggtgg gggccctttc aagagtacat ggccctcaga 1800 cacgtaaaga tattttegtt etecatgett atetegttet catgettate etttggeeac 1860 tggtaaaagc atcggcagcg atttgagatt atgccaataa gccagtatgt actaaacact 1920 tccaattcaa gatacgcttc aaatttcata gtctgaaatt cggcttggga acgccctgag 1980 gatttttcgt cgcttcctgg gcgaactcct ggttcagtca tcaatgcttc aacgtcatag 2040 ccattactat ttatgtgaaa tggatcgact gcagatattg tgcacaccgg ccattttcat 2100 gtcgcggttg tcgccctaat tgttatcatc atatgcacaa tccagcagcc agagtccctg 2160 gettttacet etagteagee aacaaagete etecaacaag gaatagagag eegatgteta 2220 aaatcagggt attgaattgc cgatcgagat tcaatacgcc gaacaattgg tcattctcta 2280 ategeeteeg actaegeeca tagtgataae ttegeeegee gteaateaeg tagaeateea 2340 ctcagtggat caagggtgtc agaattcaag gagaatatgc aaaaggatgc ctagactctg 2400 taatgtctcg gagatgggca tgagtagggc ttgataaatt aacaggaggg ctagaaaaat 2460 ccgcattatt acattacgcc gggatggtct tgtccagccc gcgcaatcga ctatgcaaaa 2520 tagtaaccaa tccagaaggt aatgcgttgt tggtatgcat cctgtctatc aatgacgttg 2580 actorogecacts gaagetgeta ceagagege acttateges gaacegttaga gategeacete 2640
aatcacegtt acetegagta teegtgeattt eceeteaate teeaaceaac caaageggtt 2700
ceteaacett atacacecag ceetgtgaggg gtettgeege ttegtttegga ttgactteet 2760
gatagagtea getgeagett ggtaggacat geetgaegga atageagtat gtttatteetg 2820
teaatggeac tgtatategg ttaacegeac geteatggat tgggeacetg caaaataget 2880
ggtetgegat etaettagtg catttgeeat agatgeaget ageaagtaac ggeaattgea 2940
ttgattgaca gatgeeetaa aagetggttg ettaeeggat ggtteaetge gatgetetee 3000
tteetttaca cacegagete aacteaagaa tggaetteet aatggaatae ggeagteetg 3060
etggttttt caceattte getaeattat ggetegtata ttgetgttg egeatgetgt 3120
ataatgteet geegttacae eeactgagee atateeegg geeaaateet geageeggaa 3180
cetteetgta egageaatat ggtaateete eaceecagtt gtegeeagaa aggaaacage 3300
getggaatge eetegtegtg geaggtaegg tggtgegegt eteteecaaa taaegeee 3358

<210> 1906 <211> 950 <212> DNA

<213> Aspergillus nidulans

<400> 1906

60 tgttttggta tacatgaccc tctgacagaa tgccagagag gaggagagat gtcctcgccc cattcattcc ccctttcccg ctggagagag cacctaagcc tgaacctatg aggcactgtt 120 ttcataagcc tgatcttcca aatggtcctg tttttgtgag cggaccaaaa gaaagccttg aaagaaatgg caacggtcta agactgccac ctcggtcaca ggtgcactta caaaacagga 240 atgtgaatcc acaggaccac gtgcttcctt ccatcgagaa tcctcttccg gtggagatca 300 aacgcccaaa cagtggccat atagagcacc ttactaagag gatgtctgga gctttcacct 360 ttcgctcagt aacaccacac cgccaggtgc accatgatct tccaagtcgt acttttcagg 420 aacctgttgg tcaagaccac atatccaaaa gacggcgttt ggcataccac gagccaactt 480 tagtggaaaa accettgtet cetaacggae eteetttgag cacteaccea ggaacteggt 540 atgcccggcc ttttgtccag agtggtcccc atgtccgtag gccatttgtt tccccaactg 600 aggegegteg tategeacaa caegageeaa geattggeeg tgaetetttt ageactaeeg 660 etegetttga tegegageaa caeacaeteg caeateeagg ategateaaa gettaegatg 720 geeageaate tteetaeaat catettgtta acaeceagge egegtatgat agateteeag 780 tteaggeteg tacegegtet gaeacgagat ataeegeage eggeagtaae ggetatgata 840 ggaatttgea geeetatttg teagaettae eagageaceg tgtateteae aacattaagg 900 tacatgatga egetgaaatg agaeactage gaegaegggt acttggttag 950

<210> 1907

<211> 3318

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 1907

gtgcttctat gccgataccc tgcatgtgca taagatacaa tgcttagaga actcatgggt 60 120 tatttcttcg ctgcccactt aatgactgaa taatacaaga ccgttagaca tgtgattggt 180 tttgaccgaa ttgacatacc ttaaccaatg ttccagactc aggatatagt aaacggccca tatactgcct gcatatactg cgcagctaag gttgagcctt tttcctggac ctaagctagg 240 300 cacaacggct atgggctcga acaagacaac gggttgacta acaagagcat atttcaagag aagttaacat tgaaataaac ataacaagtc aggccatgca gggcatccaa gctaagagct 360 actaagaaag atcaagcacc accegeceet geaactteee etecteeate tetttgaaaa 420 480 tttcagtcaa ggcctccatc ttctcctccc ggaagtgcgc cttaatgaca cccctcgccg 540 caaactccat agtctcaatc gcctcgttcc tatttccgac agccgaccca gtgacatgca catgcttctg gataaacagg cctgggtacg cacttgcgat agcctgcggc tcgttctcgg 600 660 ggatacccac gcagaccatc gttccgttgt accggaggaa gagcaaagac tgagcgtaag 720 caatattgga cgccgtgcaa actatgacag catgcgcacc aagacccttc gttgtaagcg 780 atttgacgtg cgaggagatg gcctcgaatt tatcgcccgt tgggaacttg gtgatatcca cgaagtgctc ggcgcctgac gccttgacga gctcttcttt actcccgtgg tcaacgccaa 840 teacacgcag geceatgeec ttggetgega tetggacgge taagtggeea aggeegeege cagcgccgga gatgacgatc cattgacctg gttgggcttt actgcgctta agagaagcgt

agactgtgac accggcacag agaaggggcg ccgcttcggc tgatgggagg ccatcgggaa 1020 ttggggtaac gtattgcgca ggaccgagca cgtattgctg gaatgtgcca ggggtgtagt 1080 aacctgatac cttttggttg aagcagaggc cgtcggcgcc gtcctggcat ggagctttgc 1140 qttqttaqca aqttttqqtt aaaatqcqtc taaqqtqtat gtacqtacgg cactgcccac 1200 aggegetgga aatccactta acaccgacte tgtccccgat ettcaateet gatgetteag 1260 gcccgcgccg agcttcacca ctttgccaac gccttcatgg ccaccgactt gtccgggctg 1320 aqtaqqqaaq qqtaqtatct tccactqtat catccattaq catgcgttcg cccttgatga 1380 gactecagga caggaactaa gtgeetaeeg tgttggteat aataccaaaa tetgagtgge 1440 aaacgccqqa atgaqtqcta caatgttata acgttaqtaa ttggtacatg ccaqtactcg 1500 acteggettg gatateceat teeteeaagg taacaggtat atecagggea egeacagatt 1560 gatcaggact tcattgtcgc cgggctcagg tacatccagc tcgacgacct tggtagagac 1620 ggtaccgggg ttgtcgtaga tgacagcctt ttgcttcttg gggatttcag gagcagccat 1680 tctqacaqat ttcqcqqqqc ttctcttqta tcqttqataa qataaatqtq qqaaqqtqaa 1740 agaagtagag gaaggacaag cetetetta tatggetate eeagaccaga geaacgtaac 1800 gccaagtcga ctatcatctc tagcctgacc ataaccttag aagcagtcag gtagtctgat 1860 tgctgatatg aaaatgaggg gaaagggcat ctccgcaggg aggggagagt ggctgatcca 1920 aggaggagag agcagtgggc cttaggccag cccaaagcag gagtctgaga gagcgaagtt 1980 tcagcatgac gcagctaagc tagaatatcg cattcatgga acgtggtatc atgattcatc 2040 caatcagtet egaggeageg tgaggggege eggeggeega ggaggtgeeg tggtggaaca 2100 gcctcggtta cggtagacaa ataagacgcg tttcatagtc ttttgagtcc gtaacagtaa 2160 actagetgae ttgagagtgt tegtaatgtg gtettegeea atgggateeg acaggtteaa 2220 ggttgggacg gaaacactgc ggaacttggt gtcgaattgt cgatgtgatg gcggggaaaa 2280 cgcggggtcc aggaggagga accatagcag gaccgcgacg atgtctagga caaggtctga 2340 ctttatatcg cgtcgaagtg agtaccctgg actccaagcg tcactcacta tataatgaac 2400 cttcttgaac aagtctatgc caatgatgtc aagccgtaat gcctatggcc agttcggtct 2460 gaaatcaccc gacggcaacg gctaatatag atcaaccgcg aatttacccc cgatatctca 2520 ctcttatatg gtcatggcat cctgacgttc ttcttcacca tgtctagacc agaaataaat 2580

cetettetgg acctetggac acgtaaccgc tcaagatggc cttecetatt gtggactege 2640
acatecatet attteetgaa teecacette ceacactage etggtataca cetgacaate 2700
cactggcate tcaacattea gtegacgaat ategttetge agtgaaatee teecacatett 2760
tacgeggett tatatteett gaaactgace geeteetate ggtegaagag teggagaegg 2820
gaaagcatgg etggacecat geeetegatg aagtteeget eetegacgaa ategcaageg 2880
gtacacetet teegggagag gggcacaatg etgaagateg egatetttge etggggatag 2940
teeegtggge geetgtatet ggaggacegg atgegttgga gaagtatatg gegetagtga 3000
aggagaagage aggateagag gaggtttgge gtaagataeg aggegtaegg tatttggtge 3060
aggagaaagg ettgactte gacttggeg teggatgeag geagggttgg atttggeage 3180
ttgaggagge ggttgagatg atgagaagg tttnegaggg egttgaggag caaaaaaaag 3240
teacgettgt gattagteg teaanceteg eegtetatte agagtettaa tttggtgeca 3300
tgegataata tgetgeet

<210> 1908 <211> 1734 <212> DNA

<213> Aspergillus nidulans

<400> 1908

cccctagggt caagcaagag ctcgtacggg gatttggcct gttcagtctg acgagtctag 60 ggattattat tgccaagtga gctatttttt tggatttcct ttatctatct ctccatcttg 120 180 caccetgeat accagacaeg teacetatet aaatgtegte aataacaget egtgggeege aaccggaggc acaatcgtta ctgcgctgta caatggcggc ccaatggccg tactctacgg 240 cctcatcgtg gtcagcatct tctatgcctt catctcagcc tcgctatcag agctcgcctc 300 agccatecec teggeaggeg gegtetatea ttggteeteg gtegtegeag geeggtaegg 360 ccgcgcggcg ggcttcttca cagggtacct gaatgcctgc gcatggctac tcagcgcggc 420 atcgatgagt tcgattctag gcaacgaagc agtagccatg tatctactgc gtaaccccga 480 cgtagaatgg cacagctggc agccgttcat cgtcttccag attgtactct ggatgtgctg 540 600 eggaattgte tgetgeggga ataggtteet eeegetgttg aategaattg egeteattte

qtcqatqqqt qqcttqttca ttacqattat tqttctcqct qctatqccqc qtqqtcqqtq 660 gqccagtaac cagcaggtgt ggaggactta ttataatgaa acgggggggt ggtctgacgg 720 cattigttic ctgagtggcc tgctcaatgc ggcttttgct gttgggacgc cagactgtat 780 tagecateta tetgaagagg gtaatgetet teegtageat tetecatgat gggatagata 840 900 tagcatgeta acagggtgge atccagtgee geageeegaa eggaaagtee egeaaggaat aatgctccaa ctcctcacag cattcagcac agcattcatc tatcttatcg ctcttttta cagcataaat gacatcgacg ccgtcttcaa cagcgcactc aacttcccca ccgccgaaat 1020 ctacctgcaa gcgacaggct ccaccgccgg cgcagtcggc ctcgtcgcac taatgttcct 1080 cgcaaccttt ccaaccctaa tcggcaccct cacgacaggc ggccgcatgt ggtggtccct 1140 cgcacgtgac aacgctaccc cctttgcgcc gttccttgca aaggtccatc ctacccttga 1200 tgcaccegtt aacgcaactg tegegatgae aaccatggtg aegtgeetag ggtgeateta 1260 tggaggaage aegaeggett tteaggeatt gateagetee tteategtae teageaeget 1320 ttegtaegee ggegegatte teececaect getaageggt egaggeegeg teattttegg 1380 gcccttccgc atgacccgaa gctggggatt cattgtgaac gtgctcgcgg tggtgtatat 1440 egetgtgaeg gtggtgttet tetgetteee gtttaegttg eeegtgaegg tgeagaatat 1500 gaattatact agtgtcatta ccgtaggttt aatgacgatt gtgctggctt ggtggactgt 1560 gcgggggatg agagagtatc agggcccggt gtatagtatc gaagctgcgg aaaagattgc 1620 tcatgaagag acggagaggg ttgccgagga ggttggggtc ttgggcgagg gggttgggac 1680 gagggaataa gctatagtat agattatacc aacgaagtgc ttgcaaacag ctga 1734

<210> 1909 <211> 4454

<212> DNA

<213> Aspergillus nidulans

<400> 1909

ttctggacct cccgtgcata gtcattgaca gccggcataa caggtacaat caggacctga 60
cgcgggctga tccagaacgg ccacttgccg ccaaagtgct cggtgatgat acccaaaaac 120
cgctcgaaac tgccaatgat cgcgcggtga atgacaacgg ggcgggcacg gccgggtgcg 180
ggctcgttgg acttggggtc agcctccttc ttcgcttcct cctgggtage ctgggtcttt 240

300 tegecagtea tgtaetegag ettgaagtta aggggtgeet ggtaategag ttggatggtg 360 qcacactqqa actctctctt qaqagcatca gcaatcgtaa tgtcaatctt aggaccatag aaagcaccat ctccttcgtc aatagttcag tcgtcgccct tgaacttggt catggccttc 420 480 ttqaqctqct cttcqqcqta qttccacqtc tcaaqctcac ccagatactt ttcaggacga gtggaaaqct tgagcttaaa ggtgaagccg aacagtccat atatggactg caggaagtca 540 600 aagagteett egatttegga tteaatetgt eetegteage aggtetgtag gatacattet ttgcaaagca tcttacctga tcgtgggtac agaagatgtg ggtatcgtct tgctggaact 660 ttcqaacacq qqtqaqaccg tqaagaqcac cagacgcctc gttcctgtgc aaaacaccaa 720 agteegegat tegeagegga ageteteggt agettegete geggtggeeg aatageacaa 780 agtgacccqq qcaqttcata ggcttgagag cccattctct cttttcaaca tcaagtttga 840 acatgtcatc cttgtagtga gcccaatgac cggaggtctt ccaaatgccg acgtcgtaca 900 tgttgggcgt ctggacttct tggtatcctc gcttgcggta ctcggaacgc aggagggact 960 ggagggegtt gaaaatcctg acaccgttgg gaagaaggaa cgggcatcca ggcgacacgt 1020 categaaaaa gaaaagttet tgeteettag egatteteag gtggttgege tttteageet 1080 cctcaagaaa tttgaggtgc tccgccatct gtttcttgtc ggggaacgcg acaccacgaa 1140 ttcgttgtag agagtcgttg ttctggtcac cgaggaagta ggcagaggag ttctgctagg 1200 ggttagcctt aacgctttta ggggattcgc ttagtatagc tgacctgcat gatcttgaag 1260 gtcttgacct ttccggtgct ctggatatgg ggacccctgc agagatcaac cagagtacca 1320 categgtaaa eggtgetett etececagtg acaagtttgt egatgtagtg eagettgtae 1380 ttgctgtacg caaacatett ceggagatte teettggtga ettecaateg gtegaaacte 1440 tgcttctctt tgaaaatctt gttggccctg ttgtcgaggg tcttccagtc ggactctttt 1500 acgacacggc tgcctagatg tcagtgactg tagcgaacgg acgaacgaga tgcgtactta 1560 tcaggcatag ccatatcgta gaagaaacct tgtggagtag gcggcccgtg ggagagcata 1620 caccegtact egeattegea agetteacet agacagtgtg egetegaatg ceagaaaaet 1680 tecetteect caggateget gaaaggaaca tacgacactg tgcattetee etccaatggg 1740 eggectagat eccagagetg tecateaace tttgeaataa eaatateege getgatetee 1800 tttgggaegt gtttcagtag etgegetggt gtggttteee aageettega gggaategtg 1860

gtagtatttc catcgccgag ttgaagggtg acattgattt cagggtgagg cctgttcttc 1920 acctcctcca gatgctcctg ccataactcc tcaaacagct tgttccgctc aataatgaag 1980 tcggggagcg tgtcgccgcc tacaacaatc gacatagtca ggaggggttc gaagattcag 2040 cggggcaagg aatacgactc actggccggt ttagcctcag cggcagcccg aacaggcaaa 2100 tctttgggac catcagaagc cataattgca cctctcaaca aggaaacaag aatgatcaaa 2160 qqatatqqqc qttctcqcqa cqaqaqqttc ttttqatqtc tcaaqcctct agaaagttqa 2220 ctcaqatctq tqaatcatac ctacccqqaa qqcqqtqaqt aactcqqcta qcaacatttt 2280 cetttgagge tecegeegtt tgaaaactte teegetteag teegeaceag gtegacaaga 2340 acaaccccaa catcaagatg tcatttcgcg gaggcggtcg tggcggcttt tccggtcgcg 2400 gtggaggctt tggtggtcgt ggaggtaagc aattgtgaca attgaagaca gatatgtgtt 2460 tgaccagagc taaatgaaat ttttttggat aggcggccgg ggaggtttcc agcagtcttt 2520 tggaccgcca gaccaggtgt taggtgatta etcacattga aactggettg gaggeatcaa 2580 ccggctaatt acaattttag agatgggcac tttcatgcac gcatgtgaag gcgagatggt 2640 ttgcgaatca atcaaccega agatteetta etteaaegee eecatetaee tggagaacaa 2700 ggtacgagac gagcaatatg atctgggaac aatttgacta atgattgctt tctatagaca 2760 cccattggca agatcgacga agttctgggc cctatcaacc aagtatactt caccatcaag 2820 ccccaaqaaq qgatcqtcgc gacgtccttc aagcccggcg acaaggttta tatcggtggt 2880 gataaactcc ttcctattga gaagtatgca tctttctgcc cttgggagag tagtagcccc 2940 gctgaccage tatatcaggt teetteecaa geccaageet ecaeceggta aatatateea 3000 ttctgtaaca tcgccctctt acggactctg ctaacaagac aataggtgcc aaagccaaga 3060 aggeagtegg agetegtgge ggeggtegtg gtggtegtgg tggtgetege ggeggeggtt 3120 teegtggeeg eggeggtgee eecagaggae gtggtgeace tegtggtgga agetteggat 3180 tccgcggtgg tgctggcggt aggggaggtg gccgaggagg gcctcgcgga ggcttccggc 3240 gttaaaacgt gacagettet etgtetttge etcgteetgt ettattaegg egttatggga 3300 acacgggaat tatgtcgata attttgacca cggtcatttg agaaaaattg gttttcatct 3360 agtettgaaa tttgtatgat etgatettet eegeggtgtt geegtgaeet aegttgtata 3420 cgaaatcagc ccacaatagt tacacgtgct caacggccag aggcatctcc agtttaagca 3480 taatccaatg ttgaactaga agcgttattt tgtcaactcg aacagagaag cttagaacct 3540 gcttgctggt agacgtggct gagtgtggcg cagcgatgac gtctagtcgg actgctgaga 3600 gcctgaaaga agcgagagcc tgcacgtgca aatgtcaaca cattetecat cggaccgcaa 3660 ttgcagccca gtattgcttt ctacctaagc atcacccatt tatattactt tctagccact 3720 atttacccta taaaccctct tttctagctt tcccttgtat gagcatgttt cgaaggactt 3780 cagccatgcc cgcgaactcg ttttcacaca gtggtgtctc agtgactgcg gatggaggta 3840 tgccaggact gcataaatga catggctcag cttattgcca ggaagttgat tagctcatga 3900 aaaccataat gatgcagtgg ccatccaaat ctagtggact tagtttgtct gggccagatc 3960 ttccgtgcct agaaaacttc cttccctctc tgtcagtgtg attctcggcc ctctgcacct 4020 atgctcacct ttctctcgtc ctttctttcc aaaggctttt ttttttacct cattccgagt 4080 aggtgatcta accettettt taactttgee ggtetetata tatteteeet tacaaegeet 4140 tttatgtcct ttatctgttt tcctaacttc cttggttgct ctttttagac ttgtacctcg 4200 taatttcata tctcgtatcc attattgatt acctatcact gtcccttttt ctcttatctg 4260 catctcttac ttatacttag tctatttctc ttctcctctc tttaaattct atcccttctt 4320 cetatatece ceteatactt teattettt cettegeact acatteactt cetetettaa 4380 cttttatttt tcttcttaat aactatatat tcatattttc ttcctcaatt attctacctg 4440 4454 actacctctc ttaa

<210> 1910 <211> 8709 <212> DNA

<213> Aspergillus nidulans

<400> 1910

tegeogttet ttgaattaat etaecaatea caatteette ggteteaaat gggeateaat 60 etetttgeet ttaaatteeg aaacacaaac egcaagacag aaeggggtee eecatgeaag 120 gegegeeaaa gateeacegg tagttettge acacagaatg geaeceaace egggegttea 180 gaageeatt gttgttatgt gteaeceteg gteteeaaeg tteteetaee ggegeagtea 240 eetttegege aaaaetgtte ggeateegag etgtaeteat agaeggagaa tgteeaetta 300 tetagegtea ageteeaeae teegtttgag eeeggegatg aatetaegeg ttgeteecae 360

aggtactgga agccctggtt cagaagacgc ggcgcacgat gccaaccggg ctgctctttt tgcgagggcg gcatatgcat tgatgcggcc taccgttagg tttgagggtt aacgaacgtg 480 ctcagccatt cttggtctac agttgctatg agccggtggt aattaagctg gtggctttgg 540 acctgttcgg gttacgtgag ctccgcttca caaaagcatg gaatcgcgtc tatttcggag 600 tgggcacacc caggaccttt cccactagag aagtccaaac gatgtaatgg tgcttcagtc 660 agaaggacaa tcattgcgcc aatacagcat ggatgtgaag cggagttcat aaacccatgt 720 gtcaaagcca gttagtgagc ccactatcac ccccatcaac atgcattgct gaagcagact 780 ttgtcagctc atgcatgtgc ataatattct acaaaaccga gatagccgtg ccagtctgcg 840 ttcgctgagc gcgacataag cttgggcgta tttttctgag gtatggaata gtgcatgggc 900 agcagaaatt aatgccagaa cggccttaaa cgaagcccgt catggccctc gcaataaagt 960 gacaggacat gaagcggcaa tgagcattac ctataaggga aaggcatttt cagcgcccaa 1020 tgtactgctt ggcctacctg cctgaaatcg tcaataccac ctcgaacgac cattcgtgag 1080 tattacttgg tagtatgctc cgcagttggt ggaaatccag cgcgaacaaa caaacatgag 1140 aacgaacgtg agctatatct agaggacttg atacctttaa gaataccggt gggtagaaac 1200 tgagatgggg gagtgggtgg gtgagggata cccatagccg acagacaact gaaatcgatc 1260 agcaccttgc gcgattcaca gcataggcag aaagaaaacc cgtacttgca agacaatatg 1320 ttaatgctca gcattgcatc atacattaat gggacaacta ataaattggc taacttggaa 1380 cctgttgttc tcaattcacg aaacacttct acaccttcag ggtttataaa acatatttgc 1440 cgccgcaaag tatggagaga ccaaaccccc gtcctacgaa tgaaacgcaa atgaaaaact 1500 tccacaaaga aagggaaaaa gagacacagt gagaaagaga agaccaaata tcatacccat 1560 tcgagttgac ctattcaagt gcacattgca ggttgatacg atagttagac atacccgcaa 1620 ttcgttgaag actgcaagtc catgagcaaa acggcacata gtctgcttgt tgcactcgta 1680 agctccaaat aaatgccgca ttttggaggg aaggcggcaa agttaagact gttttctgtg 1740 teegagtaga teatagtetg acacagagag geeceagata gteeagtetg etagaacaaa 1800 ccgccgggag aagcacaggt gtcgacagcc ctggcgcgta tggtttacca tatcaactcc 1860 agccggacat ttgaaggaag cgatggttga ggccagctgc cggtgagtga gaccgctata 1920 gggcgccgct ggcttgggtc gaaggaggcc atgctgtttc atctggttca tcagagcatc 1980 caacatccga gaatcgcaat ctacagtgca tcctgggggc cctttaagga gtacgttaag 2040 agtgttgtgc aaaacgtcga aatgggcgcc gatgaagcaa ttccggcgct ggtttagatc 2100 ttcgaggaca tcaccagaaa tgggagcgcc catggaagta atctgtccag ggctctctgc 2160 gattgcaata ctagtgtact tggcgaacat gttgtcaaag tggaggtgga gcgaaatcga 2220 cacaaaaacc atgagggtgg gacaataggt tctgggcggt tcggagtctc tgctcgatag 2280 ccacgcagaa acatgggagg caataagaga ggggcattcg aaaaacgctg ctatttgagt 2340 gagctttgca atttgaagga ggtcggtaag aggcgtaatg gggtgttgcg ggttgtgaag 2400 gategteaag aacaacegga egagateggg ategtaettg ggtageacat aateaageee 2460 acgcggcgaa cgtaacatgg tttgagcttc taaggtggta aggaccctgt tcattagagg 2520 cgagacacgc ttcaattgat cggctgatgt gcggaatccg gctgcaggag gctgagctgg 2580 tagagagect tgteetggte cacettgete geetgeteea geetegtgat tgaggggeae 2640 gatgatgata agtgtgccgt ctcggctaaa gaccgtcaag cggctgggac gaacagtagg 2700 gtaagacata attgtgatca atttaaggct ggtaagatta gacagctcag tagtctaaca 2760 gttaagaacc ggaatggttc ccaagagatc caataaaccg cttcaagaac agaccagaaa 2820 gaggataaaa aacacaatca gaatttaaaa aaaaggggag aaggaccaaa ataaaagctg 2880 catagccgaa caattagtag tgaataagta taacaaaacc cagtgaatga aaactcctta 2940 gggctctggc ctatctcgca ccggcagttg aactgccaat agtaaagata tctggaaatg 3000 ctggccaatg tactcaattc cttcaaggct acctttgtct cttctgcagc acctatgagc 3060 gtcgcggaac atacgttacg cgggccactg aagtatgtta gatctaactg aagacataaa 3120 tgacagttgg ttatcatggc ggagcagaac gtatccaaac agaatatatg ccctgccctt 3180 aacagttgga gcattagcac tacatatgct agtaataact tcaacgcgcg cgcggagatt 3240 cctcccatta ataatggctc gaacatgaat tggcattgcc aggacccgaa atgctgcaac 3300 tgggtatgtc caggagggct agttgatgga ctcttagggc agttcaaagt gaaaacctac 3360 aaatcgattg cccagaatcc cataatcatt aagtgtataa atgacctcaa ccaatctacc 3420 agatatatat ctcagcaaca gcaatcgtcg tcatcattcc cattccctcc acagcaacca 3480 tcgcagcagt cgtcatcccc gtcgttccca tccctattct gcgtcataaa gtcgagagat 3540 gtatacggct gctgctgctc atacccactg tcgttatacc ccgagttgcc gttgtcatac 3600 cccaaactct gagtctgata cccctcgttc ctgctctcat actcatagtc agatggctct 3660 agttcgctcg aatcttcctg ccgctcagct tcagcttgca atcgctgctc ttcccactgc 3720 tecettteee atgeaacece egetgetgea eeggeegeag eeceaagtge egeteetgea 3780 acaacacctg caacagtett ateccaatet tteetgtett getecaectg egeetgtgae 3840 ttataccaca tatattgctc gtactcatac tgcctctgcg catcagcatg ccggatctgt 3900 tccatttcat ggtccattgc ggcgcggtct ctctcatact gagctgcaag ggcagcattc 3960 tgtttctcga agtgcttctg gtgcgcagca gattgcttat caaaagccct ttgttgtgca 4020 ttggcgtgct tgttgaatgt tttttgctgt gctgcgaatt gtttctgcat gctctttgct 4080 atctgcgcgt tctctttctg ggcactttgg tttagcttcg cttgggactt cattgtattt 4140 gcatgctgcg atatctgagt ggtgtgctgt ttcaactgtt ggccgtggtg gcgctgcgtt 4200 gtttgaatgt gggagagttg tcttgcttgc gctggagccg agcggggatg agggaggtag 4260 tgggagcgag accgtgctgg agctggagta ccatgggcca gagactgagg aggatggtat 4320 gccatctgct gtggtgcacg gggttgagca ggtctggtgt atgccggcgc tggggagtga 4380 ggatggggat gggaaatagc ggtaggatga gagtgagagc ggccatgagg ctgggggatt 4440 ggtttacggc ggtgtggtgc ggtcatttcg gatagagtag ccttgttaat aggcaggcag 4500 atagggctca agatgtagct gtaagaatga ttggagtgaa cggagccgaa ccttgcagag 4560 gatggacceg gcgatgttct tataccetgc gtcctcagat gtcctgcgaa cctgattcaa 4620 atagcaatcc tctactcatg ctaatagttc taggtaacct tactatcagg acttacaatc 4680 cactaatccg accccaatgc acggctaaag attaagcaat atcgcccacg tttgttggcc 4740 cagcgctgcc ctatttagga aatccacgag gctgccatgc acgcacgccc gaacggctgg 4800 cccttggcga cgttttcctt ggctaatttt aggctgcgtg ggataatgta aactatttca 4860 agcatcagca gcaagttaat tggaccagaa ctagtctaga cttgtcccag ggacgctcgc 4920 ttctggggct gagttcgacg ccaaaggctg aagacttcac aactccttca atgcatttga 4980 acactgagca atagcctggc cttaggaaag atagctactt gttttgcagc ataatcttaa 5040 ttccgtgata cttgtccctt cttccgtttc gttgtgaggc tggagttcaa aatgagagct 5100 aatagtgtag agcgtggaga tctccaagtc tgtctcgatt gttttacaag gtctcatcac 5160 tctgaaatga tgttttgatc gaattgcgtt gccagagcct cgcacatctc ttttcggctt 5220 actgtttatt ctgagactcg tgagttaatg ggtcataaga gggctaatcc agccattgtc 5280 tggtgtttaa tctccaacca agggtaatgt atatgctgat cggttgcatt tgggctactt 5340 atagtgtccg acaagaaact aaggtttatc tcctgattca agaagaacac tgacggtcct 5400 acagcgacac ttttctgccg aaattgggaa ctaaagaagt atgtgagatc ttattcaaaa 5460 cagataaggc taggccagag aggagatatt tgtctactga gtggagatca tacgctagta 5520 tctattctaa tcgcactatg caaaccccag taccactacc cgtatcagaa ttgacgatat 5580 ctacgtccca tgctcatacc cactacgcgc ccgaaaccct ggccccttgt agaagaaaac 5640 ccacggaatc ggcgccatca ccgtagctag aaatcccaga agactagtcg cccagtccac 5700 ccccagcgcg tcgtacatct gcggtacgaa cagcgggaac gcagtggaaa gggtatacct 5760 tgtcaagctt gacgccccac ttgcagacgc cccgtattta gacccataca cgtcaagcat 5820 gtagaagtta caggggatgt atataagcat actgccaagg aatgtcaggc tttgtgctac 5880 aatgggggcc atccagtgga tgtgcggttt cgccgtccag gcgaagagga agaggccggt 5940 ggggaggatg agagagccaa acatggctgt gtagagcttg agctctgggg gcgatccgcc 6000 gccctcagtg ttgttatttc ggattcggag ggtaggattt agctgcacaa tccggtcgac 6060 tgtgaagagg actagaggtg cacatatgca gccggctacc atgcctagga aggagaggcc 6120 ctgaccagaa ggggagaagc cgtagacgtc tgcaaaaacg cgcgggctgg cgacgatgaa 6180 ggtgtagagc agggcaaact ggaagccgca gtagaggcag atgaagccga cgaggggctc 6240 ggtgaagagc atatggagcg ggcggacgat ggtcgaggtg acgaattett taaagagctg 6300 cattgcagtt tggcgctgca caggcaggac accttcgcca cccagtttct ctgcgcgcct 6360 ttgcaacagg atcggcttat atgactctct gatgaagatg gctggcggat ggacgactgc 6420 cgccatgatg agcggtgtcc atgccgtcca tcgccagccg cgctgctcga ccacaaatga 6480 accgatcaag ggacccattg agcttcctat tgtcgggatt gcgtagtaga tccccagcgg 6540 aatgactctc ctagaagggg gtgtgtagtc agtaattgtc gccgctgcca ctgagacgcc 6600 cggtgctgcg aagacgccgg cgacgaagcg gcacactatc aacgaagcga tcccctgcga 6660 cgccccgaca ccgagcgtga agagatccac catcggaagg gtaaggaggt aaacgaattt 6720 gcggccgaat gtctcagaga gtggagagga gatcatcggt ccaaatgcca gtcccaggga 6780 gtatgccgaa agcggaagca gagagaccgt cgttgacaca ttgaagtctc ttttgacctg 6840 ctcatgacca gaagaataga tggaggcatt gacagtggtt gcgaacccaa tcaagccgat 6900 gacggtcgtt gtcagagtct ttctcagcgt ggaccagttg cgcggattcc ccgggtcgtc 6960 gtcactgtcc cattcttgga gtctcctctg tctttcgtct tggtcgtctg cgaggtctat 7020 ttgcatcatc ttgatacttg agccaatgga ggtttccatc caagcaagtt tgcgagacag 7080 tgctggataa tagaggagtt cggctatgac tatccttagc cgagaccagg ccaacgatgc 7140 cggagatctg caaatgccac ccaattagag gcagcgttca cagctactgg acagggctag 7200 actgctcagt gagtcggtcc agcccgatca gctgtcagct ttttaaagtg cgatcggaaa 7260 cacteggete actgteaaga gaceeaatgt geggggaaga ecaatgteae gegtggggae 7320 gcaaagggct ggacaaatat ccggctctga ctcaaccacg cctgggtaac ctaagtaata 7380 aactagatac atcagttggt tactacatgt agcagtaaac ttgctgccga cgaacagcac 7440 ttttcaggcg gagtcataca aactcacttt acaccccttt cagggcactg tcagcagtta 7500 ttgttatgcc tttgccagag gaggccgcag ccgtaatatc aatatgatgt tctctatgat 7560 aacagtactt cgagatgttc tctaggatag acataatagc tgactgctat cactaggaaa 7620 gacacatacg gaagacaagt acctgaaagg tcatgatata gatcgaaggt acctcctggt 7680 tatactggct ggctcagcca ttatcctagt acttaatcta caagagaggc aagcaggtgc 7740 gattgccatt gtcgccgcag tatctgggga agcagggctc cagagggttg gtgaaggaac 7800 ccagcactaa aggccagcgc caaccgagca aaactaccag gagatagata tcttaataat 7860 aattatattg cagccagaat tatctcgacc aaaggacggg cagtcgtgct gagcttatct 7920 ccacagaccg tgcttccttg agagtttccg acatgtaggg ctgagatcta cccgcccaaa 7980 aaagagtagg cgcactatca gccctgtggg gaagactttt atataaacat cagaagcagc 8040 tagttctttt ttatgggcac ctgtatatct aaggagtcag tgctcttcgt ggtcttaccc 8100 ctcgtcttct ctcgcgattc atgtagagcc ttgtcctccc aaccgttggg tgcgaaacac 8160 ccaccaaggc acaatggtta atagtgcaga acgacttgta attcgcgctt tcaatcttcc 8220 cggtaaggct caggagtatg ggcgtcttag tccgcacgcc ctctgtggcg cagtcactag 8280 caagcaagct tetetgaetg gttgeggeet ateageegee tgtagtaete egtttteaet 8340 agagaaccag cagggatgat agtggctgag ccagattgcc ttagtatcag gcagaataat 8400 aaacaaaggg tggcctataa atacgatcta tcagctgctg tacctatctc cttccacagc 8460 ctggccactg acacetttac tacttgctac agcacgcaag ccagecetaa attttgctag 8520
aataggtcca agccagecat catacteget teaatecagt tteacagtet etaacactac 8580
ctaatggegt atategacea gecagaaaaa teeaceatge attacgacea acegecagee 8640
tacactgaaa caacettgac ggeggettea ttagtaggee cagetetaga eegeceetac 8700
ageteacat

<210> 1911 <211> 2090 <212> DNA

<213> Aspergillus nidulans

<400> 1911

aagatagcga cgggaaatgg cgggggccac actattctct aggtaccgat gagcgtatag 60 tgcaacggag tatccgggca atagccagat aaacttgcgg gaggagaaga ggatgcggcc 120 ccctgtccaa atggattcta gaaaaagcca gaacccgacg acgactgctt ggatatatgg 180 cggttgatct tcgagtactt gagtccgctg actctgaaaa ccgtgatcgc cgatgaagaa 240 ccagccggca gccgataaga agaagcaaat cggggtgatc aggaaagagt aattgtttcc 300 aagatagggg atcagagcca atgcggtgca aaaagcccca gccgttcctg atacttcgta 360 gaatatatgc accaaagcat ctacctgacg tagtttctgc acattgccac caactagatc 420 ccgcgggatc acacgccgga tcaactcaac catgccgtag gcgataccgg ccacgcaata 480 cacgggaata atgccatcag tgtcgtagct gccgtagtag tggaagtcat gttcagggtg gtgatctcga aaggccgacg ggaggaatcg accgcctgtg ctggcatcaa tgatgagaag 600 tagggcgctg agaaggccaa agaccagaac ggcgccggcc agaaccagcc gcgaagggaa 660 ccttcggata agcggggcga tcaggatgga cccaacacat tgacaggcct ggttcaggcc 720 accataagec caaccegttg aaacgttttt ggggtggtgt tggtcaggta ggegtcataa 780 tcgtagcgat tagttgcaag tgtcacgatc gatccgttga acgcttcaag cccgaacttg 840 tacatcataa tacccaaaat gtatatggct atgttgcgtc tctccgcaga gtaaacaagc 900 gccaattctg cttgactgca tcgtaaaagg gttccatagc cctgggcgcc ccataatcat cttccacaag cgggagtaat atcgcaggag cgtgaagcgc tgctgccaga ggcttttaaa 1020 tgatgaccag tgacgaacga ccccgccgtc agagatgtag tgctcagcct gacattccga 1080 tagctgaccc gacattgctt cttccctgtg gtcatcccac gggccctgcc tgactggcat 1140 ctcggcgaga acagtcgaga accgtgagaa caaatcgaac cccaggaatc aagcacgttg 1200 ggtgggtaat aacagggatc aggaattgag taatatctaa actttgctta gtgaagtact 1260 agggagetet catggaagte gtgtagaage tettggatgg etggtatgea tettggeece 1320 tcgtggttta tggaggaatc gaatcccgcg agggaggcac gtggtggaga cctccagata 1380 gggctagcgt tcaatcacgt gaggaaactg ggtatgcccg gcaatgccaa gaccaaacat 1440 atggcgcttc agcatggtta tgtatccagc aaggagcaga atacaagaca gcacatttgg 1500 atttcagtcc tatgatgtca gcgcttatgc accactacta cagtagggag gaaattttat 1560 caacaagcac ggttgtttcg cgcgggatgc tgcatgctgc atgctgcgga cttggctcag 1620 ctggtcctcc gcatccttcg ccaagactca gagccgtatg aaggagtatg aagtacataa 1680 tetetgecag egteaactat actatgatea caataceagt tetatgaega tgacattgae 1740 actatactag aaatcaacaa tagccaactc attcatgcat ccatccatag caacccgtgt 1800 cgcgtccgaa tatcagtata caaatatcaa ctggatgagt ttacccctta aacaccggcc 1860 gattttgaga tgacggggaa agaacacata ggcaggaagc gaaggtaatg aaaataaatt 1920 ggaattgaga aacctcagtg aagactatta caatttgggc taagtgtcag cttggtctta 1980 cgatatetta teatggttet geegttetgg geagaacata etagagagat eaagaetttg 2040 2090 ctgcctcagg cgcgatcacg caacgccgca aacaaccgct ctttccgctc

<210> 1912 <211> 1762 <212> DNA <213> Aspergillus nidulans

<400> 1912

ctcactttcc agctcgatct cagctccaat cgtctcgaaa cagtatcaac accctccccg 60 ctaaccaagc tgcgggctct gagagtttcg gacaatcgcc tgcggagtct caatgttggt 120 ctattcccag cgctcactct tctttacgca gaccagaact gtctatccac cattttaggt 180 cttgaccaga gtcgtgtctt agaagtattg tcagtacggg aacaggaaat tccggatggc 240 gaatcccttg atttggacct gggattgctg aaggatatcc ggaaggtatt cttatcatca 300 aacaaacttt caccacaaac actttcacca tccgcgcctc ttctgagcct gcaacttctc 360

gatgtcgcaa cttgtagctt gaaagcgctg cctatggact tcgccacaaa gttccccaac 420 gtcagagtcc ttaacctcaa cttcaactct ctggagggag tgaatgcatt gctcggcatg aactgcctct cgcggctaac tgtgctcggc aactccatct cgcgcctccg agatatctgt caagtcctca gtcggatcgg ccgtacaagc aaatcaaaca cttgcacact ccaaaaagtc 600 gacatccggc acaaccctct cacagtccga ttctatccac ctgccttaac cgggagcggc 660 aaaccacaac cccagaaatt gatttcaaac gagggacgac gttccggcca tagtcatggt 720 ctcgacttag atctgcctct catggagcag ctcaatcgcg aaggccagct gcttcaagtg 780 aatggcgaag acggcgaaga tacagcgcac gctgaccccg aaatcgatga tccttacact 840 cttcccccag cagatttgtt gttggaccaa aagcatctag cccatttaga tcaagcaaca 900 agactcaagc gtagagtctt cgagcttatg ctttatgcag gcacaggagg agcgattaaa gtccttgatg ggctggattt ccggccggtg cttgagcctg gttcagatat gaaccaggct 1020 tgggctaggc ttgaacgact cggtgttctc agaaagaaag cgatcaccgg ttgatcattt 1080 gattettttg attacceett ttttttcact teacttetea atateetetg cetttetgea 1140 tttcttatct aggacggggg tgaccccgat atccctcgaa cttttttttt tcttatttgc 1200 ttccgaccat gttgtgtgta ctttggaggc tggctgggat ttcttgatgc agcgttgctc 1260 ttagcgagtt actttgatcg tacctcggcg tttcgggatt gattgacatc tgtatctgcg 1320 tctctttgtt gctgttggcg tcgcccggga atttgggtgc atggatgggg ttaggtaaat 1380 agegagettg teettaacat agecaettga teegcattae tggcageatt tgcattttea 1440 acctgacttt tactgaattc tctattgact gctcactcaa taggggtggg tgtgtaaatc 1500 gggtaaattc cttgctggag cttggttcta actagcggac tcttaagcct tcgtgagatt 1560 ggtgaaaatc caatggcaaa gtcttgtctt agaactccga ctcgaggtta ctcagttgcg 1620 tgccaaactg tgcccttacc atttccatat aagccttcca cttgtgatgg tcacccatcg 1680 tctcagcatt agggaatgct ttggacaatt cgcgtgtaat ctttagaaca cccgttgacg 1740 1762 cctcctgcgc cttctcgatc ta

<210> 1913 <211> 3558 <212> DNA <213> Aspergillus nidulans

<223> unsure at all n locations <400> 1913

aaaattgtcc gaaaagcatc agaaacgggc tttacagggc tccaatccgg ctcggttgag 60 gaatagtcga tgcctaaacc acctctgcta aggaagtctg cacgggctgg aagtaccaca 120 tggagagcaa ttagacgctc aatcccgctc agcacgttag tcctctcgtc cgtatcaagt 180 ccagcagcac gaacgcagtg tagtagcctg agggcgcgct gggaacaatg agcagcaaat 240 ccccctaag aatataaaag tcagcaaaca cacgcataca tcaagttgag agtccgcata 300 cattaccaga tecetetgea ecaecetgge ggtacgatet ecaeteceag atetecaaga 360 gagcaggaag aacgtagaac aaatgctgca actctgtcgt cttccgagca ttggagaact 420 gagtaatcgc gagagaagca agggtaaatg atttgcccag cgtaattgcg atcggttgag 480 gttcgcccct gagagcatgc ctgagatgag agcgagcagt ttcatcaacg ccgtcctttc 540 cgctaaccag tgtgaccaag ctatagatgc agtcaaggag acgtgtaaaa gccaaaaagc 600 atgagacagg cgttcttggc tgctcgtcaa cgtccatcga atcgtgctca atcccattgg 660 ttctcttccg cttcgtgccc ttcctgctag atccttcact caaagtttgg ctggattcgg 720 aatctgaagg cagtagctcg tttgtcccat ttccagatcc agatatgaca tcgtctgtta 780 agtccgtaat cgcatggtct aggatgccga tgaacttctg gtctttaagc gtcgacgcca 840 atgtcttcgg agaaatgagg tcaatcagct gccgcaacaa aagaaaagat gcaggctcga 900 cccgatagtt cttggcagcc ttgagcttct ttaataacca tcgtaaaacc cattcttcct tcggggccgc gtggattggg acatgagggg ctcggttgat ctccggatgg ctggcgcata 1020 acgacaagtc gagtccaata atttgggcgg cctcgttcag ctgaatgttg ggagacgccg 1080 taccettete tagtegaagg agageetett gegaagggeg eggaegetgg actateaegt 1140 tagcacagtt agatatggtt aaaggagcat gctctgtaga acgcacctct ggtaacgaag 1200 gcatcetgga ggaggcaceg teactities gtetteeett tiecegatie taeeggggee 1260 aaaaccacat tgccaagcag aaacatctaa cgctctccgc ccgtgttgat tgtagtctgg 1320 actctatgca tctcccgaga aaaaaagtgg aaagactgat agcgggcagg ccgctaagcc 1380 taatttttcc gaccgccttc ctgcttcctg ggcggacccg aagctcgaaa accgccgctc 1440 ccgaccgact caagcctgac gtctcgtcac tactcactca atccaaccat atttacctag 1500 tatettggte cattegetgt tecageacag gttaagtgat attgtettea aatageette 1560

tcaagctaat actcgggctc tagatcgctt acaatggccg actcaagcga ctcccagcct 1620 gtcgcccgct cgaccaagct tgtcagcgag gccttgctta acgagaaggt actaggctta 1680 ccccgtccgc gccgttgatg acgaatatga tttctccata attctatcag atgctcaact 1740 ctggcctcgc tgagaattat ctcctcgcat tataacaatc atagaagcgt cggctaacat 1800 gtgccttgtt aatcattagt gggategtge catetettee atgattatte getetteeet 1860 eggeetgteg teeggtgttg tetteteagt geteetette aageggaggg catggeeege 1920 gtgggttggt ttgggtttcg gtgctggacg tgcatgggag gaggctgacg gtatgttccg 1980 gcatatatgt aatgatccag tgttactaac tccataatgt agcctctttc cgcaggggtg 2040 attecceggt gagagaeget etgegtaggt agaeggaett tggcatgeag tetgaatttg 2100 tatgatacct gtatagctgc gcagataact gccatggcat ggtttttaaa gtttagaaga 2160 aattctagac ctgtatttca acattgtctt tcgcaaacca atgattcttc cttatctgct 2220 cattggtttg ctttgtcata ccttaagcac gtcaatctat ctcagaacag gggactactc 2280 attagactcg cagattattg agtggcgttg tcaagtgtac agctagtttc attttcacga 2340 accttctgtc gcccggctac gaattatgta ttttcaggca gacacaagcg caagccgtgt 2400 ggaagteett egtgeggget gtaceagtgg ettgateeac teaaatggat aaaatetaag 2460 taaaccagca accagaaaca cgtagagaca aatgcagatg aaggacaaca gcgtactcct 2520 tgcgcttcgc tagacaaaat ctgcaacagt ttggactggg caccgacacg ctagacgcag 2580 gtaaacaaaa qtaqttqagc tgtgcggata agtgaaaaat gatcgatcga gtaatacagg 2640 aggggagata gccacatatt gaaaagagga tttgaggtgg aaaagtagcg gaaggaaatg 2700 gaggetaget atgeggtggg aaatggggaa agtacacaaa cattaageca acaaacteeq 2760 aagcccgata tgcaagggta tcatgatcat gaatcgtcca aagatatccg acgtcgagta 2820 caaaaggtgt gagaaaggac ttggtagaaa ataaaccaag acaaacgcgg ttgccaagta 2880 ccagtacctg ggaaagctgc tgaattcaca gattgccgtg tgttaaacag ccaaggcagc 2940 tacagctggg accacattgg caattaccgg cctcaccggc acaggcgcca ggcaggccaa 3000 cctgatactc ataggtgtaa taagcatcag gaaccatgag gtggtctgca gtaaaggact 3060 caataccctg agcgtcatgg ccattatcca aaggagtatt accggtgcca caacaagact 3120 cgactggcac attctcagag ttagtctcga cttcagctaa cgtctggtcc atttgcggcg 3180

egetatatty aagtacytty geatgagast tetgetgate gaactegtte eegtteeega 3240
aggettgega ateetgagea atgatgegte eeacetetty aatatytty aegytaacyt 3300
egttataeeg atgyteeggy eaageeaage aactgeatty agggeeacaa etgeagetat 3360
gggggatace aetgytyty tttyttaaay tytgegytyy taaactygyy gaancaagat 3420
eggaageete agaateagte tytgeeggat geacatyee etaceegaty etgytygat 3480
ttattaytt eeetgngyty eggyteegga eaaggegyt tyteeeeget ggtgeegytt 3540
eteeacaaca ategtgee 3558

<210> 1914 <211> 1504 <212> DNA

<213> Aspergillus nidulans

<400> 1914

60 tgggggtccc ttgacaaaac gttgttaaaa gtagcatcgg cgtccaagtt ccctgtaaag eggtacgtte geaggagata accgetatat caetgetetg gagegaeagt gaattgeteg 120 gtcccacctg caccagagtg gcggtccgat tgaaacccta cagcttatat tagtatatcc 180 240 tocatcacct toacageeee egtaagegga acegagttte cegataeget geacatgttt gcatgggata tgggaccact gaccctaagc cgagtctgac tgccttcaaa gctgacaggc 300 gattgcagta atggggcgac gtgcaagtcc aagccgccag ggagatccac ttgagagccc 360 tcgaacaaga atcgcctctg ggagagagcg ggatcctcag ccacaggagt ttctgacgac 420 agcacggtcg agcccacagt cggaacggtg gaaagaaggg aaacaaggaa gaggagagaa 480 agagggcagg aaagaagagc gtgcgagaac gaggaggggc gagagagaaa aggacgttgt 540 gggagcccca tggagacggt gatggagtag atttgagaaa ggaatggatt tccccacggg 600 ttgcgaggct tacggaggcg tcggagggta tggggaatcg cggaagatca ttaggtcacg 660 gatetettqa gtqqqacaca qaaqaaqcaa aqaaaqqteq aaaaateqaq taatecaeqe 720 gcttccaagg cctgcccaga ctgacgctga tatcaccatt agcagagctg gtcgatcact 780 acggtcgtgg cggttagttt catgcgatcg atgccagagc cggtccattg gggaccggat 840 gtgcttgtgc agagcggtgc agcgtattcg tacctggtag taatccgttg aaggatcggg 900 gcgcagcaat ctggtaagaa tatggtaaga ataatttaat atgagccaga cagtcccaga 960 caaacgacga cggatgagtg gagggaatca aatgccagga tagccgggct gacgatagtg 1020 aggggccaga gatggatcga tggttggatt atcccggggg atccggcaga tggagggct 1080 ggtgacagca aatatacgcc tcaactttca actctcgaat tgacttcgaa ttgatcgaat 1140 tgatcacatt gaaggcctgg tcgacgtctg acccaccgcg ctggtttaaa tgcacgagac 1200 atctttatca aagaaaagag ttttcacaga gttcagaacc ggaaacgtga tgaaaacgag 1260 catggccgga tccagagtct gacatctccg gcttacggag tcctattctg gttgctctac 1320 ctagatggtc tgtcccatcc tgccgacggt gcattccttt gtttctattt gaggctttac 1380 tgatggcttg ggatggcctg ggcatactgc tggcttccac gattatttac tactctttat 1440 ctgacagaca caccctagcg agtggcgcaa cggggtcgga tgctacgcgc aaataggtcg 1500 1504 ttag

1915 <210> 3636 <211> <212> DNA <213>

Aspergillus nidulans

<400> 1915

cgaggtatcc cgcaatctct tccgccctct accacaaatt cagccttaca accttcagtg 60 ttaatactag aagtcacaat ggccaaaaca atcattgtca ctggtgcctc tcgaggtacg 120 tttacctaca tgctttcaag cttactccaa ttgcttgagc taacgattca ggcatcggcc 180 tegecateae aaaataeete eteteegeee eecaategea caaegtegte gtgategege 240 300 ggagcgtcga gccctccag gccctgaaga acgaatacaa ggaccaagtc gccatcttaa acggcgatat ttccgacttc tcgctcgcga cgagagcagt cgagctcgca ctgaagagct 360 teggacgcat egacggtetg gteetgaace atggtatett gggacaggtg ggcaaaattg 420 cgaccgctaa tattgaggag tggaagaagg gctatgatgt gaatttcttc agccttgtct 480 cgttcgtgca agcggcactg ccaaagttgc gggagagcaa gggaaagatt gtgtttacaa 540 gttccggagc cgcggtctct gcgtaccgcg gatggggact ctacgggtcc acgaaggccg 600 660 caatgaatca tttggctttg agcttgggtg aggaggagcc agatgttaca agcattttta tccggccggg catggtcgat acggaaatgc agagggaact gagggaggat catgcgccgc 720 ccctcgagcc gcaggtccat tctaagttta cgacagtgca caacgaaggg aagttgctga 780 agcccgagca accagggcat gtcatggcca agttggtgct tgatgctcct aaagaactga gcgggaagtt tctttcgtaa gtttctgctc aaattgctac ggatagtgct aatgggagga 900 tcaggtggaa cgatcaacaa ctcgcggcct tccaggcgtg atactaaatt actgtagacg 960 agtcagcgag actcttatta aaacaagcca tagaacaaga cagcagaata gaattgatca 1020 gccgaaagat gaaaagcagg tacatttett aagcattaga tgcagcgcat etteataett 1080 agcatggaat gtagtttgtt catcacaaaa atagaagaca gaaaaaaatg tcaatgccgt 1140 accttttcat gctagctacg gaatggctgc tctgcttgct gatgagcaag gctgtcctaa 1200 atgcttcaaa ttatcagcaa tgctcaagta ggtgctgagt ggcataaatc atgaaattgt 1260 ggtatcagtg gtccgtttgg cttggacagt gtacgtcacc atagaatggt ctgatagggg 1320 cgacaacgat gttcatcatg gtaaaaaagg caagcagagt cgattaaaca taccttgtca 1380 gttagtcaag agcataatgc tgaattgtag atatttctca aagaacatca tattgagatt 1440 tctctgtggg agatgaagaa aaataaagcc gaaaaaaaat cgcagccgaa gataaatagc 1500 ctgagcggtg ggtttctgcc tcttggttaa tccgttccgc tcgtcgcatc catatttcgc 1560 gataaagagg gtccgtcagg cttacgctcg gacaaagagg caacgtaaac aggtgactcc 1620 atactgtcac ggtataatct atcgccgctg cagaagactt gctcttgcga tccctttaga 1680 caaataccga aatcatgtca gatagggagt tcagctgtac gtctttcgcg tcttggcgca 1740 acaatgatac tagctaacac ggccacagca aatgacgact tgtcgcttcc taaaggtgtg 1800 aactaccttg cgatgtttct tcgcgagcct cggtgtgctt ctaagtcgcg gaactgtcgc 1860 taatagtcac agcgacggtc cagaaaatca tcaccgagat ccttcccccc tcgtccggac 1920 aatccttctc caaagacgcg cgcgaccttc tcatggaatg ttgcgttgaa ttcatcaccc 1980 taatctcctc cgaagcgaac gacatcagcg aaaaagaggc caagaagacc atagcgtgtg 2040 agcatgtgga gcgggctcta cgtgacctcg ggtttggcga ttacgtcccg gatgtccttg 2100 cagttgcgga ggagcacaag gagcagttga aggtatgctt tctttcccca ggaatatgag 2160 acatttgggg tgacttctaa ctgtgtctgc agtcgcggga aaagaagcag agcaagatgg 2220 agcagagcgg gttgtcagag gaggagctgc ttcgtcagca gcaggagctg ttccgctcgg 2280 cgacggagaa gtatcatgct gcgccggagg gtactgagtg aaggaatatg gtttattcat 2340 gcagatcgta tacctaatga gggctcgtgc tggtcatgac ggacggagtt tatacttaaa 2400 gggttatgga gttataggct tctatcatag tacacttgag ggaaatatat ttatgtcggt 2460 ctcattaacc caaatcacca atcgtgtatg ttcccgtccc gggtttcatc ttcattcaat 2520 tcatgtagac ttcaagggta atatttcgat atattttgct tttgggcgac cccctggaga 2580 qctccatagc agactgcacg aacaagtatt agagattttg atttcgacag cagattccat 2640 tagcacgaag agcacagttg tatacatatg gaacaacatt ggaggtagag attaaggtca 2700 gatacaatgt cgtttcttac ctgaaccgca ctaaccgcat ttggcgtccc gaacttcage 2760 gcgcaatcgc agcaaacacc gcggaacttc aagactatca ttgaaagcac agcctaccca 2820 aactaaaaat gccacctttt aaggatgagc atatcttggt atgctcccta gatatttact 2880 gttttagtag gcgggagaaa tgctaattct gccagatgat tgcgccagga tcgcaagtga 2940 ccctggcgca actcggcctc cccgagtcgt tcacacctgc tcgatggcgc ttcccgacgc 3000 gaatgttccc gggtgaaaag aagggcgaat tcgaaccgta caagatccgc gagaggcgac 3060 aagaagttaa aattgccaat ggctcgaccg cccctgggga gaaggaagac gtcgacatga 3120 aagaccagcc tccgcaagaa gaaaggaagg agaatacaga cgcgccgaag acggaaaaaa 3180 ccgacgagac caaggcagaa aacaccaata acaccgagaa caccgagaac acgggtgaag 3240 aagggggtga ggatggtgag aacggccaga tcgtagagga ggttttctac gaagaagacg 3300 tegegtetga agaaggggeg atetaceeta tegagaaegg aegeategtt gaetggeegt 3360 gctttttcgc tctcttgacg catgtgtata acacgctcag cccgccattc catacgccta 3420 tcatgcttat tgccgaaccg gcttggtcat tacgggatcg ggagattatc actcaatttg 3480 tgtttgagaa gttcaagacg cctgcttttt gtctgacgga ctcagcgatt accqtgctcc 3540 tacggatacg gcgtcggcac tgcaactgtt gttgatgttg ggaagaacaa ggtggacgtc 3600 accgcggttc caggctttgt ggtcaaagaa catgga 3636

<210> 1916 <211> 3107 <212> DNA

<213> Aspergillus nidulans

<400> 1916

cacaatgtat atgttatgac gggttatgtt gtactaatgg ccattggtaa atacgcttag 60 tgtcaataat taactgatac gatccttact acttgttcat aattgcccac ggagaagatt 120

agacttctgt acacgataga gtacaagtgg tatatttgtg caaggattga ttcgaaactg 240 ccttgaaatc gtttcctggg ctttgacgcc ctatgagcta aacaaagttc tccgcttaac 300 gagtetacae ttgaateeaa etggegeeag ggteteaett gttetttatt atttttgaga 360 ttcgcgctgg gacaaatata gccttgatcc ataaacttga tttttcccgt atttgaaaaa ctgtatagaa cagtgataaa gtcacggact taggcctgtg agacttcgta caaattttct 420 480 acatgtttta ggaactgcat acagactaat caagcacaag tcgatgcctg acagacagcc 540 gatatctatg aaatagatct gacttaggta tatggtctct gagaaccccc ttcgtgcgcc cggtcagcac catgtccaat gactataagg agattcacgt tttctcagcg cgccatacct 600 660 tgtgtagtct atattctcgc ataaagaaat ttttggtgtt gacaaagtct tacagaacgc 720 acagaactct ctatagtagg aagtagatgg cttcgcggat acttgaaact ctgccaaaca cctacctacc ggcttctatc catctagcaa gcacagttgt tgattatttc cccattccga 780 cacateteta egectgeatt eceteceaaa atagtgaggt gaaacteace eteaactget 840 900 ggctcatcag caccgaagat ctccatcaat ccgcacacaa ataaaaaaaa ggttgttgca ggatattctt gacgccattg gtaattgact catatttatt cttgtcgagt tatagatttg 960 aatcgaacat agtgtggata tttgcggtct acgtccagta cggaaatact ctcctaagtc 1020 caatateeet tetetageta taatteteag actgeegaat gettetaege aaatteagtt 1080 acctcaaaac caactctctc ctcacctctt tgaacgagca attttttaca ctcatcccaa 1140 cgtcatcatc tccttgtcgt acccagtaac agcctccata cccacttatc aatcctttca 1200 aaccactccc atgccaaaaa ccctacatgc acaaaatccg caaagtccag ttcctgcacc 1260 tcaaagtata cacttcccct tgttgtttgt tgtaacaagg caacaactgg ctcatagcct 1320 cagccatate cetggaggte etettgtace teaateteae tagaeggttt cattleeteg 1380 actgttttac caagtttcga tccccaggtc cgtacaaagt atttaccacc ccggggtcga 1440 ggatagcgag gatacttgac aaaaggagcg qaatgttctt ttgtatcaca gtggacatgg 1500 cgtcattgac ctgatcgcga gattgtggct ttttgcgcct gctgggaaga tggagggtcc 1560 ggggaagact tttcaaagtt ctgggcgata gggagagaac ctatcaatgc gccatgcgga 1620 ttccttgtct gataccagcg acggatgcat tatcacgggc agtgccgggg ggctcggttt 1680 gctgatgccg cttggtgcgg ctggaccgcc aggaaagaga agagagtcgc gatgtatggg 1740 tacgaggtgt atgatcgtat gatcgcatgt atgggaagtg cttgtaatgt aggactggcg 1800 gaacttggtg ctgttcgccg atcaagatgt tgaaggctgg gggagcgcag aggcgaggtc 1860 gaagaggtga acceptcetteg tecttegatet agteattitte ataggegatt tegaaaggega 1920 gatettqqte agaatqqtaq qacaqattaa aattettqaa ateegtttee agegggegaa 1980 ccaagegetg eegeegaaca ttettatgta gtgtageatg gtetgaeetg getatteatt 2040 tataaccctq aaaaattcgt cgtattatcc atcatataat agctccaagt acgcgcttaa 2100 gattctatca atggacaaat ctccgccgtg gttagtagat cggatagtct attctcccgt 2160 taatacaaca gctcttcacc cagaaggtca accaacttcc ttcttaatta aacacaagec 2220 ttatagetge tateacettg ettgtactea teaaagtgte tgttgeatat tgagegeeag 2280 cacteggtee actegtteac ettttgagte tttccctggg ceattetttt ggcaggagtg 2340 cacgtttgat atatggttaa atacattcat gttcaacata tccatactag tctcggtcgt 2400 atctcataag gacaagttag gcttcctaag aatatgaacg ctggaacttt atgataattc 2460 acgettegeg geogteecea agaggettet ageaggeage tetgtgaceg teegeteatg 2520 gcagtcaata gcctcatcca cttgtaattg ggtaaagttt gccaattact cggaagataa 2580 gtagtttctt tcaccgctgc aacgggatta ggtattatcc ctaaagacaa cataatcgac 2640 agattegeaa tgaagetaga acetaagace atgtateact acatgaggaa ceatttttat 2700 aatacatttc aatgtaatag aatttttcca actgtactgg cggttctatt ggtgctaagc 2760 tegeggttet gaacttgagt gtatgtegta getgeaaggt geetgegett ggaetaecet 2820 gcagggaaca gaatcaattc tatgagtgtt gattcgtatg catataccta tatttgcgaa 2880 atatatecta aeteaattee ceatetett geaattgtaa ttagteette gtttgteegt 2940 gtcctgtqcc tqcqccatqq qgcqgttcca agattqttaa gaagccaaga ggttctttat 3000 atatttatca acgcgttcca gcccaaaccg ctggttctgc cgcaacaaac tgaacaagtt 3060 3107 ataaaaagcc atataatagc ctacaattta cctctagaga taaccaa

<210> 1917 <211> 2529 <212> DNA

<213> Aspergillus nidulans

<400> 1917

aaggcatatg tgcggcaggc cttatagtta tacgtcgtaa cgatcactag gccacctgag tctctggaca agtcaacccg aaggatagga cttagctctc ttcgccctgt gccgcaggat cgagcatctg cgccatctcc ggccacgcct gataaaagat tggtcgatgc ccccggcaag 180 tcagcaaggg ctttttttgt aagtaaaaaa tccagggttt cccgagctag gaccgtcagg atctaaatgg gtagacttca gaaggctgtg caattcggtt cccacataat tttcattcgc 300 cttcacagaa ggctaaggcc attcatagag aagtgagtat tgggtccgac ttggcctgct 360 420 atttgccatg atgcgcagac atatgtggcg caaataacct gctccggagg agatacccct 480 ccgagggctg cgtgtcgaat tgtctgactc tcgagatgat tccttccggt ctctggcaat 540 acaaagaccg agagaagcag ggatatcttg gggttgtagt gaagaataga ttgaacccaa 600 ctggggaggt catgaagcct gactcagtcg catccaagtc gggttagccc tagacattgg acctagatca ttcaatatcc ttttatcgcg tccgacctca ttactgcggt caaacccagc 660 ctatttatcg actcgccttg gtctcatttg ccggatgcgg cattactttg gagggaatga 720 gggattgtcc tatgctgaaa cggctctctg gcagtagttc tgagcgaaat aagtctggca 780 tetetttgae gecaecacet etgeaegtea atggeeagta tecetgtgae attgagagtg 840 atttctgtag aagctgcaag gatcagtaat gtatggccac gacgctaaac atggatttgc 900 ctcccctgta agagcctaac caaaaggatg gagtgtgtcc gccattccca cgcagttttt gtgtcgatag cgtatcggta agacattccc gaatcctcaa attttctagt ttgcagtcga 1020 ggcttgcatt ggcggacaga agcatggtgt agctgcgcgg acgacgcgtt cctgacatcg 1080 acaatcgagc atgatccatc cctgagtatg aggcgaggaa ggctgcccat tccccgcaat 1140 cccagggatt gacgtttctc agacggcct tacttattct atcacatccc cactatatgg 1200 acteteacga tgeggagtee caettgttta acatetettt taatetgtgt tgtttgteea 1260 caagaacacc tgccgttaca atggcgactc ccggcctcga tgttatcatg agctggacgc 1320 caaactatga ccatecteat gageceetgg atgeegteat ataeggtgte aacateeeac 1380 tgatggttct aatgaccata ttcgttgcgg gcaggtttct atcgcggaca ttccttgtgc 1440 gcaacgcgct tggagtagat gactggatga tgcttgttgc ctatgttggt gccagtgctg 1500 gctttggacg tacatcgtga gctaactctt gctaaagata ctggcaatgg gtctgtcggc 1560 gtgtcagcta gtcgagccca ggtatggtat tggccgccac ttgtatgacg tgagatatga 1620

ttggtaccct gcactgggga aaaaaaggct ctagagcccg agtgaacaat tcaggtatta 1680 accactgtga agttgacaat cgcaatccaa gcactgtttg cgccttgttc tgcaataacg 1740 aaqatatcqa tatqtttqac ataccttcqc cttttcccqt caaaqacaaa cagatggttc 1800 aactatattt cgatggtcat tetggeggga tttggaattt caacgacege aactatgett 1860 ttgcaatgca tgtgggtagt gcttgccatg ccgtgacacc gtacgctgac gcaagcagac 1920 cqttqtccqa tctctqqqca qtcttcaaqc cgatgtcgca gaaacaatgc atcgaatcag 1980 aaaaatttta cattgctgtt gctgccatca acagtataac cgatttcatg gtttaccttt 2040 ggccgattca ctacctctgg aaagtaaaac ttagcttggc gaagagagca ggtctaatca 2100 tctqtttcqq cqtcqqcqtc ctqtaagaaa gagacgactc ttcccaatcc attgatactg 2160 ctaattccaa tcaaggattt gtattgcggg tgtggttcgc attacctggc aggtcaagtt 2220 cgccaattcg tgggaccaaa catgtgagtt ctcttcggca atgagcctca tttgtgcact 2280 tattgatgta actgtctaga caacggagcc atcatctttg ttattgtagc ggtggagtgc 2340 aatcttggtg tegtetgegg gtgtetteea ggggteagge egetgatgte caagatette 2400 ccaagtttga ccagctcaac ttacaactcg ggtcgaggca agaacagtca cgttcaggtc 2460 agetttaaca atagaceegg ggggggatae cacgacetge attegattea egttagggaa 2520 2529 gaagtggac

<210> 1918 <211> 2503

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 1918

acgttgcaat atcttcccta cagctgccac atttccacgt tctctctttc gttcagacgc 60
agctgctgcc atatctttgg atgcattctg cgcagcggat gccttcgccg cttgcctcga 120
tgccacattt gcagcctgtt tgcttgccgc tttcacagcc tccttcgtgg atttgtcgct 180
tcttgacttc ttctccgtct tctcagcgtt agccggcgag acttccttgt caggtcgttg 240
gagaagcttt ttcgattgaa ccttttcgga tttagcttct ctctctgatc tctgtcttga 300
tgatttgctc gcggcttctt tagctttggt tgcctttttc tccttgatat actgtactag 360

420 ngqcqtqqat ggtactgtct actttttgac ttctccctcg gcagaagttt tcgcgagggt 480 aggttttgta atggggtgag tgagactctt gagaaaatgg ataaattctg ggtcctggtc 540 aatggttccc aatcgagcat ctttgcgaac acgacttcca ggtattttgg cgtacggtgc aaactccaga tttggtgggc ctaggagtac cgggtcgttc gcggtgttac gggcatccaa 600 660 gaatgatgtg ctcctcacct tatcggagag aggggcaatg tgttcgcttg aaacgacgta 720 gaggtatgct cgggaaggcc gggagggttt agcaggactg tggttcccat gactgttagc tacaacattt atggattaga aagtaggaac tcactctttc gagacctttc caggcttata 780 ctgagcccag ctcactctgc ccgctccaag tttccattcc gcgcccagcg cagtttcaaa 840 900 ctcctcctga gttaggcctg gaggtaaacg ccgcacgagc agcttcagcc gcggggctac 960 tggtttcgga gccttcttag gtgctggtgc attcttttga gtcgcagacg caggaatttg aaggacgccg ccgcttgatt tggacaggat ctgagtcatg acggtttaga atcaaatgtt 1020 actttgaccc aaactccgat gggagcgttg aatccaagca gccgcagagg tcggctacgg 1080 aggtatcqcc agaaaaqcac tttctcaggc tagaagtaga ggatggcact aggqcacaaa 1140 gtagcaaaac tgagcccttc agatgaccct cgattggaaa aggtgcgctg ctgaaactcc 1200 ccgctgacca gacgacactg cttaaaggat ccacgcacgt gactgcgaat cggcgataac 1260 cagcagggct ctgcggggaa gggagagagc acgtttatgt gtgcatcggc tatgctgcca 1320 atttgagett gattttgeet etteaacete gtegteeett gtacaaattt teaetttete 1380 tgattcctat catttttgcc atgactgata gcaaggtccc tcagccgggc ccagcgaage 1440 tcaagcgcaa tgcaggaccg gacgagtggt tagaggcagc caaggactgc aaatacctct 1500 cggagtcaca tatgaagcag ttatgtgaga ttgtgaaaga gtatatgatg gaaggtgcgt 1560 tctgcgcgag ctagctgaaa ctattttcag atgctgagat ctgtgcgtct gcctagagtc 1620 caatattcag ccagtatcga cccccgtcac cgtctgcgga gatattcacg gacaattcta 1680 cgacctctta gaactatttc gcgtctccgg tggtatgcca gacgcgtcgc tagctgaacc 1740 tccgaagact tcttctgctg tgattacatc ggacgacatt gaaccgccca ccacgataac 1800 agatccagag ttgagaaaga agttggggaa gccagggaca gcaggagatg atgatgatga 1860 ggaaatagct gtcaaccgca acttcgtgtt cctcggcgac tatgtggata gaggatattt 1980

cagtetggag accetgacat tattattgtg tittgaaageg aagttegtea tecagaetgt 2040
tittgatatg ggtgtagetg actattgaag gtateetgae egggtgaege tegttegtgg 2100
caateaegag teteggeaga teacacaggt atatggtitt taegaggagt gtitgeagaa 2160
gtatggaaat getteegtet ggaaggeetg etgteaagtg tittgatitta tgaeeetggg 2220
tgetattatt gatggteggg teetggegt eeatggagga etaagteeag aaattaggae 2280
eetggateaa gtiegagteg tegeeagage teaagagatt eeteaegaag gtgeattetg 2340
tgaettggte tggteagate eagaegatgt egagaeatgg geagteagee etegaggage 2400
eggtaageea geaagtatgt geaaaetgte teeagtaetg ataeteetta ggttggetat 2460
ttggtgaeat ggtgeegaeg agttetgeat gtaaeatttg ace 2503

<210> 1919 <211> 3258

<212> DNA

<213> Aspergillus nidulans

<400> 1919

ctgaatagaa ggagaccaca aaaatgaaga acaacatata taggggttta aagggttatt 60 ggggtttgtt aagttttaag gcaagaaaac tttgggctta ttaaaataaa ggatatttag 120 ataaaaatta gattcccatg gcttgtaaca aaagcacagc attgtagtgg gcaatttata 180 attaagggcc ctacatagac gtaaagaaac agattggtaa tgtgaacgaa acgacccgtc 240 tggctttcag gaaatgaaag attgttgttc atgaagcaaa ctcaagagat atgtggtaag 300 tccaaaaagt accgcgattc cagagcttgt cgcatcgaag cggtttcctc cagttttcca 360 caccegeaat cactgtagge gtcacgeagt gactttggee ageatttgga atceatttee 420 aatatteatt tactgatgat gtgtttttet gettttaaet tgetteeete tateteteet 480 ctctcgcgtt tgcagagcaa aggcgttgtg cccttcatca taactgaata tacgcacctc 540 atgggtctga aatgtcaatg tgaggttttc atggaattgg tgtgtatctc aagaacgcat 600 ggaatcacac gggataggtc ttgaggacta tggcgttttc tcgaggtcga cttaacagac 660 caggtggtgt tetetetett tgetetetae eetgaaatat accegggegt tittacaaac 720 cacccattat tcattacgtc ctcatgttca tgtactgttg cattgttttc tatcctattt 780 ctggcattca accatgattc ttcgtttact tgtaaacatt tggttataga tgtaatctgt 840 aactctgctt ctagttttat cgtatcaagc ataacgacca gttgtcctag atctcctggg 900 960 tatcaacctt agcaagccct gtagatgtag ccaagtttta actggttcac gtgaactcca cqagctaatc gtagccctag gaaggtagca gcggcaccct gcatcaggca acgcccttaa 1020 tttqattacc qaacatctat ggagtattac cccgaggtca tagccacata cgacgttgat 1080 taaaaaqcqc atqctcgctt catcgttttt aattttccaa tcgttattgg aggacgacca 1140 atcatctgcc ttaggcgtag gtagttgaag cccttcgcac ccaacgaagc ttccgtgccc 1200 tgacttcgcq aagtcaagac gataatagcc tagtctacct cgaatgaatg agggagattc 1260 atcocagtte tteattgatt gagtategtg etgttteatg geetgtttte aegeegeeet 1320 qaqtcataqa qcaaqcgtcc gtgctaacgt ggtacgatat aagccgcact gattcgtcct 1380 caqaqqtcat caactacgtg qcgcctactt ggaaacctag atgaactgaa tgggagggtg 1440 ggaaaagatg tcgctttgta ggcttttcta gccgtgtgcg cccggaagac gtttataggc 1500 aggataggac cgagggagtc agcctggata ggcgagatac ctatcaagga atcagccagc 1560 tactgateca tecaacecat gtetgtgaet tgeegatgae teacatttag geeggeggg 1620 gcagcatggc ttaggtatgt gactagctgg gtcgcccgac tagtgaggtc aactagagat 1680 gttggccagg gttttatcac agagcgtgaa ggggtgctgt agaggcagtg agacttatct 1740 tccattatgt caccaatttt ttactactag taggtaacaa ctcctgaccg tgtatacctg 1800 aaggtcatgt ggcattaatt agggctgtac aaatgttggc ctggttttgt aggcaggaga 1860 cataatgatg cctgaggtta cggcagtata tagaccaaga tcgagttaac aacctcgatg 1920 gataacataa tacttcaggg cggcctaggc aacgtatgca cccgacctat gggcacgacc 1980 acggctgtag ggcctcattg attttatatc ctatgatatg acagcttgtt gggagtgttc 2040 tgttctacgt aggccagcag atgtcttatc ctgggtactt ttgaagtctt aaacatgtaa 2100 cagccgtaca attgatttga aaaagggcca atgtatcgtc agatcgaggt cgggtcgagt 2160 tgggtgccca tgggcgagaa gatcttgcaa tatgcagctc tcccgatgtg tatggcctat 2220 caccatttaq caaatttcat tcctcatcac taccatgact atcaccacta tcatcactat 2280 cattactaaa gagatccgtc actaaaaagg ttcatttgcc acggggatac tgaatttgag 2340 ttgtatgtgc tagcagttat gcttgatagt tatgctaggc atgcttatat aacgtgtatt 2400 cataactcca cactccacac acaccgagtt ggccagttca cgtccaacgc ctccgtatta 2460

gactocgate theotatiae thacacetta aateceaati catgacagge gecaaacati 2520 gagetgegea atetgtacat tetetgacea etetatetti cagateegge caggattaga 2580 aatatgteee geaaegeeea agtegaagaa gtetaegaet eggaceeaga agaagttget 2640 eettetetgg teecaageea eggeaaaaat gacteeatte tetetggege eteaatteet 2700 aegtegtega tgeecattaa accegtgeet tgaaeetaag egagaaatte caaaaateea 2760 eeaatgtetg gateetgtg acetttgace agaegeeaae eeeteata ggeecaaaaag 2820 titggacaaa ettggeaggg ataateetti gggagggeat tiggtgatget gtgeeaaaae 2880 eetggatege atgtggtet agaeetataa titeeeetee ggaetggeea ateeeggega 2940 gitetggea titaaggtea tgategttae egitatitta eaaaatataa etggettett 3000 titgeteeet eateeecatg gittaeataa giceeteeta tiggiteeeet gageeetitt 3060 titeetetige ateaettate eteaeatea aetetteaat etititeee etitegaace 3120 eetgteeeee teeetiggaa tittiteeete teaeteeete teetigggigt eattaeetti 3180 titeaateaet tattaeeet teetaegaeg tittaeetti etetteatat etetaeteet 3240 tetteetaet teetatae

<210> 1920 <211> 1763 <212> DNA

<213> Aspergillus nidulans

<400> 1920

gggcgcgtca aaacccgcag cgcgggctac acaaacgagc aaaaagaaga ctgctaccac 60 agcgagcacc acgaaaattc tcgaggacgt gctgcggcta ccactaaaac taccgtgaaa tcaacggcga cgcgcaaact taccaaagcg gacgaagtcg gcgccacaaa gaagacagcc 180 gcgccagcta aaaagcgcag agctgatgct gaagatgctg agactagtcg ctccaccaaq 240 cgggctcgcg ttgtaaagcc tgctgctgca aagccgaggc caaaagttgt catcaacaat 300 gcgccaaccg caaagctgaa cgtctatgtt tgtggtgaag gtagctctgg tgagcttggt 360 ctgggcgtcg gaaagaacgt cattgatgtg aagcgaccac gtctcaaccc gcacctgctg 420 ccagatgatg ttggtgtcgt gcaggttgct gttggcggga tgcattgcgt cgctcttacg 480 catgacaata aggttcttac ctggggtgtc aatgaccaag gtgccctcgg gagagatacg 540

acatgggagg gtggatacaa agacatggac aaccgcgact cggactcgga ctcggactcg gactoggatg acaatootga totgaacoot catgagtgca coccaactgo cattoottoo 660 agogotttto otcatggoac ogttattgto gaagtagotg otggtgacag otcaagttto 780 gccctcactg acgagggcca agtttatggc tggggaacat ttagagtacg tcatgttctc gcgagtattg aagacactgt taactttccc ttagagcaac gatggtattc tcggattcga 840 cgccaagaca aaggttcaaa ctactccgaa gttattgccg gaccttaaaa aaataaagca 900 ectggtatge ggagataace atgteetege teteaacgae aaaggtgetg ttetgtegtg gggctcgggc cagcaaaacc aactaggtcg ccgtatcatc gagcgaaaca aactgaacgg 1020 gcttcagcca cgggaatttg gtcttcccaa aggtatcgtt catattggtg ctggcgcttt 1080 ccactcettt geegtacacc agteeggeaa ggttttegee tggggettga acagetttgg 1140 agagacqqqa attcqtgaaa atqcgqgcqa tagtgaqqct gccatcgtcc accccaccqt 1200 ggtggactct ttgtcaaaga agaacgtcac gcaaatctgc ggtggtgcac accactccat 1260 agctgccacc caggatggcg aatgtctagt ctggggtcga ctagatggat atcaaacagg 1320 ettaaaaatt gatactetee cagacgatge ggteateaag gaegagegtg accgteeteg 1380 tatecteate gagectaegg etgteeeegg gataaaagee aaggetgttg eggegggtte 1440 cgatcactca attgcaattg atactagcgg ccgtccctgg tcttggggct tctctgctac 1500 ttatcaaacc ggccaaggca cacaagatga tgtggaggtc gcaactgtca ttgagaatac 1560 agccgttcgg ggcaaaagtc tcaattgggc tggtggtggt ggtcagttct cagtctttac 1620 cgaaccagtt gagttgtgaa ccacttagag gtagttttga gagttgcttc gtaaagattg 1680 tgggctatct gtctcaagga tggccttgga atatcgggct gatcttctaa aatgtgttta 1740 caggacattg ggtatgctgt ttt 1763

<210> 1921 <211> 3558

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 1921

cgtctaagat caagcctttc cgcgggaata caatgtatcc tagccctccg catctaaagc 60 tgagtatcag gtaggccaga tgccatgggc cgaattctcg cttggtcaat tggagaagta 120

gcgacgtctt cgtgacgctc gttaacaggc tatggttgta ttggtgtttt cgggctggca gtacaatatg gctgcctggt agccttagcg gcgataggcc gtcttctagg ctgcaacgga 240 300 acqqtqqqqa acqqcqqtcc cctcaacaga atagqccatg ttatcqtqqa cqqcqttgaC tggatgagta ggccaaggtc agctcagtaa aaacaaaaaa ataaggaaaa ataaaaggga 360 420 atttacttta atcatatttg acgactctag ccagattcag tcattgtagt gaccatagaa 480 cctagcctat ccaactctag gtacgcacag caagtatcta cttcctcttc catttaagag accocgacat ctcctgccag aagctcaccg atggctcaac cacactgage tectectegt 540 600 acagateaat etcaggegee teccagatea gatetgtete aageggtgtg acaaatetgg 660 teegttteae caattteeag eecagaaaea ggaeeggege aagaaggaee ategtgtagt tggtgaagaa ggtctctaca ctccaggggg tgaaactctc gtagccgaaa cagcagacca 720 780 cggtaaacat ccacgcaaag ccgaggtagc cgcagtacgg ctggaaccaa ccagtgtaag 840 ggagcgtgga gcggtcgaat ccttgggcaa cagtcgcacg gtagaagaag atgtacgtaa 900 gggtgatgat gacgtagttg ataagaccgg cagccgtgat gatgtttgtg agccaggtga 960 ggaccgtgga ggaactgtcg cccatttgga ggaaggacaa aaacgggaag atcattacaa caaggaagca gtagataggg acgccctgct tggtacactt gcggaggatg cgtggggctc 1020 ggccttctag ggctagggaa tgcaggatac gggtcgctgt ataggtgtag gtgtttccgg 1080 cgctgaaaat ggaggtgatc aggagggcgt tgacgacatg cggtaggcct tcgatagaca 1140 tgtttttcat ggctattaca tagggcgagg cggcggcggt gccggagcct tcaccgtcac 1200 cgaaatggat ggcgcgtagg gtgggatccg cataggagac gacaataccg cagcaaaggg 1260 ccgagcctat gaagaacaca atgaatcgga aatacacggt ctggaaggcc gctctaatgt 1320 atctgcgagg gtgtttggcc tccgctgcca ccatggagat atactcgggt ccgacgcagg 1380 caaacccggc agaccagagg caggcgagga aaccctcaaa acgaccaagg ttaccgtggc 1440 tgaggtatte ggegaatgeg cegggettgt tecagtteet aaaccegtat aegtegtget 1500 gcgggttccc gccgaccatg gtgacgaacg taaacgcgaa gagcatgagg atgaggatca 1560 cttttccgcc ggagagccag aactcggctt ctccgtatgc ccggacggcg aggatattca 1620 aaageetage eggteagtet ttegtgaggg actacegeag ggaeegtgea aaegtaeeea 1680 tagattataa cacatgotaa acaaatacto cacaogggaa tatogtooot coagtaggto 1740 aagaccacat tgatggccgt aatctcgaac gggatcagca gcgcctcgta caagaagaag 1800 ttccagccag ccatgaaacc ccaggcatca tcgacccatt taccggccaa gcggataaac 1860 cctccctcga ccggctggta tacggacatc tccgtcaggc agttattgac catcgccaga 1920 aaacagcagt ggatgaacca agagatcaga agagatcctg aaccgccctt ggccaggccg 1980 eegeegatag agaegaaggt egeegtaeeg attgageete caatggegat taattggate 2040 tggcggtttc ccagtcgacg ctgcaggcca gagcccgttg cgaggatggg ctcagcccgt 2100 acttetgage categttagt gttactettt tegaggtetg gttttggatt categtgaca 2160 gtcttgagag gcgtgaaaag caagaaaaaa aaagggccaa aaaaaaaaag agaagagcga 2220 gggagggttg atttaaaaga gacggtgcta taggttacat cttctgggca tgaaattatt 2280 gtcccgctct gaggatgggc tgggatagga cgaggactgc gctgaccaga gattcacttc 2340 tccgtcctgg gcgagcacca ctaggagcag aatgatgggc tgggggcttg ccgcaatggg 2400 gataageggg ggaetggege egtttggeat gaetggggea etegeeagga acaaatggga 2460 ggcccccatc tgcttgtggc ttagcgcgcc tcgtgggcgg cagcttggcg tccatgccat 2520 gatettaeag aggatgeaac geatettgaa attetgeget aaageageeg ageggtgtee 2580 gateggeete etattaeteg teaataeggt aceggtaeeg agtaeeggtg geactaetga 2640 ttgaaaaggt aaaatttccc aggacgaccg gttaccacca ggatactgga cacgcatgcc 2700 cctttcgtgc ttcttatcaa ctggaacagt atgctaaacc ccataagcga gtgagtttgc 2760 gagtaagcaa gtccgcgagt ctatcagcgt tatctcgcag acggattttc gttgcaaaac 2820 ctagctttct tatcgctcct cgcagctcag aaatcgcgca aatcgcgcat tgaatgcagc 2880 ctcgtattca gttcgcatgg tagcatctct tttttgcttc ttcattttt ttcctctttt 2940 actititetti tiegittiee etettigitaa titaatitat tiegeaetti tigieeeagae 3000 ttgtgttagc tgcgcgaagc caccgaagcc acagatgacg tcggtggctc ggcgcccgct 3060 ttcccgtcac gagattcgat caacgctgct ctcgtgttag gggaccctag ggcctgtcag 3120 ccgcgcaaga cgaacaggat catgaacgat gcattaqatg cgaaccgacg gctctccacc 3180 cttgacagac caatatetee geeectaace egteeetea etegtacggg caacgacteg 3240 ctgtccgccc tcgaagcggg gaaagaggag gtcgacgacc ccttggagcg aatctccgca 3300 cacctccaca aattcacccc agaccgagcc gctacgcctc ccgtggccgg cggatcgtgc 3360 ctgatcccat tcgatgcctg gaaatcgctc tacacacgaa actgtcatgc atcaggaacc 3420
attttgtcat tcacaacacg accattcatt gncggcccga ctatgacttc gctacagatg 3480
ncgcattcag ttcgtcagct gagtggcatg tatgattgcc cgggcccgat agtcgcgctg 3540
atcgaatgcg accgaaca 3558

<210> 1922 <211> 5150 <212> DNA

<213> Aspergillus nidulans

<400> 1922

60 aaccggcgaa ctcatctcaa agacacgggg ttaaagcggt tatataggtt ttgcagcttC 120 tcacgaatgc attaatggga gacgtccgcc tggcgcaaaa ggaccaaacc agaaaatcat ttacctggga tcgctacgaa atcagcagtc tgaaggcacc gcgtccatat ttttgtgccg 180 240 tggggtctgg gcctcgttga tcggcagtac aaaggaggag aacgggtata tataccatct 300 actegacaag aagtggaatg geegeaggag tgetgtttte aagegtatge ggaagggtga taaacgtaag tagctgaacc ccgtaccaca tactcttggg ctgacgette gaaggetett 360 gtcaccagtt gctcgcgatg tcatgagcgt catttgacaa tatataatat tgccatgccg 420 cactcagatt gccgagtcat acggctgatc gaccctataa cgggcatcaa tcggctccgt 480 cacaatccaa ttaggctgat agattatttg ataatgaatt gcgaaaatca tcgacgaaat 540 cattegetat gttetetete tgeeetgaat gtateegaee agtgtattee cagacaacag 660 ccgcagccga tatatcacca cctacgagca ttcaagaaaa gggcaaacac tcttattcga 720 gtccgatata gtagcatgca gagctctaag aagtgcgaaa gccagataag tgctatcccc ggtctccgac gccggcgccg aacccgagtc cgggcccgcg gacatcgagg ccctgggacg 780 840 gcaatagtgc ccgaataaac cccgaccaga tcaccaggtg ccagcattct acatatacat aagcacgcag ctcctttcct cactgaaatt cattctattt cgctaagtaa cttgaaacag 900 caatagcgaa atggtctccg aaacactcga attctacaca aaagccctgg gcgctatgtc 960 gtccctgggc atcgcccgcg ccagccaaaa actccagtct ataccacacc acttcacata 1020 ccaaacgacc cctaatccca aaaatgtcgt cattattggc ggctcatatg ccgggactcg 1080 acttgctcag cgtctcacag aaaccttacc gacggggtac cgcgcggtgc tcattgaacg 1140

aaactcccac ttcaaccact tctttgtgtt tccgcgattc agtgtagtca aggggaaaga 1200 ggagaagget tteatteett atgataatet ggegaagtee gegeeggegg gaattttega 1260 gcatatccgg gacaccgcga cagaaatcac accgaaaact gtgaagcttt catcgggtgt 1320 cgaggtcgag tacgagtacc tcaccctcgc gacggggtca tggcagccgg cgccgagtaa 1380 atacgatgtt ttgacgaaga ctgaaggcgt caacgcgttc cgcgcgacgc agagggctgt 1440 agaagctgcg aataccattg ccgttgttgg cggtgggccg gtgggcgtgc aaattgcgac 1500 tgatatcaag agctattacc cggcgaagga gataacactg gttcactcaa gagagaaggt 1560 gcttagtgcg ttcggaccga ggctgcaagg ggctgttatg gatgcgctga ggaagatggg 1620 ggtgggaatg gtgatggggg agaggccggt tatcaagaaa gatgcaccag acggagccgg 1680 ggctggtatg gtcggaccgg gaagtcttac attcaaggat ggaacgcaaa agtcgtacga 1740 tettgtggtg agtatgegee ttgeecettg ttatataegt tagaetgata tgtatagete 1800 ecctgeaceg gecageggee caactegage atectegeee atetegeace aggageaate 1860 gaccegeaaa egeggeagat tetegtgeae eeaaegetee aaateaatga tggetetaca 1920 tccagctccg ataaagaggt caccatctct gagcggattt tctccctcgg cgatgtcgct 1980 aaaacaggcg gecegegett egecegtgee getegegeae aggetgagat tgteacetee 2040 aatatcctgc acttgatcag ggggcaaaag gacaagctga gcgagtacca tccggcaatg 2100 tacgaggggg cgattaagct aaccetgggg aaggtaggcg tggcacataa gcccagcact 2160 tgttccggat ggattccagt atgctaatgt ttgatttcgc agtccgacta ccttttctgc 2220 gggagaatgc ctgacggtcg ggagattgtg aagtttggca agacgcagcc gcagaatgag 2280 aatttcgagg tgcagtcggc ctgggaggaa ctagggggtc gggaggactc tgcagaaacg 2340 gggttagctg ctaggacaga gaagttagag aagcacaagg agaagttcag tgcgtgctgg 2400 gggcaagggt ggggacaggg ctgggagaag aatcgcgacc agcagctgcc gtggcagagg 2460 agggatgcat agatgactgt catcaagggt ggttgaccat gtccattaac cgatgaatat 2520 cattcacctt ccgctattag agttctgagc acgagttcca gccgtactgg cctcgtttca 2580 agtatatcga cccgatgatc gagtcttttg aatgattttg ccggaatatg gcgagtataa 2640 ttcatagcag tataaaggag ttaaatgcag aaagtctgta ttcgttatat ttgtcacctg 2700 gcagcagatt ggatcccggg atatacaaaa agaattgata ttgatatatt tactactgtc 2760

cttgtaagac cgggtcaatg gagaccagtt taaacctagt accctatgtg tagcccaatc 2820 tttatgacgt acaatctaga ctatgttgcc tttatatcga ttgttaagaa cattcattta 2880 cattgagaag ccgtcccatg ctcagtcaca gaacttgcgg tatcattggc gtagtgactc 2940 attgctacgg gtacaaagcc ctaaccgtcg atataccgat acccaatgcc aatctatata 3000 tgacaaagtc caccattcta tggcccgatc tccggcatta taggcgttaa gcttagttac 3060 ttctggcagg atgttaaggt attcctttgt atcaattcga cctattattc cactgcttca 3120 aggetectag etgaaeggta aceteacate attgagettg ggeeagatet geeggagega 3180 tgactatccc gagttacgag ggctgaacac gaacataaat aacttctgtg agttgtgcaa 3240 ctacaagtac attgggaggc acataggata ctttggtcat taaggacagt caatgtggaa 3300 atagtggctc cgtgccaaac ctacagctgc agagaaggga gcacttacga gagtcgcgcc 3360 accactacag ctcattatac ctcgcaatca caacgccaaa atgccctgtt ggcagctagg 3420 gccacatcaa cgatttcgac tgcgttgaca aagtcgatgc cggccatgcg cttgtgttgt 3480 aagcacatct ttttgccagg gaggcaagct tgaacggagt tttgatcgta tatataacca 3540 ctaggcttga tggtgaagga gattgatgca agatactacc agtatggcag gatcagtcca 3600 gttatatgca taccettgte taggteteta gggtgeegat gteageagea gatteteggt 3660 aaggetegee etgetgttta tetteecaca tgeteagagt agtteeaata aggettagta 3720 tacgcactca aacgatcatc cgcattacac aagagccatt ggcgaaacag tcttcctcaa 3780 gcaaagatgt accccaggac aatatagtct tgcggaatgg ctagcatata taacccatgc 3840 ggcttgacga cgcattatgt agcaaaggca caagaataat aatagatact atcactgttg 3900 tcgagcaaat agcctatcga ttcgaggata gccagaatag gctggggaca ccgggagtac 3960 gggtacagca ctgttttgct atatcctaga ctacaaccga aaggatccac ccttgccttt 4020 cggtttttaa gtttatttat tgaatcatta atcatttagt caatctaatt tattttaata 4080 atttattata tcgaacttaa ttctttacta atatattgtg ttaatgcaca agagtataaa 4140 acatagacca ctcccagtct tacgggtgcc acaccagcaa gtgccatata tctactcctg 4200 tttgtacatg acaaaaccac aatgccattg aaaccagtcc cctatttgtt tgctgaagct 4260 atctgtctca agaaggccca gtattgccga tttgcagata cgcacaattg gaccggtttc 4320 cggggcatct tcctgaccag cataaaggcc accttccata accccgacgg ctcgatcgtg 4380 <210> 1923 <211> 779 <212> DNA

<213> Aspergillus nidulans

<400> 1923

aaagaaggaa gggtctagca gctaacattg gagagtcagc ccacagtcac taagctatgg 60 cacgaaggat gaaggctaaa ctgtgtatgg cagactattg ttctttggga aggatatggg gaaggaataa gcactagaat agaatactct gaatgtcggg gttcaaccgc tagagtqtgq 180 agaccataag cctcagccct aagtgagaat atccgagcac gaccaatcac acccttctct 240 300 atacgaggtg ggcataatga tgataccaaa aataaacacc ctccggacga cagcatgagt acqaqccaqa cgcqqctqaq caaqqataqc aqcqqctqaq ccqcqctctc ataqqqccac 360 gaccgcgata atccagaget aagatagega egttteetgg atgccagtge acaattegge 420 gctgcactct gactgcacag ctctgcagcg gtggataagt ataaactggc ctctattggc 480 tgttcttgtt ggtaagactg caggactacc gttgggagcg gtccccataa ggctgatggt 540 actgcctgtc ggtagacacg tgaaggggtt tattcagtgc tggtaattag gcttagctct 600

aatcaaaaag catgtagtag tttaagaaaa ccttaatcga ctctatccag tgcacctcat 660 cattccccgt ttaggcaatt cttgatagat catcatctcg tcaccgggca gcaccacgta 720 gccccattac ccactccagc tagccatggg ggctttaggt catgctgctg ccagatgat 779

<210> 1924 <211> 3134 <212> DNA

<213> Aspergillus nidulans

<400> 1924

aaaaaaaaa gaaagaaaga aaggtacgat agctatcgaa ggctccttgc cttgtctagg 60 cctggttacg caagtcacgg cagtcacctg gctttaggac aggaggacga ctctgtccgc 120 ctacgtccct atttatccga cacctccctc acaatggacc ccagtgttcc tatccgattg 180 aaagetetee teetegaett eaegtaette egtaetteeg taetegaegt aetttagegt 240 300 tectegetgt equatttega egategeegg tetatettea ettteeagte ttegteeaag cgacggctgc aacttctacc agtaagcctg ccattgcgat tgagacggac gattgagacg 360 agegetagae gtgeaagaee catgteegta egateateag aetaateaga eeactgagag 420 tacttgaaga gaggctgaca ggcgacagta tccagtagag tgtccagtac agagtccagt 480 cgtagetetg egcatecage ttecceaett tttecceget gtggeeggee tgettgatte 540 600 ggaccgtaac cgtcgctgtg ttcctggaga gtctcgcttg gagtacgagg gacggagtat tatcgcccag actcccctcg cgccacggtg cttgcgcaag catataaaga gcccagtcct 660 ggtctctcga gaacagtctc ccatccgcaa gctgtgatcg cgcccgtctc gtgctacccc 720 accateceae tectaceate etaceatege actgaacteg aegteataeg eggaateeee 780 agccgctgat cctgccacgg ttcgccatgg cgcagagtga gttctcctct ttgctgcatt 840 geoegategg tittgtteee eagtetgeet gteaceecea cateatgtet eeatgateat 900 cgtcgcatcg tcgtqtcaqa tcgagggtcc tccacaatcg gatcqtqcqc taacqqtccc 960 tagcaaaaca ettettetea gaccecacce atetggttea caeggegete aattegetga 1020 cgctcactaa cccgtcactc gcgttcgacc gcgagaataa gatcatcttc cgtcgtcccg 1080 atgtcgtgag gaaggggaaa gtcgccatca tatcgggtgg agggtctggt cacgaacccg 1140 cyttcgcggg gttcgtcggc cagggtctcc tggatgcatc ggcggcaggc accatctttg 1200 cgtctccgaa cgcagagcag attcgtatcg ctgcaatgga gcgtgttaac aatgaacaag 1260 gagtgctcat cattectatg aactacaceg gegacgteet caattteggt atggeegegg 1320 agaagtcgcg cgctgccgga atcaagaccg agttcttcgc catcaatgac gatgccggtg 1380 ttggcaaaac caagggcggc aaggttggtc gccgcggtat tggaggcggt gtcctgatcc 1440 tgaagategt eggegegetg geagaggetg ggtaagttgt etegttaete ggaactgatg 1500 aaatcctgac aagttgtagt ggctcgcttg aagaggtcta caagaccgct cagttggcaa 1560 atgagaatct tgcctcggtc ggctcatcat tggagcacgt ccatgttcct ggtcgagagc 1620 categgatga ceacateeca gagggegagg ttgagategg catgggtate cataacgage 1680 caggatetac cegeaceaag actaeteteg tegatetagt tgegacgatg etectecaga 1740 tectggaeca caacgaecet gaecgateat atateaegea ttegecaggg gaeaaatttg 1800 tgctgctggt taacaacctt ggtgggctca gcactctcga gctgtccggt atcaccgatg 1860 aggtctaccg ccagctcggt aaatcgtatc agatcaagcc cgagcgagtt atccagggca 1920 cettecteae cagtetgaat ggactegggt teageatete actgeteaag etggeagaea 1980 ccgggctggg ccccggcaag tcgttccttg agctcctcga cgctcccgct gaggcggtcg 2040 gctggtccgc gcctatcaag cctgcgacgt gggaataccg caatgccccc ggaattgaag 2100 tcaagagage caagecagee gageageete ecageaaegt caagegtaeg teeegtgeet 2160 ccctttattg acacgtgcta acagtacaca gtggatatcg caaaggttcg caaagtcctc 2220 ggggccgctc ttaagcgcat gatcgatgcg gagccccaga tcacccgcta cgacaccatc 2280 gtcggcgacg gcgactgcgg cgtcgggctc aagcgcggcg cccaggctgt tctcgacctc 2340 ctcaacgacg cctctgcaaa cctcaacgac gatatcgtcc acacagttaa tcgcatcgtc 2400 acceptcette aaaacactat ggacggcacc tctggcgcca tctacgccat cttccttaat 2460 gcccttgtcc acggcctccg tgagcaagac aagggtaccg aaacgcctgc tgataccgac 2520 gtctggggca ctgcgttgaa atactctatc tccgcgcttg ggaagtacac ccctgcccag 2580 gtcggtgacc gtaccatgat tgacgccctc gtaccgtttg cgcaaactct agcggacaag 2640 cgggatgtgc atgctgctgc caaggccgcg gaggagggca ccgaggccac aaagcacatg 2700 aaggegtege tggggeggge ggtgtatgtt ggaggegage aggaatgggt tggeaaggtg 2760 ccggatccag gcgcctacgg gctcagtgag ttctttactg ggctggcggg cgctctatag 2820 cggcactatc actitatgg cactggccac tggcatgtg tictacgtat atatetatat 2880 gtaattatic ctgcttageg ggttgctcta gtataatata atgatgacat gaagtataac 2940 gtetgcttac cagataatat citgtctcic tagggategg cicactgtg cittagecag 3000 tacticccct gcitgtggga titcctaati giccattagg cagctagegg cgcitatice 3060 tgccgtatic aattategeg geegeagect ceaacateeg titcagaagg cigaacggit 3120 ticaaggget teag 3134

<210> 1925 <211> 3002 <212> DNA <213> Aspergillus nidulans

<400> 1925

cctggaatgg caggccatat tcggtggctt tccttgatta tggcattcta ggtcaccgag 60 cactgttagc gacatatatt cagtgtggcg catgactatc gcaggtggag aaaacgtacc agatacggaa gctcacccag tttcctcgga tcgatatccg tactttttgc ctgtcgtctc 180 attgcttcat caagctcctt tcttaatttc cgcaaaatct caggactctt gagaacatga 240 tatagagccg taactagcgt cccacccgtg gtgtccacgc cggcatcgat aaacgcgaaa 300 gcctcttcgg ctaggtagtc taatgtaggt ggtttcccgg tattttcaag ccgatgaaaa 360 atcaggaget cagegacgga egettetgtt ctaegggeca titetitigt gggagtgttg 420 aggagaggcc gtgtgtggtc tttgcatatc tatactgttg ctcagtgtct acccgcgaac 480 gtatattgat caggattacc ttcttgaagc ctgctactgc tgaaggagtg aggtagttaa 540 caacagatga tggtagaagc gagtttaatg tagcgaggta tgggaaaaat cggactaacg 600 agaaatgtta ggcgatatat gcaacaacag gggaattact gcctggaggc ggaaaacgca 660 720 cgagtaggaa tcaaggcaga aagcccatca atgtcctcaa gcatatccag ctttctagcc tegtaattaa eecagtegee geaateteea agaaacaegt eegeeaceea gtttatetat 780 tcacgataat tctccctttt agccggcact tcgatataaa ctcaatcaga acagaaattq 840 aagtcaacga accgcaacag cccgaaacaa atccgtaatg ttgcacccct ctccctttct 900 cgactgtttc accataaact gcaccaaatc ctgcaatcta gcttgaattt ttggcgccgc aagtteggee geetgttteg agaacetegg agegageace tteegteget egeggtgate 1020 gtcgcggtct gatagggaga agacagatcc gtggttatca gcgcaggtgt agaaggattc 1080 atctttgtag aagtcggtgc ccaggcggaa gatactggta aatcgctccg ttgatccttc 1140 gtgatgtttc ttgaagagag gtgaacttac tgctcataag cttcaatatt gttgatatgg 1200 acgtggtttg gtccgatgcg gacaacgggt gagcctggaa aattttactg tataaaacag 1260 ctattgaccc agagaagtag aaaccgtact gtatctttta tgtagctcgg gaaaagtctt 1320 gcaccactct ccgtctcgcc agatgttgtg gtagaactcg tagaagccga agatgcgggc 1380 tgtccatggg ccagggatac ccaggagagg gttgaagagg agtcggcgaa ttatcaccca 1440 cgcaagaagg gcaatggcca gcaagggtat gtacgcaacg taattcatcc ttctaagttg 1500 ctactgaaag gtggtcctgt ttgagagacg ctatttcctg agcaattcgt atgggggtta 1560 aaacaaaccg ggaaatgact tagggtgtga atgtcaacta accacactca tgatcatatt 1620 gaaatggagg tgcatatata ccgatgagag gtgtaataaa cgatacgcct ttcagctgca 1680 gtaacgtttg gcacttgage cegtggtege gtatgeatga gggaeegteg getgggeeag 1740 aagttgggca cctccgtaga ttttacgtat gtctacctca tttcagtaac aaaacgcaga 1800 cagategatt aaatteetgt attgeaaaat ateaaacece cateaegteg gtgageatgt 1860 gaaatcacat tcaatattgt cccaagtcag gtacaaaaca aactgccgat tacgtccacc 1920 atctgcatca accaacccta ccgctctacg atccatactt ataacaaaga tgataatctt 1980 ccgtactcat cacctctctc aatgtgcgac tctgatccag ccatccaaac ggcaactccg 2040 tatccaagtt aacctcagga gttgtcggcg cattatggat tgagcttgtg ccattcaagg 2100 cccacctcct ccttttagga tctttactct gccaaagcgt ccagacccga tccacttgcg 2160 catggtgcag qaagaaactg ggatcctgcg gcgctgtcca aaaatcatcc attgttcgac 2220 cgagctgcat gtgcgccaca gcatgcggac ccatgatccc agcctttcgg agttccggcc 2280 agtcgctgaa gtcgatatta atttgtaatt ccgtaattga gtgcgaattg agaagacgat 2340 caacgtcgcg ctggctggtg aacagctggg ccatatgcga gttgaggttt cgggtgaaac 2400 agtgtgggga gtagttgaat gcgctggcag ggaattcggc gtcgccggcg aaagttagat 2460 cgggcaggtt gagcgtcatg ttcgcgaatg gaccgtttgt gacgcaaccg ccgccggaac 2520 caccgtcacc ggagagagag gtgggagagc catcgaagat ggggctcgct gagatgttgt 2640 cggcggagag ggcccagtcc cagtaacttt tggagttagt cgccatgctt gtagtgagaa 2700
tggaattagt gtgcttacgg ctggtcacct cgatacccac actcctcctg gagggccttc 2760
tcccacaaat agacgaagtg cgatgccatc caaagaagat gccgctgagg tggatattca 2820
gggtgtaatt gatgtgcgtc ctgtatacgc cgtcaaactg cgaacaccgt acattcagct 2880
ggacagactc acgcagagaa atcgtccata cgatggcgga caccggggta ctgatcccgg 2940
ggaagaattg gaggtttgct ctgcatacag tgaagagcat caatgtaatc aaatctctca 3000
ga 3002

<210> 1926 <211> 2864 <212> DNA

<213> Aspergillus nidulans

<400> 1926

60 gctgcttttc atcaaaatca cattggaagg ggcgataacg atgtctatac agtgtgtcac 120 gggtgtttct taatgagctg aacacttatc taggtataaa accegctatc cccttttggg accccgctcc tcgtatccat gtagaggcct tgactcaagc atccttactt ctataaatct 180 ggaaaatgag ccctcgaagt tgtggatttg gtcttttcag tccgtgccaa ataaaaagac tgtaaacacc aataaccaaa tttatgtaca acggtgctca ataacaaagc acctgcatcc 300 360 agtggatata ctcccctcgt tgatattggg accacggaaa tctacgctgc tctaagcgtc gaagcagtcc atacactttc aaattgagtt ctcgaagttc gttatgacac attcaatcat tgcaacctgc aaacagactc ggtttcatat tgatgacaaa ccatcccgag aggtttgttc 480 catacccaat ttgtcaacat agagtataac tcaagttttc aggttgatat agagggcctt 540 acagtcgcag tatcttcagt gccggagtct gtggaagatc cctcaagaac aaaagcaaag 600 gggaaatcga agtctaaggc cgaagcaaga gagctcattt ctgatgcgca cttgcgactc 660 720 aaagccggcg tgcattatgg gctgataggt cgcaatggca ctggaaaatc gagtatgtga tttgacctcg ggcgagacac tagttaacgt ggtgtgcatg cagcgttgtt gcgggccgtg 780 gccgataaac tggtaccggg cataccgcat tcaacccgaa tagccattct gcagcagaca 840 gatactgcta gtgaagacgg ttatgcgccc ttctatgata gaactgaaga tcaaggagca 900 960 agtgagggaa agttcgttct ggactatgtc atgagcagtg accagttcag gaacgaagtc

acteggaaga tgaactgtaa ggacacagee ettatetaga teatttetea tgagaatgea 1020 gttttgtcaa aatgtttcga gacggaagac ccgctagagc ctgtgagggg gattcgaagg 1080 attegecaeg aagataeega gaageagetg tteetggeee ggaaaaatge cagtetaaga 1140 agtggtgcaa ggggactgca agcgcgaaaa gagctgaaag ccgtcgaagc aagattcgag 1200 ctttcgagag agctgtaggt tgtccctgga tcttgcacct tctcgtaagc taagttttat 1260 agtetegage aggegaaaga ggatattgat geegaaatea taaageaaga gaceeaagea 1320 gcgatagaaa cattgcaaga tctgcaatcc caatttgaag cagtgagtag cgcctggctg 1380 acatcgaccc cggggttgct gaacggtcac tagatgaagc ttgtcgacat agagcagcag 1440 gctagccaaa ttctaactgg attaggattc aaagaggatg ccttgagcaa accattctcg 1500 acattgtegg gtggetggeg tatgeggtge atgetggega gegteetgat teagaaeeet 1560 gacatcatga teetggatga gecaaccaat tttetagace tattaggagt gatetggetg 1620 gaagaatate tgaagcaget cagagattea acacagaega cegtegtegt tgteteceae 1680 gatagggact ttgtaaatgc tgtctgcgaa gaaattgtca tccttcgaga ccaaaagctc 1740 acttatttta aagggaacct gtccgcatat gaacaggatt ttgaagaaca gaaactatac 1800 tggggccgca tgaaagaagc acaggagcgc cagatagccc atatggaagc aaccgtccgt 1860 qaqqqcatta aaqttqqqaa qaaaaccaac qacqaaaaca aqctccgcat ggccaagtcg 1920 cgacagaaga agctcgacaa tagaatgggt gtccaggtta acgcacgcgg agggaggttc 1980 aagetgaace gagatetage tggetggeac teaagtgete gggeggagat tgaagtgeeg 2040 caggatgaaa agggagctct gattgccttg cctgaccctc ccgagctgcg atttcccggc 2100 ccgcttatat cactagaggg gatcaccttc aagtataaaa ctgatgcatc cccagtgttg 2160 aagggagttg atcttgtgat gcacttggga gatcgcgtgg gtctcatggg ccttaacggg 2220 tgtggaaaat caactctgat ccgtctggtg gccggcatct ccgtgccgac tcagggaaaa 2280 gtctcctcgc actcgcggct aagaatgggg tactacgccc agcattctat tgaggagctg 2340 aaaaccaggg ggctgggaga ccctagcctg acggcgttag ggctgatgac aaaggacgtg 2400 gatggctcac tcaatgaagg ccagttgcga gggttgttat cgtctctagg tctccagggg 2460 aagatagtct ccgacgttcc gattcttcga ctctctggag gacagcttgt aagaaatccg 2520 ggaacagett aagagetagt atcactgata tatgecacae aggttegtet ggeettggeg 2580 agaatcatct ggaacgcacc gcatctactc gtcctcgacg agattaccac ccatctcgac 2640 taccatacag tcacggcct cgcaaccgta ttgtccactt tcaaaggtgc aatactgctc 2700 gtttcccacg atcgattcat ggttcgagct gtgattgaag gaaaacgcga cctagaccac 2760 aaactagacg atgactttga aggcgtcgaa gaggagtcag atatggagct accacggcgg 2820 cgagtcgtct acgtgatgaa agctggtact atgacggttc agga

<210> 1927 <211> 3386

<212> DNA

<213> Aspergillus nidulans

<400> 1927

cgaacattat gecaectetg ceetteaacg aatggetget tegeaagaac tacaecegeg 60 cctacttccg tcccaacttc cagcctccca agaccgaatt caaatccctc gaggagatta 120 180 acgttcctgt ccttcctccc atgacggttc tggaacgtgg tatggtaatt tctccggcca 240 acaaggaaga tgccatgcct tgcccaccga tcatcgacgt ggatgtcgcc gctgatcacg atattgacga gacggataag ctgttgtttg ggttggccac ttctgcagac cgcttggacc 300 360 gettgettee ttetetgeta tactettatg gaaacaccaa ggeeggtate attgtteteg 420 ttccgaactc cgacgacgac atcgctaagc aggagacata tttccgcaac cgcggtcttg atttgacttt gatcaagtct cctctcgagt tcactgctcg ttacttcggt cttgtcaggg 480 ccttctctga acacatccga acgaagcgtc cccaaaccaa gtgggttagc ttcattgatg 540 600 acqacacqtt cttcctctcc ttgcctacta tcgctcacga attgaacctt ttcgacgtta acaagaagca ttatattggt gccctgtccg aggcaagctg gcaggttgac acattcggcc 660 acattgettt tggaggaget ggegtgtteg tgtecaagee tttgetegat accetegaet 720 780 actactacga tgaatgccag tcatggggtg agcagcccgg tgaccagaag cttggccagt 840 gcattcageg atttggegat actectetga ecetetggee gtetttgtae eagatggaea tgaagggcga ggttgatggt gtgtacgaat ccggtcgcaa gattgaatct ctccaccact 900 ggaacagttg gtataccaag gacgtcgtta agatgacctc tgcttctgct gcggctggcc gccgctctgt cctccgccgc tgggttttcg accaggagga aatcgtgaac aacgccaccg 1020 gaaagtcaat ccgaaccttc tgggtcttca ccaacggata ctcgcttgtc aagtacacct 1080 acgatgagaa cacacctgac gatgccatca actttgacca cgccgaaaag acctgggaag 1140 aagacceteg eggetatgaa gegegeetag ggeeeetteg eeetegegae eaggagggtg 1200 ttaccaagga caggtggctc cttcgggaat ctttcgtggt tggcgataat gttcatcaat 1260 ggtatgtgcg tgaggaagat gagggccaca gtgtgattga gattgtgtgg ctcggtccta 1320 agggtggcgg tggtgctggt gttagggatt ttgcggtcaa catccactaa ataaccatgc 1380 totactgcgc gattccaagg ccggaccttg gaatcggggc ccttcgcttc ttgcacatta 1440 tttacattca ttgcactttc tctttttgac acctcttttc ttttctacct acaacgaaga 1500 cggacgagat ctacgaagtg gcaggaaatg gaaggcctct tcgaaccact accgaagctg 1560 gacgcacatt ttcaatcggc tattactcgg cgttgttctg gcgaaataag acggcgcagt 1620 cggagatcgt ttttcagctg ttccgagcta taagagcgac ctttctgtgt ctctgccgtt 1680 tttctgggga ggattgcttt caatgcacat gtaaaaatag agttttgttt ccttggtcat 1740 tggcgcatgt cattatccaa gaatatgatg agttaagtct agatcttact gcagtcagga 1800 taccgctgct attatcacta atatgataac aaattattca ccttcttgtc tttgagtaag 1860 cgagagtcga atgtttcagc catgcgtttc acttttattg ttgaagacat gccgctgacg 1920 ccgttggtat ttaatcgcgc acagatctct aaatgaatca tagtggaaat cgtgatgtgg 1980 ctgggataag tatattgatc tcttaagata tagctgtctt ggaacgtagg gcgatattcc 2040 aaaactette tegtatacag agacteecaa caageatege agaaggatga gtgeetgegg 2100 ctatgctcaa accccatgca agccaggaga caaccaaatt cgtcaattat ccccaaccgt 2160 aagccgaaag gtttactgtt gtcgtttcgt ctaatatctc gaacccattg ccggcacgac 2220 gagegatega acaatgetga tagacaacte tgeecagggt caecectgee aatgtaeggt 2280 gtgcagaata ccattgaatc tgtacagccc tgaaatatac tgcagcccat tattggtgga 2340 tattggtatg gctaaaatta ttggcgggac tatcgccttc tatatccttt ggtgctggga 2400 tegatttgat acaatcaagg etecaactgt eggetgtega eacgaagaga ttategteaa 2460 gtattagtct actgaactcc aagatgatgc gtcagtgaaa tggtaagaga gtagcaactg 2520 tcaccgtact gtagtagtcc gtaccaccgg ttcatcagcg ccctagccaa cggctacggc 2580 caacaactga acctaatcac ggagtacgga gtcctgtgcc gcaggactcc ggtccctctg 2640 taagaggatt gaagcaaggt acttctggcc ggctattgtg actgagatgt gttgtccagg 2700 acgggtggta gtctgcattc cttgggcact agatacccac tgatcacctc tgttcgtggc 2760 cgtcaattga gctagagatg cgcgattccg agtcgtggaa ctggactcga ggaggttggt 2820 atgcttgtct ccaccgagtc actgtttact gttttgcttg acatggccac cggagcctta 2880 ttttgaactc cagctcgagc ggtgtatcta caactgactt gaaaagagtcc agcgctcagg 2940 gctcaaaact gtgggcgtga ataatggggg tctcgtggga cggagtacta ccggtaatat 3000 tacgtggtat tagcgggag tgactttcta gagtcgacca atcatacagc tcgccaagag 3060 cgctgaatgg tctcggaaca cttagtcccg gccgatgcca gtcgcctatc tcgctttga 3120 ccttgaacag cttcaggaag aatgtgtaaa tgctcattaa ggccgtaaag gtgatataac 3180 atgatgttt aagcttctgg tccttgagat gaaaggtgag ttctaaaatga ttgtcttca 3240 agcgaagagt ataagaagtt gactggacca ttatccatta cgagctacat cccagctcct 3360 ccccgttggc ctgtttctct caacaa 3386

<210> 1928 <211> 1153 <212> DNA

<213> Aspergillus nidulans

<400> 1928

ccgctgtgtt ataacatccc ttggaattgt ccaaatttcc attccccggg caggaagccc 60 tttccctttc aagtggttcc ggtggatgca tcatcgcgca ttgtaaggaa ggaaaccact 120 gccaacccgt tttccgtcgg aattaggggc aaccttaagg gaagcttggg tgccaaaccg 180 aatgttcctt tttacccctc caaccaagcc agtagggttg tatcccactg gcgttttacg agtacgtctt cgagtcttca tagcagtgcc atccgctagt acggctgtga ggttgatcac 300 ccaatcettg atagtecegt accgeacage atttgtaceg etgeagtttg tgecaateat 360 accgccaatc atggcagatg gacctggatc gaccggaaag aagagcccag tgtctttgat 420 tttctcgttg agatccatcc actggataga cggttgtacc acaacgtcca tgtctgcttc 480 atgtaggtcc agaattttgt tcatgtatgc aaagtcaatc gtcaagccgc cataggcagc 540 600 tgaaaagttt gcttccagac tggaaccacc ggagtacgga accattggca tcttgtattt gttgcagatt tttgcaatct ccgaaacgtc ctctgtactg gatgggtagg caatggcgac 660 cggtaagege tgegeattga egettgacea etecgagaag ecatgtegt gtaggtegte 720 tteateegtg etaategeat etteteecaa tttaaectga ageteagega tggeetaaae 780 gacaaaggeg ategttagea acattteaca atageegtae tgggteettg tttgtaeett 840 ttegaaatet tttgeggtte eatacegtgg ggtgeeageg teettggget ecaacagttg 900 gteegagttg ecaatteegt ageegattee ageagetage gaegegacaa eageeateeg 960 geecaaggae eaggaatteg eegagttee ggeagatgag etegageteg agttgtgaet 1020 actettetga teatteteae eacgtetgga tgttgagete gteaaecgaa eggegetgge 1080 aaaagggatg ggeegagaae etgeecgaca eageatgeg ggatttgeg ggaateeceg 1140 agatateagg gae

<210> 1929 <211> 992 <212> DNA

<213> Aspergillus nidulans

<400> 1929

ctcctcgtag ccaccatctt ctatgccgtg attgccgaga tccttgaaac accgttacgt 60 tgtcttggaa agcgttgacg tttgatgaga aattcttgga atcacattgt ttgcgttggt 120 gcccaacact acagagttct tggtatgtgt gttcacccaa tgtagatgga gctagccagt 180 tgaccgatga ttatagaatg ctatctcgtt tgccatgaac ggaaatattg cgctctccat 240 ggagategga teegeetatg eeetgeaggt ttgtetettg caaatacetg etettgtett 300 gtttagtgcc ttctacgccc gtgttcttga cccagaacat ttgattacac actccttcag 360 gtacgtcagc tatctctcgt attgtgtcaa tecttgagat cgatatgatt ttgaagaagg 420 ctaattaatg ggtttaacag cctcattttc gcgcaatggg atatgattac agtcatcctt 480 tgcgtttttc tcctctctta tgtctacggt gaaggtaaaa gcaattattt caagggctca 540 atcetegtee tgacetacet tgtegtegtg attgggttet teetetetgg ttacagtaac 600 atggacacca tgggtgttga tcgcttcaac accttggccc tgaacattga atctaggccc 660 gagaaattct acacaattgg caggtcgaaa agcggagttg cctatcagcg tgttcactga 720 ttaggcacct tgaggtgtca atggcggctt tcgctctttg ttctctgaat actttctgac 780 ctagagactt cttgagcgca cgattcatgt gtacttcgca ggccatgttt ttggttagta 840 gttagattct gccttcttct gtcagaatga atgccggcaa gtatagtccc caaagtgatc 900
tctgactctt tactttgtaa aatgggacaa aaaaggtgta gcttggaaaa ggcaagttat 960
tgcgctatac aaaccatgcc cgggaaggta tt 992

<210> 1930 <211> 1689 <212> DNA

<213> Aspergillus nidulans

<400> 1930

ctcagtaagg ggccgagagg gagagtaagg gatagagagc gcgcaaagaa caaggcaaag 60 120 ctgtaatatg ttcagtatat catgtttggc ttcgtcctct gggatgctag gatatgggac acttaccata cccctagcgg agggcccgtt gtgtcagttg ctcggtatcg tatttattca 180 tettaetgtt gettagegtt eactttagga taetetagag atataataea tetttattgg 240 300 cqttqtaqca qacactacca atcaqttttc ttatttcgct taacaactac tatttgggtt gagtggtgag tacagtcgat tatggcatgc atatgcacgc taccttgccc tagaatagtg 360 egtgetaact agacaaaaac cacaccaacc tgtaattttg agtcccatgg etttgacate 420 480 agagcattat ggattagcta ccatgatacc gatgcagaaa tagttcctcc agtatcgttc 540 gcaagtettg gacetteett tateaetega gtageagtae tggagatate tgttteaage acaaaagcac tagccagttc ccttcgctgt aggtttcttc aggttctcaa tccaggacgt 600 ccaacagaag aaatacctca gtcacgcagt gcatcaccaa cccgcctcat tccgaaccct 660 aaacacagtc agactcattc agtcgcacca ccaccgaaaa cgatctctct aaccgagaag 720 tctgatatta tcgcattggc gtgatcatta aagacggagc agagatgggt tcctgcaatt 780 tgcagtttgt acacagaccg ggttaggaag acggagttag tctcaggttt ctagttttgg 840 tttagctaat ggagtaggga ctgaagacct ggaagaggcc taaacgagta cgagatcaga 900 tctcgagatg aaggtcaacg taccgtgtgt tgaatgaagg cttccctcag ctgggactgc gatactgagt gccatgacgg agtctatatc atttgatqtq actgagaggt cgtaaagaga 1020 gtggtgtaag aggctgatag aatgacagcg ataatagcgg tggagtatca tggtatttgg 1080 atactcgctg gcaaggagaa tagccacaag ctcactcaag aggtaggacc tagggccgtc 1140 agacacgtca tcacgctcca agtcaacaaa cctaacagtt atcctcggag aagagtcaaa 1200 teaaactgat acagteacet ateatggetg cacatgetgg caagategte ataaceatta 1260
teeteegatt ggteteggag aagtatggee atgaeeattt tgeteeggat gtateeeate 1320
categeetga ageteaaget eegeagetet tgattetaa ttattetaet ateeteeag 1380
gettggaata aagtgteega egtetatttg agetettttg ggageggete ttgegtaett 1440
ceaceaaage teaatagete gageeacgat eeegegatte eacagaggge egetgetteg 1500
ageegaacat tteateeeaa gaeeatgggg eateeaagtt agegaatega tggeaceete 1560
agetteteea geteeageeg eateeatgae aageacagaa tggaeegtet tgeeggeat 1620
etgeaceece egeeggeteg teeatggete geaceeetge teaatgeagt eeteaceate 1680
tageeceag

<210> 1931 <211> 4419 <212> DNA

<213> Aspergillus nidulans

<400> 1931

acctgcgcgt agatgagttt taggtcggct acctgcccaa taaccgcgcc tggcttgagc 60 caccgcgggc gggtcaattg ctcctgtgtg tccgttttcc acccataact atccggcggg 120 agagtcgact ccggcacact ggcacagccg gcatcgtctg tcaggttatg aaaacactct 180 ttgcttgcgg agaaaatcac gcgctgcgag tacttctggt gtgtttccac gccatccttg 240 cggaatggtc gatccaccgt aaccataccg tacctctcac gtaacttcgc attcatttcc 300 cgtagcaatt cctgataccg cctgactaga acctctggcg gcacgtggaa gaaaatgtcg 360 aagccgtcca caaccaaaac aatgtcatga tcctggaggc gcggggtgta cgccaaaaag 420 ttatatatcc cagtaattct gtcaaccatg taatcatgtc cggccgatcc cgctggaagt 480 540 tctctcccat agcgcaccag cgttggcggc ggataattta gaatcatggc cgaagtcaag gtacggcata ggcctgggtt gctgcgggtc gcgggcagga cgagatgaaa cgatgcattc 600 gtcttctgca gattattcga cagtataaag gtatcattgt gatcgtaggc aatccqqqqq 660 gttatgatcg tggcgtcttc aggtcgaccg tggaaagggt ggtacgaggg gtattgaagc 720 cagtgattga cctccggctg aagaatcgtc agtccttagc agtcccacat ttgccatttc 780 agagggetta eetegeeegg agacegeatg aaaagaaata teaaaaagaa geateetgeg 840

actgcgagaa gcaaccgcgt cggtcgcggc cgtgggcgag gatagtaagt ctgctgcagg aaccgcgtgg cggacaatcg ccaggaattg tactggtcag cccagggacc aggcaagtgg 960 ttgtccaggc cgctcaggaa cccgcgcaag gccatctgga aactcagctg tgcgttgctg 1020 ggagcaaagg gaaattgtcg atttcaatcg tggaagagaa ggttgaagat aaacattccg 1080 gegeggattt agteaeegea ggegeaggga atgggatgat aaegaeteet tegtaetetg 1140 aggggcctag agaaaggaca gatgagctta agaagaaagg aaaagatcaa cggcaagaag 1200 aggecatgtt geagaagatt tgeactgetg tgatgaegea getgtegeet gegaeageee 1260 cgacccggca cttagtttca gatctgtcaa tgtcaatcga tgtggcacat aatttgtcta 1320 cagagacctg gaatctttga catgcttgtt tatctatacc caaccgactg attgattctt 1380 atatccagta tgaattgcct atgtttcttt ctgcgagccg aatatcttgg gtttaacctt 1440 ccgttcatgc tcgggccaat tctccctagt agtggccgcg taatccgacc caaccctgcc 1500 gtttcatatt gacaggccga tcccaggccc tggcagcatt agtgcacaag agttctcgct 1560 aataaaccat gatctattgg tagtgcagct atgatcaact gctgctgttg agtttgccgc 1620 tgtcatttgt ggagtaccca ggcaataatc agtcattaga tgtacaacaa agccggtcgc 1680 aagtggaaac cagtggctaa atagcaagtc agatgcagtg cgaaggtata tataaacaaa 1740 cccccaaacg ccagtatgta tgtctatcct gcaatcaaca tggaataaac ggacaactca 1800 ttccaagtaa atctcctctc gtaaccgttg cagattgcgg aagatcccgc ccccaggccc 1860 ctcactctcc tgtctttgat gccccctcga ccccgagatt tgtgtctgtt gactctgtga 1920 cggagcetca actgecetce tecgeteetc gacgagettt getaateegt ecacaaacet 1980 caccegegee ttetecteeg etgteeeett ecacaccaaa gatagtgtee gtagageete 2040 caccetgege getgeagett caageecace ategetatee agaageteat tgateteace 2100 acgtagette titgeagett cetgteettt etecteaege gietgaeigt eegggeetaa 2160 atctggtgcg gaaacagaga tgaacgagga cgttatcgaa gtctcagacg gtgqaaqcgg 2220 ccactccatt gcgtcgccga aggtctgaac gacttcttcc aagcgcgccc ggacctgatt 2280 cagggtgcga aggttgctga tatactccgg ttcgctcttt ttcctctcgt gttctcctcg 2340 ctctgtggga tctgattcgt cttcgggttt ctcctccgga attgtcggcg tagtagtaaa 2400 cetegeaate teetetgeea geeecteegt cageaagtee gagagtgega tegeeteace 2460

gcgaagaacc tcgacttcgt acgcgagccg gttgccgctg cggatgattt catccgtaag 2520 agaagtaagc gtgcttgagt ggcggatgtt ctgggcattg gtttgtgaca ggatagattg 2580 gacgcgagtg gagaggtcgg tgagattgac ggcacgcggg tttgattggg attgaaactg 2640 tgaagattgg agactcagtg gcgggagagt gtcgttgagg aagtcgacgg ggtcgaaaga 2700 tggatttgcg taatcaggat tgactgtcaa tgttgacgcg gatgttgggg gcggagctgg 2760 actgggcgtc ttagacggcg tcattgcgct tggggtatta tggaaaatgg gaactgtgtt 2820 tctatgactg agttggcatc tttgaagcag taatttgtcc agcgggactg atggataccg 2880 tgcctgggct agatcgaccc cacaatgact tctggggtgg ttcaccgcct gccattgttt 2940 acattgtata cagtggattg cttacagaaa ttatttcact ttgctttagt atctcaagta 3000 gagtetataa acagtacgtt gcgcggttgg gtagtatgtg catetacttt gttgccacga 3060 caaatggaag getteataaa gatagteate ttgaatteag ataatacata ttaaaggegg 3120 gtategtgat attaaaccaa aaagcaaagc cacaagatca atcaaacccc aatcccaaat 3180 actactgttg ttcatgccat cgtcaatctc gggtttaaat gtcctccacc acacggcgtt 3240 aatcgcatgc tgaacccatc tectecetgg ggcggegegt agegetagge cettegeeag 3300 catteteege egeegetagt tgetgetgta eggtttggtt tggegeegga aggaagatga 3360 ccttgctgtt ggccgtctta gccatagctt gcatcgcctc gagatatcga atctgcatag 3420 caggagcaga agaaaggata teggeggeet gacttgatta gettagateg egggacaatg 3480 gcttagcaca tacctgacgc ataagtttgg cagactcgac ttcagcacga gcggcaatga 3540 cettgetete teegataegt ttagaetgeg etgeeatgga eagegagtee tggaggteat 3600 cactgaagat aatgtetttg atgageatag actegaegtt gacaceceat cetgaageca 3660 cttcctcaat gatctccgac gttgactgag caatctcctc acgtcgttcg atcacgtctt 3720 ggagaacacg cgcaccaatg acatgacgca atgtggtctg ggtacgctct acgagtgctt 3780 gcttgatgtt ggaaatacca aacgccgcct tgtgaggcga gacgacttgg tagtagatga 3840 cggaagtcaa gttcagggtc acgttatcct tggtcatgca aatctggcga ggaacctcga 3900 cgatctggat ctttacgtcg attgtgataa gacgetcact cagcgggttg accttgacga 3960 gaccagggtc tactgcgcgc tcgaatctat gttatgttag ctgcgcgttt ttcgttgttt 4020 ttgttatttt cgcaggtcac tggagtgcac gaaccggccg aatcgcgtca ccaagccgac 4080 ttcaccttgt tggacggcc tgaagggtt cgggcatggg cagcaaggaa taactcccag 4140
tcctccgata cattcaccga tggtatgctc tatagaaatc gcttggttag ctctctcgaa 4200
acttgactcc cttcttaggg ctcgacatac taaacgacgc gtaccagccg tgcgcttctg 4260
ggttgctatc atcgtgctcg attgtggatg cgtaccgcgg ctgcagatcg gacagacgag 4320
gaggctgtac ctcgacaagg ccataaaatt actgcgtggc cttgccattc acgccagtgt 4380
tgcagcagtg ttagagcggt gcttgaacgg cagacatgt 4419

<210> 1932 <211> 2857 <212> DNA <213> Aspergillus nidulans

<400> 1932

cactccatcc ctctcgacaa ctgtccttct cgtttacctt acaacgctca atatgttttt 60 caagtccgca ctctctcgcc ttccacgggc aaagtttttt tcgaacagcc ccggcgtcac 120 ggtcgaacaa gtgagacaga tcgcccaagc ctgcgaagat gccttccgca cttacaggaa 180 actgtccctc gatcagcgca aagctatcgt cgttaaggcg ctggaaatca tcgatgccaa 240 300 caaagagact cttgcgcatg agttgactac acagatgggt cgtccgattt catataccgc cggtgaggta gataccatgc gcaagcgagc caactacctt atcgatcagg cggaggatgc 360 cctcaaaacg atcccgggac aagaggagaa cggtttcaag aggttcgtca agaaggcgcc 420 agttggtcct gttcttcttg caaccgcatg gaatgtaagt tgccccaggc tttccgaagg 480 gttggaagct aaccggtcag tatccttact tgatcaccat caacgcactc gtccccgcgc 540 teettgeegg aaacacegtg atcettegte etteacetea gacteetett gttggegate ggetetetga ataetttgag aaagetggte tteetaagaa tgtgetgeag gtggtgeate 660 tgggttcgtg ggacgttcta gatgaggtcg tcaagattcc ccagatcaag cttgtttctt 720 tegteggtte tacteagggt ggteteegte teegeeagge gaeegeegge egaatettge 780 cactgaactt ggagcttgga ggcaatgacc cggcttacgt ccgtgccgat gcggatctcg 840 cgtacactgc cgcgcaggtt gtggacggcg cagtctttaa ctctggccag agctgctgct 900 caatcgagcg gatttatgtg catgcagatg tgcacgacgc tttcgtagcc gaggttcgaa aggagctagc aacgtacgtc tctcaccctg aatcaagaac atcattaacg aatgtagata 1020

caaactegge gacceteteg acaaggetac taccaetgge ecegtgatet eccateaage 1080 tqtcaaqaac attcaaqccc acattgacqa cqcattqtca cqcqqtqctq tqqactcqac 1140 ccccqaqaac cctactttcg cgaaaattcc cagtgaagga agcttcatcg ccccacgcgt 1200 cctcactaat gtatcgcacg acatgcgcgt catgcgcgaa gagacttttg gccctgttgt 1260 tectattatg aaggtgeaga gegaegatga ggeagtggeg ettatgaatg acagtgaeta 1320 tggtctgact gctagcgtct ggaccaagga tatcaaggca ggagaggact tgattgagcg 1380 tategaggeg ggaacegtet teateaateg tigtgattat eetieteegg tiegtggeaa 1440 aacccactat gcatcgaata tgatactaac tgcaaatcag gacctcgcat ggattggctg 1500 gaagagetet ggettggget getegetegg teegeaageg tttgaegeat tetacaaget 1560 gaagagette cacateegta caacecaegg ttaaatatag ttetgttgat etcatagata 1620 tatacataaa catacattaa ttctcacgtc gctgtttata acttttatct cctattaaag 1680 caagatatet titaegagga ettgegtgeg ceaetggtet egitegtett eeegaaceet 1740 gtgacatacc tetegtgeet eccaecetta agtgtgegae tgtactegat geccaeactg 1800 ttaccggtct tcacatcaaa aggcacggga ctggtgtagt catgcgtagc ggtcaacccg 1860 gegtaggtet teetgaceae gteeaggate ceataaceae eggaacactg acceteggte 1920 gcaggaatcg gccactcgta ggtcttctga gagtattcac ccgcagccat gggtccgtta 1980 tacgaaacat tcaggtacag gttgctcgta tcgacttcat agttcgtgta cccgaccttc 2040 tcagcaagga aagaaagcag gtttgcgccg cagtcccagc ggcctaaact gggaaggccg 2100 aagttggcag acaaagacga gatgatactg tagtgagtgt agaaggtgtc gtcttccttc 2160 ccgatgaggt ccttagggac agcaccacca agcaggaaag agaaaatctt attgcctagc 2220 tegtaggtgt egttetegte gaaagttaag aggateageg tgtegttggt gaagtaeteg 2280 ttgtccagca ggtcaatcag gaactcccac gtccacctac cggagaaaga gatgtccgtg 2340 tegtgteeat egttegteat gtteggtgtg atgaaactgt aetgaggeag aeggtgggte 2400 ttaaggtcct cgtagaacga ggtgaagttc ttgatttggc gcaggcgcgt ggggtcctct 2460 gttattgagt cgtagaggat agcgggattg tgcttacgaa cgtagtcgtt gtctcccgaa 2520 gtgggataac ggaagccctg gtagccgggg tagggcatgt gttcttggta ctcgccccag 2580 gagatgttct tagtgtcgaa catatccgca atggtggaga tattggccgg aatctggttg 2640 aagtcgtcat tatccatacc gaatgtatcg cctccttggg aagcgcagta gtttggctcg 2700 gaggggatgag tgacggccca aaagttggtg agggtgaggc ccttctttgc gagccgggcc 2760 agatgcttct cgctggcggc aacgtcgtaa tccttggtaa gtggttatta ctttgtcggg 2820 tttgagggat gacagcagaa cagagcgtac agtattt 2857

<210> 1933 <211> 1597 <212> DNA

<213> Aspergillus nidulans

<400> 1933

tcgaagagtc gaccaaggtc acaggccccc cgaggtagag tgaaagtgat ataaaatggc 60 gaccacggcg gtccgagaca tttggtaagg gcccatgaga tatggtgtat tcaatggccg 120 cctcgatttc ttaacctgac gttgaggttt gatatcggaa attagagtaa taaggtaaac 180 tttgaccttg gcggctccgg taaacgaggt accttaagcg cgcggtaagt agcgggcggt 240 aagatcgagc ttggctgggg acaaacaaca ctcggtggag tcgggttgga ccagcgaaca 300 atttatgatt ttttgacata cctccaagtc tctttgtctt gacgagccgg cccttgggaa 360 ggctacacca ccaatcggcc tctatcaatt tcactctctt ttgtctctcg actacgcctg 420 cgccaaaaat aatcccgatc attgatcctt gctttcagaa tgttttcctc gaaacccgca 480 accccgtcaa ccgggctctc tatcaacacg aactccgcca attctctctt gtaagagcat 540 tgcctttttc agctaactcg tgtcctaaca tacctatcgt tgaaatagtg gtggcaatac 600 gaatcaatcc gcaaatacgc cggctacgac aagttccggg gggggtctat tcgggacggc 660 cgcgacgcaa tcaaagccag ctggtagctt attcggcaac actgggatgg gtactacaca acaaactcag tcttcagggt caagcttgtt ttcagggctg ggtggccagc aaaatagcac 780 840 gtctggtagc ggattgttcg gcaacaccac agctaccacc acacaacagc agccaggcgg tettttetee ggcactaetg geaccaacaa teaagegaae agttetggag ggetttttgg 900 gaacacggca tcgggtgcca cgagtcaagc ccagtcgaaa cccacgttcg gtcttggggc tacgtctacg accaataata tcttgtaaga actctcttga acgagcagtc tgtgtgatga 1020 gatggctaat attaattagt ggtacaaatc cgggtgccgg tcagcaacag caacaacagc 1080 agcaacagca ggctcaaaaa ccgacactat cgctcttcgg aactcaaaac accacttcgc 1140 agcagcccac acagcaaaca ccggcagcgg gatctaacac ggtcatccaa ggtgtcaagg 1200
tggatatcac taaccttctg ccgaccacca agtacgaaag ctgcgcggat gaggttaagg 1260
cagagcttga acggttcgat accttcattg ttaatcagat aaatatgtgc aacgaagtcg 1320
ccagtatcct tectetggtt gcgtctcaag gtagcactat accgaatgac gtggagtatg 1380
tccaaggcaa gctagaaacg atgcagcatg ctttggaaaa tgatgccagc gatatcgatc 1440
agctgcgtag cetcgtatct cgggatgcag cggaggctca ggtcgcettc cgtgctattg 1500
acaccctcaa gctacctttg cagtaccagt caactcgggg gttcctgggt ggtggtccgc 1560
tcaagatcac aaaggtgtcg gattctcagt ccttgcg

<210> 1934 <211> 2105 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 1934

cttgctgcat attagaccat acacaaacat gtcagcaaat cgatcttagc agttgtaccg 60 aagtcagtag tggttttaag cggatcaacc gaccttgtca aagttcttca agaggttgac tatecggeec teaacetett cettettaag aceggeaggg geggaataga ageggacage cggcaaggca aagcgaggag ccaattgagc tggacgagca acgggagagc tacggatttg 240 300 gagagcagcc tgaggcttga cggcacgagg cacagaggcc ctcaatgaac ggacgacagc 360 ggaacggaac atgatgacgg tagaagggcg cggtgaaaag tgcctacacc cgagttagaa aaagtcgaca aatagatgaa ggcatacgat agagattacc tgagcagaaa aatggaaaga 420 tggacagcaa aagggaccga taggagcttt gtctgatgct ggagaggtga acctgaattt 480 ggcgttgcga acttgcggct tcggggaaag caaaatccct tgcaccgacc aatcaccgcg 540 cggcagaaac cagtgacata agccgcctgc aaaaccgctc ccagcaacga ccggccttcg 600 agatecteca getgetecag ttegacecee teececaatt gatetteece teactegtet 660 ttcatacgac gtccgtctgt cgacatcccc atacacagat ggctacctcc agatctgtgg 720 780 cgagactgct cgccttccga cggcctgtgc cctccattgt gccttcgtat ctcttcgtcc cgaccgcaaa cttctcttcc tcggtgagcc gggctgctac accgtttgga cctcctccat 840

egggatteeg cetteeteec eccaagegat gggateagga eccegagtee tetttggaca aggctagcaa gtacttcctc atggcggaga ttttccgggg aatgtacgtt gttttggagc aattetteeq accaceqtaa qtetteeteq caategqeat tqqateetgt egagagaggg 1020 tgtgcgacgc caccagctcg attgaacgca ctatcttcaa gagtcccaaa tatactgtgc 1080 taatgcggct tgctcagtta cacgatcttt ctaccccttc gagaaggggc caatctcccc 1140 teggtteegt tggtgaacae geeectaega egnetateet aetggegaag agegetgeat 1200 tgcgtgcaag ctctgtgaag ctgtctgccc tgcgcaggcc atcaccattg aagctgaaga 1260 gcgtgtggat ggaagtcgcc ggacgacccg atatgacatt gatatgacca agtgtatcta 1320 ctgtggctac tgccaggaga gttgccccgt cgatgccatc gttgagagta cgttttccac 1380 atcttattgt tactggactg tctgctgaca agtaatccag ccgccaacgc agagtatgct 1440 actgagaccc gcgaggaact gctatacaat aaggagaagc tcctcgccaa tggtgacaaa 1500 tgggagcctg agattgcagc tgctgccaga gccgatgcgc cttaccgata aattattcag 1560 tgtctttatc ggacgatatc aatgaatgga aaaattcgtc aaagaaaagc ctgtattgcc 1620 accaactgat taccaggatg ctttgccgca ttcaatttat ttccttccca ccctgtacat 1680 aactcatgcc gtcgctcaca ctcttcctcc tttagtactg ctatgtattt tgacggattc 1740 gtagggatat ctgataccta cctagtttcc gctcggttgt cttttctgta cctgtgatag 1800 aagagatttg tgttttaata ttgttaggga tcaattgagc tatttccttt gttgcattca 1860 ggcgtcacga agatcaagcc aaagaggctc ttagttaaat aaggttgact actataagtc 1920 atcaagtcaa tacacagaac agcattgaac aaaatgcctt tattgtatca acaaatcgct 1980 accaaatgca tatgtgcaca agatgacgga atcccattat aaaacaaatt ccaaaacacc 2040 tgtctccaga gcccactctg acatctgttg atactgcgcc acagaaagtc ctaacggaaa 2100 2105 caggc

<210>	1935
<211>	2308
<212>	DNA
<213>	Aspergillus nidulans
<223>	unsure at all n locations
12237	dibare at all il tocaciono

1935

<400>

ccacaaagtt gaccggtggc ggcgcatgag tgactgacaa ggttcgtagt ttcgtcgagg 60

tttggtcttg cggatgccgc caatctatgg cttcgtattg cgtaaaatag tcgctatcag 180 cttgtccata aatgtggtct ctccagacct atagcggaag ttcccgactg gagtcctgga gatgeeggag tacacatega geetategee getateaceg caaategett eegegaagaa qaqttqqact cqcaqtqqtc cctccacctc cccgtcccat tggagcttgc ctgagggacc 300 360 ttggggatge attctgegea eccatgagte egggteecae attteetett tgetegaace qcqqqtcqaq taqtcaacaa cttqccqcat aaaqcttaqa tcaaaataat tqccttqcta 420 aaaqcqqqac caqaqcccaq acqaqqctag caqcaqtttt agccctcgtq ctaqttcctc 480 ggaccgaatc caccgctgcg ctactaaagg gctggactaa atggaatcca cgggcctctc 540 tgcgtctttt gtgtggttgc agtggctagt tccaccgata atccttctcc aactgggatg 600 cacgtgtgat atctggccgc cttggctatt cccatgcttt gcgatcgacc tctgcagacg 660 tcgaaaggac agttcgagga gggagaccag gcgttgaaac ttcgagtcca aatccaatag 720 cttccqqqqt qaqacqatcc attccttqcc tcaggcccac gaggttgcac gataccttcc 780 ttaataggca aatgaacgtt acgtccacgg gtccgctaag gaatcatcgt ttaccccagg 840 attggcatcg agacagtcgt ccatcccgct tccagtaagt ctcattctag ccagcaaggg 900 tagccaggaa tgcaagtcgc gaccggcttg agcttgtgta tccgcaacga cctactaagt 960 gttcagtagg cctatcactg gatggtgatt ttcatccctc attgcccaac ctctcqtcct 1020 teggttegea tacaaegeag tggatategg atttgteagg acaettetaa aegetattat 1080 tagcgccacc ggctcttcag actgttagcc gacacaatac ggaccttgaa ctactcagat 1140 aggegegace agggagatae tgaagtteea ttttgatggg teggeattat tetggaaegt 1200 gaaagcqqqt tcctqaacqq qqccaaqqat ttqqaattca acqqcaqcac cqaqaqtcqq 1260 tggcaatgac gagcctgaac atcaaatggt aatagtgacg catgatagac ccaaagcagc 1320 ggtaatggaa ggttcttgga atactccaaa gccactatcc aaagcctatt ccgactctat 1380 tgacagacgg tcgtctcgat ggttgttgca gggtgacctg agtggtcgac ggcggacgcg 1440 gtggaggcgc ggagatgagg gcgatagcgc gtttcagact gttgtagctg gtcaagtgtt 1500 aactcaattg acaatttcga gcttgcttct cgctttcaat ttctaacttt gctcacaaag 1560 aatcacgact cattgctctc caccaaatta tcggcttggc ttatgagagt ttgtgagtta 1620 cgaagcactc actggctggc aacccgtaag accatcgcac tctgtcccca ttccccgtac 1680

atgccetete etaaacccaa tategegtat theetgtage eccagatage tegteggatt 1740 ettattateg tatetttggt aeggteggat ectteegeee ggatgtetgt gattatgeag 1800 gteaggteee ateaeggtgg theeteegee attateetea caaacataat gagacteteg 1860 aattgggeee teggaaatege tegtagacce geaaatetga tetegaetgt tetaettgaa 1920 the teggaaggg atgaggegte ggagaacgg ggaaggtetg geaaegetet eteaaaatea 1980 gtateagata geagatgata eagegaettg eteggaatte egtaaeggte tettettet 2040 the tegethete gtateetea ateagaatet theegaetaga eeeggaetge eeggaeggte 2100 acaccagtea agtgeaaege geeeagtaat egeeathte etgggteeg eeggaeggte 2160 teteaetete ataagaacth tetttgaegg agegaeggeg gaeeaaaece egaeaggae 2220 gttgaaeggg gattateetg gatgaagaga agaenagagg tgnagagaag eetggeetga 2280 tetgaeggte gaaaggeee ageaaatg

<210> 1936 <211> 2687 <212> DNA

<213> Aspergillus nidulans

<400> 1936

qqatccqaaa qcaaqqqatc taccctqaqc caaqctqacc tqaaactqaq cqaqctqtca 60 gageteagga eeaggacegt ggatgagate caacagcaca ettatactge teacgcagte 120 tgacgttggt acaagggtat gtacggtaag gctacgaggg cacagccgca ggttaccaag 180 gctcgttgta cagataccac aataaacttg cgggttgcaa atcactgcag agttttcctg 240 gttgccactc acaggcaata cattgtttgt gggacgcaaa cttgatgcac tgcgctgcct 300 gcactgcatg attgtgaatt ccagatgcat gagaatgcat tatgttaagg gccagagaaa 360 teggaegetg etgeetagae gettggetaa gtgtaaagaa gtteaataat gaagttteaa 420 gggtcagctg gagccctaca agtctctcgc acttgcctgc tccagaagca ctgcacagtg 480 cactcaccat aactgtattt ttggagagcg cgggccaaag cgaccagtcc agccagacgg 540 tegacagace eeggggaggt etggteeetg ggacetegge ttgetgteag tggtggggat 600 gatgtcgcaa aagggttaca taaacacgga agttcggcgc ttcttattgg aaggtcgcaa 660 cactaaagat aggccggacc ccacttccca tctcattggt gcttttgaca ccaqqtactt 720

ttttgacatg acggttcgcg cgggacgagg gctggggata ggacggacga tgcatgaaaa qtqaqcactt taqqtctttq aaattcqqat aagcctqaqa cggcacggag atggtaagga taccaagggt gtcaaactgg tgaatcttgg atatccaatt cgtggtactt tctcttcggc teggeectae etgeteecea aattgagaat ggetagaggt tegacattat tggagettge agtaatgaga agcctaccga cggccgttag tccggatgta tgttatccac ttcttatatt 1020 aaaaaccagg ctttgaccct tcgacatcgt accatgcaga agctacgccg agctagaata 1080 atgctagctg ctccagacgc agagctagaa ggcttcgaga agaaaacggc ctactttcct 1140 gaagaattcc agttccacct ttttgatgaa ggctcggaga tataccaggc cgctgtcact 1200 actgtaaggt cccgttccat tactgggtcc atctcatacc gtcgctgcga ctgtcgcgca 1260 ggtcacggca agtcatatta ggttctccat aatcatatgg ttcaaacccg atgattatga 1320 agctagaagg cttccagaag gacacggcgt gacatccttc atcccctagc tctagcttta 1380 cctaggatet tggccgacac tattgctacc cactetttet aattgaaatg gtaggcacte 1440 cgagaatacg taccgataga gccgacatcg agccatgctc tgtacgacta cggagctgga 1500 agetecatta etgaegetag aaggetteea gaaggaaatg gegeeattet etetaeatae 1560 cgctagcgag ccgaacggag tcgaagtagc aagtcaatta cgtacttgcc ttccagttgg 1620 tggcaatgtc gcactacctg cttatttcga caggcggtga ttgggactag ggcctcagaa 1680 tcaggccagg cgccatgctg cgcttctcag actcgagctc gagacctcga acgtttgatg 1740 cctccactac aatgatgcgc cggtgtatcg ccgagatttg tttttgtagc cttgtaaggt 1800 aaaatagacg aggggtaacc taacagcatt gacggcaact cgaatagtag tgtcaacgtt 1860 cggctgcggg aaccgaagag tgagagttga ttaaccatcg acgacctgaa cactcaagat 1920 tcaccgtcat ttcttagcgc ccaacgccaa gaggaaaacc gttgtggcac agacgttaga 1980 gaatatgacc ggtcagcaga atatccttgt cgtcagggtc tgcatcagac tgcagtttgc 2040 ctggtcagag aacgataagt gatagataag cgctaacact caaaagtagg agtaatggct 2100 tagccggctg attgcgcgta tctgacgaca acaacggtta tctatcatga taggattggg 2160 tgagctcgaa tctgacagtc gcacccgcgc tgaggtggaa aattgtcgct ctaccgcagg 2220 taccgaegec gtaccgegat gatcgaegec gtcaageege ettgeatgaa tacggtatga 2280 caggacggct cgcgctcatc gtcagcacct gattttcgag tcccgcggtg cggatgagat 2340

gacatgacag gtcacagaat ctccactcac ggcggataaa ctaacaaaag aggatatcaa 2400 accttcccaa aaatgcagtc gggatcgcaa tccgcgtgta gcgataactg gcgagggact 2460 ttggccttga atgttggcat tttctggtga tctgatactc gtcgcgcga cgaggttccc 2520 ttcgggccag tgatagtacg cgaatatgac agctgccttc ccgcacaagt gggtgcccga 2580 gacccgccgg gtcccttaca tccgtttcac tttgctttgg gccttttcga cgctcaggat 2640 caggccaggg cttcttcttc acctcttgtt cttcttct atccagg 2687

<210> 1937 <211> 1589 <212> DNA

<213> Aspergillus nidulans

<400> 1937

accacgigtt cicititate titicetitge agaaggegge ctatgiaett ciattiggat 60 tcatcaacat ctggaccgtt atgattcacg atggtgaata cgtcgccaac agccccgtta tcaatggagc cgcctgtcac actatgcatc atctttactt caattacaat tacggtcaat 180 tcaccacttt atgggatcgc atgggtggca gctaccgaaa gcctaacgaa gagctcttcc 240 300 gccgtgagac aaagatgggc gaggaagagt ggaagcgaca gaccaaggag atggaaacta ttctcaaaga tgttgaaggt gatgatgacc gcaaatatct cgctgaggaa gatagcaaaa 360 agaacctgtg aattteetet tggtetgaga cetacagggt teggeagtea atgteteaat 420 gcacctgaca tggttctgta atgtcactcc aacggaactc gtttcaagtc gcaaaggctg 480 gctctcttac ttgtggctca cgaggttgac gtttttctta cccttgcctg cttccttcta 540 ttcctgcatt cttatctgca cataaaccct attaatgtca cactgtacag caccggtacc 600 agtattatac taatcattet gtcaacactt tttctgatat gtcageggat geegtggtaa 660 accaccactt togattatca tcacagoggo gtagttgggt ttaaaacttta tttatggoot 720 tggttttcga atgtacatag ctgaatacaa gcaacatttt aagtaaaata tttcaccgtg 780 ctactctgac cacttggcac tcggaactgc aggaccgact cagctaagaa gcagcttagt 840 gaaggcaagt totatgtaca caacgggtca gttcgccttg cttgtaaagt acctgagatg 900 aacttaggat ttgcctctca taggttgtat aataactttc tgtttttgct cagagtctta caagaggcat ttgtttgcaa ttaccgctat acatatttaa attcagaata aaaggtacaa 1020 gcgacaagga teagatacca gcegtectat ecgcateege ateggeaata tecatateae 1080 categeege tecateecea gggacaette cateageage ageeggaggt ggggtegggg 1140 ctttegteee gacaggtgtt gegetggaca tageetgget aatgaagget teetegaege 1200 eggeettgeg aegaaaegge egaageeage gtttaceeea etcacgaatg atttegteet 1260 egggaaaate geegetgeeg teaceaegtt ecatgagetg gtegttgeta eeteeggee 1320 eagaaaegae ggagtettea atgaeetgga aaagggegtg eatateette teeteaegge 1380 eagaaggtte ateaagtaca ettagetgag geeteatagag aeetggetgg atgegaege 1440 egaegatetg gegaaggegg ttggtgaett tggeegaeag ageagagate atttegaaga 1500 eggaaagggg tgttaggatt gtgtgtea eeaagtggte gaeeagegaa eaaaeaatga 1560 eggaaagggg tgttaggatt gtgtgttea .

<210> 1938 <211> 1592 <212> DNA

<213> Aspergillus nidulans

<400> 1938

acagcggatg cccgaaaatg gcgctctcat ccccacgcgc cttccagagc acattcaaag 60 tgacactece egacagacag gtecaaacee ettaceaege aeggegeget cacaagaagt 120 cgaggaatgg ctgtcttgtc tgtaaaggcc ggcgggttaa agtgaatatc ttgcctcctg 180 cattatttag ccagcggcgt tctgacatat tggaactagt gtgatgaacg caaaccgaca 240 tgcctgaggt gtgagaacta tggagcagcg tgcgtctacg cttcgtctca agctacatca 300 360 tcatcatcgt catcgtcgcc gtcgtcgtct aggtccagca gtattctgcg tagtgcgact 420 gcaagcacaa gcaaatctac gccaccaaac aacacactaa cgtctctgtc catctccgac 480 atggtcaatc gcgtccggga caccctaggc aacgatctag ccttggctcc tcggacaatt 540 gggaatcgcg atgaggcact ggatctcgca gtcgactcgt tccggttctt cttgacttgt 600 tcagtaaaca gcatttcgac tccgcagatc tatcaggtta tgaagcgcga ggtggttcat gtcgcgtttg atgtgcgtcc ttctttaaaa agcccctcgt tttctcccat ttggctagat 660 tettaegtat ettaetgtag aateegtatt tgatgtaeae aeteetegge tgeggggtee 720 tgcacatgaa ccgtgtatca ccaggcaacg aatcteggga gcteggegag gcgtacttet 780 ggcagcgcgc agtgcaacta tactccgcag cactgcagca ccccatcaac cagcagaaca 900 tttccgggct gatatcagcc agcattctca tcggcgtgac ctcgctcgcc ccgctcaagt tegagatgea agacteetgg gtetttaetg ggegaggeag egacetgaae tggetegeta 960 ttcaaggcgg tttggcgtgc atccttaaac atgcgggaca atacgttcct gggagtatat 1020 ggggcgtgcc attcagccag agtcacgaga tagagagtca actcttccgc tatgagatca 1080 cgaaggggcg ggagggctta cgtccggacc tagctgatct atgtggtatc accgatgaga 1140 ctgacgagca gacaagtctg tattgggccc cgatcaaact gctatcaccc tttatggaac 1200 ttgaggtcaa cgcacagatt gcatcgcagt gcacgacctg gatgggaagg cttgaaccgt 1260 cgttcgtgaa tctgtgtcga gagcgcgacc ctcgcgccct agtaatattt gcgtattgga 1320 tggggctcat gtgttcgatg tcacagtggg ttccctgggt ggagggaagg ataaggaagg 1380 agtgtattgc tgtttgcatt tatttagaga gtcttggcga tccagttata cggccattct 1440 tggagtttcc ggcggctgcg gcgggctata ccttgatctc cttatgatca atgttgatac 1500 aggetttaae aagatatgag aaattgttga egaegtgeet aattgaeata etagetagea 1560 acagettaga gaatagatte tgateaceta ca 1592

<210> 1939 <211> 2886 <212> DNA

<213> Aspergillus nidulans

<400> 1939

60 ttaacgttcc caatgccctc caccgtaata acgtgtttcc catcgacagc aaccagcggc gcaatgcagg cgttgatgga ggcatggtaa agcttcttgg tagtcggatt gatttgcgaa acgacctate taatgteagt gaaactgata gaacattate caccaacaac ttacaaccgt 180 gcaagcacca caaccacctt ctgcacaccc tagttttgtc cctgtcaagc caatacccct 240 caggitatice ageaatgiga titicggggic aacagagice aagataacci tggigccatt 300 aagatagaag cgaatggtat cgtcccattc ttcagtgagt tgcaataacq aqqccqcaqc 360 tttcggcggg gaagctgcct caagctccga ttgcgacggt tgtaataaga caccgggagc 420 480 catgatggtg tcgtatatga ttgctccaga ataacgtacc tgaaatcaac atcaggaagg tggggagagg aagagtttaa tatggccgag tgcctgataa gtaagggtct agatggagcg 540

cqqqqatcqc cacagtccga tgqaaaccgc cacactctga ggtcatccac ccaatcgtgg 600 teggeggaat geggegtttg taatgtetae teeaaatagt acttteatga ataccaegtt 660 atcagtetta egetgtaggt atgttgaeta tgegttaaae attaaaaaea eetgtettag acqtcctqqt accttatcta ctcctgcctt gcagcctgag gctataqaqt atttatcatq 780 840 tgaccagaat atactccgca tccggcaact ggagcggaca tcacgatcga cgaaacaagc ttgaaagagg tcgtgggctt tcatcatgga gctgctgttc tcagtagcat gctcactgct 900 ttctgatttc tcagtccaac ccccgtaatg ggttgattag tctcgatcat cgcccctcc geteceetee teatecegte egateaatea etecetetaa gateaaaatt eegtttaege 1020 ttttttttggg atcattccag tgtctgagcc ctatcatgat tgctcgacgc agtacatccc 1080 teettgegat tgttttette gtegeggtta tattagtgat tttetegtet teeceaaage 1140 cggttccgga agccgtcagt gaagagatat cagcagccgc caaatatgtc ccgaaattcc 1200 cttcgttgaa cgatctgcac ctgccgacct ttcagccgcc ggcgcataaa ccccccgagc 1260 tacagcaaga cagttcaagc ggtgattcaa agtggttcag tcactgggaa tggctcaacc 1320 cettetegte etceattace ettgacgaga ateggteegt acteceteeg etteceaate 1380 ggccgtatat atttacatac tataacccga agaagggcag tgatagagag gaggagaatg 1440 ccgatgecca acttetttt geetggegte gtgettggta egeteaggge tteegaeetg 1500 tggttcttgg tcgtgcggag gctatggcca atccattata tgagtcaacg aagcaattgg 1560 atttgagcct tgagctagaa gaggatcttc tcaaatggct tgcttggggt catatgggag 1620 atggtctgct tgccgatcgg ctttgctttc caatggcgag atacgacgat gcaacactct 1680 ctcacctgcg tcgcggtgcg gattcagatt tcatcacccg attcgacaag atacataatg 1740 ccctgctctt tgggaagaaa tctgttatta acgccgtcat tgaaaaggca agcaaggagt 1800 ttgacaaggc aacaaaggct ttgacggact tgataccaga tgatctgtta aagtccgaac 1860 agaccaactc tctagcactt tatgactcgg ctaccattgc ggcgtattac cacgagctta 1920 ctgcagaggc tataccetet ccgtcggtec gecggcatgc cctagtagat ctcatcaatt 1980 cccatctgca gaatacattt gtgaactcgt tcccgggagg aatagccgtc ctgaaacctt 2040 atgetgagea caccaetgeg ttggttgaac cagcettaag aettgegaag getettggee 2100 aatgteeega etetgttgea eecaettett geeeteeaaa tetgegaaae tgeeaecegt 2160

gcaacacaca caaaccaatg aaaatcagcc aacccgccac atacaagaat accacccagg 2220
tcttcacaat aggcatcttg ccgcacccat acaccttcgt cagcttacta caaaactctt 2280
cggaagttac aacgcggtac attcgacgcg aaacttcccg cgatgcctgg ctcaaagagg 2340
tgaccggcga ccaaatgggc cgccaactag gcggtgggc gagggccgtc ttattcaaga 2400
aagtcgtcgc tgacgagcca gctatcggca catcgctatg gatgacggtc gagtcactcc 2460
ccgctgaggc cggccaggcc ctaccaagcg aactcttgga cgagtttgaa tggcagtttg 2520
gattccggat cccacgtgac agcaatgtag acgccaagaa cgaaggcgat gccaaggaat 2580
caatgcagca tgccaacccg agcaaaaaagg gtgttgagag agagtatacc atcatccaag 2640
gagctaggga tatgctaaag agaaagaccg actccaaccg ggtcaatatc cgcggtgtgg 2700
ccgaggcgtg gaacatggcc gatactgagg tctggcgatt tgtcaaggcg tacagagcg 2760
gaagtatcgt cgaacgtaag aagtgggagg aggaagagaa gagcttcttt ggagcgcgtc 2820
cgaagatata agacactaga atgcggtata aaaacgctag tataggaaaa taatgacttg 2880
gcattt

<210> 1940 <211> 1472 <212> DNA <213> Aspergillus nidulans

<400> 1940

gatcggtggg gcttaaatgg ctttactcct taagtcggcc ttaaaatgct agacttgtcc 60 ttcggtctgc caacgggccc gattaagtca tgtgaccgag tttcggcatt atttgatcag 120 tecgatteta tgatgtaaat agacgatgat attaggeagt aageggtaea ggaetattet 180 tegeteetat ggtagttaga agteagtgae atatattatt gaateteggt tatttaggta 240 tgatccgcaa cgctgatcaa aatgaatgtt atatacttgg agcccgatgc ctataattcg 300 atttatacct gtcactggcg tcgagattcc aatctggctg actatattga acctaatgaa 360 ttgggtggta catcacatgc agggccaatg cttgccatga atcctatgtg tccttccgtc 420 aagttgttat tatcatcatc tgagctgtat aaacaaaagg aatgaagatc tcaagacgca 480 gtgaaacaag gtgactaggc attcaatcag tgtatctagg cccgtgtttg agttgctaca 540 gtgctacgta cggtagtgga gatttgtgtt ttgggatagg atggttctac tggcggtagg 600

gaaagaaatg gctcgttgac atggaaggct tgtatttcag tcgcactgtt attactgcca 660 tototogaac otaaacccac atcattotto gtoatogtag tittoacgot cotcaaactt cataaaatct tctqqaqaqq ctqcatctcc cattatqacq qaccaaqcat ccttqaccaa 780 840 900 gtccaatacg acgttggcgg gacgggtagc acccttaacg gcccgtccaa gctgtgtgta 960 acgaagtgac cacaataccc tcgcattggg cccggcgctg gacttcagta gtctatctat agcatccgcg atcaaggatt gcccttgcac gccagcaata ctgacactgc cgtataaaac 1020 acctattgca caaacatcag tacgcaatga cgtcgaaagt aaggcgagta atggataaag 1080 aggtgtgcca ttatcagttc gtagaattct caacaatgca aattcaggca atgtagataa 1140 gttttgggaa aagtcatcat agaaaggcga ggcgcggaga taaaaagaaa tgaagatggg 1200 aacctactct gacctgtcgg acactcggca gtctcactag agtgcacgga tatatagacc 1260 ggcggcgact cgtcagtaag cccgagtgag gcggctggga atactacaac agccccggca 1320 gggactggac caccetetge egtaaeggga aacaggteat caagaggega tgacacaate 1380 gtaattgacc gtgagacttt gtcacaatca cacagggtgt ttggcgggga aggaagatcc 1440 1472 agtcggaacc gccacatatg tactgctgat ga

<210> 1941 <211> 2993

<212> DNA

<213> Aspergillus nidulans

<400> 1941

60 atttggacct ggtgggggtc gtggggacgc cgcacatgqt tccgcacatt atccatccaa ggggtgegeg atgeactgtg cteegteaat etegaatggt etggaeteeg agaeagaete 120 gcaacagccg gtctctcaac aagagcctca ccggcgcgac cgccgaacag ctcagcctct 180 240 gaggttegge eacttegggt eegaatgeag ateateeact agtgegtgae acaatetget taataagcaa gacatacatt aggcgcgttt taagggggag ctaatgtatc actatttatg 300 ctgcgctctg cctggttcca gttgccgaac tcgcccgcca tgggtccgta tttttccaat 360 cgattggctg ctggagtgct atcaggtaca actattctta tgtagacgtc ttgggagttc 420 tctggaaact ctatttcata gcctgtccat accctatcag ggcccatgtc caagctttgt 480

540 gaagtccatc tctttgcgaa aatcaagcgt atatatacag atgtcagtct atcaatgagg tacqtaaaqt qaccattcta cctccqaaaa tacctactca gqtagatctt actccatgag 600 660 gttcttcgac aagaatgagt ctgataaaag cggtacagaa cggatatgat tgacatgaaa gcaactgcca gccgagaagt attcagctga atctctggag ggtaaatatt ccggtcttcg 720 780 cactgaaata tetetatttg aatteageeg egataetgee eatgtgeeag egteteggea cccttcttat caatacctct atgccgcttg acgtaaagtg gctgggtaat tctgtgtata 840 gctgcatgta tatggcccca atagtgggaa aatacagcgc taagtagcca caacgcgcag 900 ttgagtcgct aggcggagga gagaaaaaga aatgttatgc gttaatgaac aatttgcgca 960 tacaagtgac tgggactgca atgagctctt ttaggaaaata atgaagaaat ccgccgcttc 1020 gaatgcggtc ccatggtctt gtggtgcttg gtgagtggag atcgcgtagt gcattcgaag 1080 ttggttgtag agcgccagat aggcagggca gtagatggat gaaggatacc aaggggccag 1140 tgtatcatat cgggttctca agcataatgc ttgaatttct gaaattttcg ccagttattc 1200 agaatgaatg gatcatcccg gaaccctgcc cctctccgga tggtgtgcat gccaaatggg 1260 ggatttagtg tggtcgtgat gtcgataccc tgcggtcttt ctactaccag caaaacgagg 1320 ctcattacag tcaagcaatt cgccaggaag atggcaaagc attttgcgaa ttgatctgga 1440 ttccctatct tcaatctccg tctggtttat acctgggcac tccatgtagc ccgtccctg 1500 agaggtaget gegtegeate agttggaate geegattega ttteagtgaa gtagteeage 1560 cgattccgcg taaatagcgt gggtcatcgt ccgcttactt cttctgctct tggtgtccag 1620 cttgctagct tagtgttggt ggttagttag gtcgaacctt gacaatggaa cgaagctcat 1680 cttgcctatt tcctggctga cggacactgt cccattgcca gattcgggag attaggcagc 1740 cgaagaatcc caatacacac caggtacgat atctcccttg atctgcttcc atagcgatcg 1800 aattgcgttg gggttttagt taacagatgt ccaacagcag ttaatgagag attgtttcat 1860 gtcccacggc cgtcgagctc tctcgcccag caaaatggga ttgtacaagt ccctgtagtt 1920 ttatagggag aaagctcaga gtgtcggagg gaggtgaagg gtgagagatg gcgccttgat 1980 ttctgttcag aaattgtgcg actcgtaccg aggcagattg ctgaggcagt cagtccatct 2040 teagteeatt cagacgaage tgtgeeteea ggeatetgeg geteetagtg taggaacagg 2100 cccaagatgc tacttactga gtggacaaaa gcatgatttt gtaagatcat ttgtacacag 2160 atgtgattca tagcggaatt gcctacagca cgtgagggcg caaactgaag gcgcacctga 2220 gagagettge ggacetegga geggttattt cetetteace acetttegtt etttataace 2280 atcccacct ggtcactctt tactcatagt ctaattgact ctagctttag cagttgctta 2340 ttttattctt aaaqgagagt ttggccctgt agacgagatc ccaattcgcg tctgctactc 2400 caaateteca geetattegt egeteacaca geetegetat etgacateet eggtetttgt 2460 gcactgtgcc cgtctttcaa catgacggcg tctcccaatg gaacagacta cttggcatca 2520 tacaccaage titectectg catetatgit catgaaccag accaeteage egaegaegit 2580 ggcgactate eceggacaat egteattgea ttetggatga aegeettete eagategeta 2640 gccaaatata ttgttggata ccgacagctg gctcctcgag ccagaatcat ctttattcga 2700 acgtcctctg cagaatttat tctgcgtccc acaaagcggg cccagtatgc tcgtcttgca 2760 cctgctgttg aagacctgct agctcttcct gccgacagcc ctgtgcttat ccacatgttc 2820 tcaaatggaq gtgtatttgc cataacacac cttctcgaag cctatcaaca agccacaggg 2880 catecgetee geatetegte caeaateatt gatagtgeae eeggaacage tacaettace 2940 gccagtttca aggcgttttc ttttgtgctt cccaggacat ggattctccg cct 2993

<210> 1942 <211> 3877

<212> DNA

<213> Aspergillus nidulans

<400> 1942

tgtgtttctc atactccagc gtggactggt tttatccatg atatctaacg agacgatccg 60 agataagttc taatacgtat acttgtgcca ctctactacg gggcctgatt tagacctggc 120 tageggttat ttttaggtta tgegaegeag agtgeegeeg agtettetee tgaaatatat 180 ccaagtgaca agatgcccga ctgcaggcca caacttacca ttqaaqatqa aacqaaataq 240 tccgagctac aacgttaccg aggcttctaa acccaggatg gaataaggaa gcttcgaatg 300 gcgtaactct ggttgccatg ccctttcctt ccataagtac gagctctttc catcctggct 360 420 ccagagttag gccctttgcg ttgctcgatt cgtcagcagt tatgqcgaat tccacgtcca gcctgaagat atttccttac attcacgggt gcctaggcgg agtatattgt ctagcctgca 480

tatttacctt gacagcagat ggatgtcccg aacgtcaatc cgacaaacgc tttcggggcc 600 cctcctcccg ctgccgtgca aactgacaat atggatacca ttgaagcgaa gactgtcctc 660 atatcctcag aaaaaatatc tccattgacc tatcctgatt gtgatgatga tagagagcaa gatattgacg acctcatcga cgaacttgag tctcaggatg gactccatga taatcctagt 720 780 cgaaagagta tggactctgg aagccggatt cctggtatgg aggcgcagtt tgacaccgac ataacgactg gtctcacttc tgtcgaagcg gcacagcgcc gcaaaaaagta cggacccaac 840 cagttgaaag aggagaagga gaatatgtta aagaagttct tgtccttctt tgttggcccg gttcaattcg tgatggaggt cagtaacaga gctcattttg cccgacttcc atcatcgctg acqctgattg gtcatagggt gctgcaatcc tagctattgg gcttcgagac tgggtggact 1020 ttggcgtgat atgtgctctc cttcttctta acgccactgt tggcttcatc caggaatacc 1080 aagcaggatc aatagtggag gaactcaaaa agtcgttagc tctcaaagct attgtggtcc 1140 gcgacggtcg agtaactgac attgacgcca ctgaagttgt accgggtgat gttctgaaga 1200 tcgatgaggt attacccata ttgtggctga ttgaagacgg cgaaggctga ctcctagcag 1260 ggcacgatcg ttcccgccga cggccgtgtt aagacgaacc atttactgca aattgaccaa 1320 teeteagtta eeggegagte tetageegtt aacaaatgea agggegaagt ttgetaeget 1380 tcatctgtgg tgaagcgtgg ccatgcgtat ctcgttgtta cggctaccgg tgattacaca 1440 tttatgggaa agacageege eetggteaag tetgegtegt egaattetgg eeattttaca 1500 gaggtactca accgcattgg tgctactctt cttgtgttgg ttgtactcac cttgatcgtc 1560 gtctgggtgt cgtctttcta ccgttcaaac gagaccgtta cgattctcga attcacactg 1620 gccatcacta tgattggagt acctgttggc ctgcccgccg tcgttaccac aacaatggct 1680 gtaggegetg cetatettge caaacgacag geaategtae aaagaetete egecatagaa 1740 tegttggetg gggtagaggt tetetgetet gacaaaaceg gaaceetaac caagaacaaa 1800 ctaaccctct cagatcccta cacagtcgct ggcgtggatc ctaatgacct catgttgacc 1860 gcttgtttag cagcttcaag gaagctgaag ggcatggatg ctattgataa ggcattcatt 1920 aaagcacttc caaactatcc gcgcgctaaa gaggctctct ctcattacaa gattcagcaa 1980 tttcacccat ttgacccggt ctccaaaaag gtcaccgccg tggtgttatc tccagaaggc 2040 caggagatca tetgegttaa gggggegeet ttgtgggtte teaagaeggt tteggaggag 2100

cagcagatcc cagagagtgt cgagaaagga tattctgaca agatggacga gttcgcccag 2160 cgtggctttc ggtcccttgg tgttgctcgg aaacctgcgg gtggggaatg ggagattctt 2220 gggatagtgc catgetetga cectecaege gatgaeactg eggegaecat taatgaageg 2280 aagacgeteg gactategat aaagatgete aetggggaeg etgtaeeeat tgegegegag 2340 acttcacgtg agttagggtt gggaaccaac gtctataatt cggataaact cggtcttgga 2400 ggcggcggtg acctgactgg gtctgaactt tacaattatg ttgaagccgc agatggattt 2460 gcggaggttt ggccccagca taagtataat gtcgtggata tcctgcagca acgaggatac 2520 ttggtggcaa tgacagggga tggtgttaat gatgcaccat cgctcaagaa ggctgatact 2580 ggaattgccg tcgaaggcgc atcagacgct gctcggtctg ctgctgatat cgttttcctc 2640 gcgcctggcc tatcagcgat tatcgacgct ctgaagactt cccgtcaaat attccaccgc 2700 atgcatgcat atgtgatcta tcgcatcgcg ttatctctgc atctcgagat attccttggg 2760 ctctggattg cgataatgaa cgaaagcctg aacctgcagc ttgtggtctt cattgcaatt 2820 ttcgcagaca ttgcaactct ggcaatagct tacgacaatg caccgtactc gaagacgccg 2880 gtgaagtgga ateteceaaa gttatgggge etgteegtea taetgggtat tgttetagee 2940 gtggggacat ggattgcact gaccactatg atgaacgcgg gcgaacatgc cgggatcgta 3000 caaaattacg ggaaacgcga cgaagttctc ttccttgaga tatctctcac ggagaattgg 3060 ttaatattta tcactagagc caatggcccg ttttggtctt ctctgccgtc atggcagttg 3120 geggeggeea tititgtigt tgatetegti geaagtitet titgetaett eggetggtie 3180 gttggtggac agacttegat tgtegecatt gttegtatet gggtatttte teteggegta 3240 ttctgcgtta tgggaggtgt ctacttcctq ctqcaqcqtt cccaqacttt tqacqacatt 3300 atgcactica actitictica gaaaagggac tetgtatete agegtgtiet tgatgatett 3360 ggtaagette tecaaaeage eettetaagg gteegtgeta aatatgatte tagtegtgge 3420 tttqcaacqa cqatcaqaac aqcatqaqca qaqttcqaqa acaqccqaqa qqqaqqacat 3480 aggattatgg aagatggaca aactccgtaa agaacgcgca cagtgttgat gatagatgag 3540 tactatgtat ggcgtattct attgttatgc atctcgtaca tcgagacctc gaaacttgat 3600 gataggaaca ctggcatctg taagtcaggg tactaaaata tagaatatcc gcactatgga 3660 actataatca ttaagcgcgc aatgttcatg tccataaatt gctcttccgc aacctgcttt 3720

getcaataaa tgettgacet eagegacatg tactegagea tgtactacae tgetegteae 3780 aegtcaacaa geagttatag gtattggttt gattatgact aacegeeaga eacteeageg 3840 ttettgeggt etegtageee gateetatat tacatet 3877

<210> 1943 <211> 2380 <212> DNA <213> Aspergillus nidulans

<400> 1943

acgccccgtg gcgtacatgg cacattccct ttttcggctg cgtgcgcgat tccgatctgt 60 gcaaagtatt cattttcacc cagccgaata cgtggtgcat gctactacta cagcccgtct 120 atagatggaa tgttctaact tccgagggaa ttaaactgac agttttcctg ttggttggcc 180 gtcttcagat gaacatcgaa tttctgacag cgcacctgct ccgtcctttg tcgtctatca 240 agctagcggg agctgatcag cataatcgac tcttcacctt tcaaggtttg acttctgacc 300 ggcctatgag acgggcgaac cagatgtgag tctgtgaccc atcacactgt caggttcgac 360 tgtcaacggt tttgacgtgt gacgaaatag cctactacta tggagcagat gctggggcta 420 agcacggaat atctgcccag cctccagaat gcgcccggcg cccgttttgc tcgatcgcgc 480 ctgtcagccc aaaccaaccc ctcgattacc ataacttcca ttgttcactg aactgtccac 540 tgaatgctcg tgggcgtcga gagatcgtgt tagatgttta gtaagaagaa aaagtgacgg 600 acaaaatcga tgctggaata taaagttttg gcacggtcct gcgtatttcc cgcggccaat 660 ctcctcggga tcgggtgtgc ctttctgcaa aagtttggct gacggcatgt cgctcggcgc 720 cactttcctg cattctatgg agtacggagc aggctcagac acttctgact agtgcctact 780 tctactagga tatggtccca gatcgtcgaa tcgtccagat gtcgacgctg cagcctccca 840 gtcagcaatg gatattaact cctgtgccga tcgtctgcct ccaacaagca acggcagtat 900 tagtctgcgc atcggaaagt gacttatgag atgcagactg cccgcgaacc gactaccaag agcgcacgaa gtttccatct ccaccatata ttacaccgta tacagtatgc cataatggat 1020 ttccatgtgg ggggaggtca tggcactggg taacacgctt gtcagatctc gcggcgacaa 1080 cggcgcaagc tgtacgaccc ggttggggct aagtccaaca gcacgcgttc atcacaactc 1140 gcaattctca caaatctgat atattcgagg attgtcaagc cttcaaagat gctcttccca 1200 ttcggccgag gtccagaata gcgtcagtga tagccttgga actcggacga ctaacctaag 1260 atggccgacc atacatgcca ttatattaac agtaacaccg ggcgatctag ctcctatact 1320 ttctagtccc tggactctgg cagctttcaa cccctttcat attgaacaaa gaataggcac 1380 cggggaaata ggtttcgttc tacgacagca ctaatcgcta cgggaactgc gatagcatgt 1440 gatcgtcgaa tcagagccac gactctactc cctttttcac acggagattc ccattcttcc 1500 tacgccatag taaggagctg gcttcctgaa ccatccagag ccctcggagc atagtaatct 1560 tgaatcagga cattggcatt ccgacggcat ggcgccagct gagtcggagc ttcttctgtc 1620 teceggaege aaaaagtgea cagacageat ggaeetagge aggetteaca gtagtetega 1680 tctaacggtc tctccaaacg tgactgggcc aattagactt ttgtgacttg tgagaaacgt 1740 tttccgtcaa gatcttaccg aatcaaacgt tacacagata ctgattaggt tgagttccgg 1800 cgccagaccc agtccatcac atcctacgta tctcgtagcc gccgggggtc cccgagtgtg 1860 atcgatgcag cacttctcat gttggacgtg cgggtagtgg gtgaaaccta ggatagagac 1920 tcaggcaatc gatcgtttgc aagctaggag actcggcagc cgcaccgtcc agacttaggt 1980 gcacttaacc ttcgatgact gagcaaagct ttaccccact gcggcgatgc tgcccgtgtg 2040 ccaaggaccc gtgccataag ccatctgaca ggtccagcta aacacctatg aattgacatg 2100 gtttgatgtg atgaactcgg ggtgcggttg cagcagtccc aacagggccg cgataatatc 2160 tgatttctga ctctgctagc acattaccgc ccaggtcccg tccaaagaat agcacttctc 2220 tececataag gtgtgatgae ttttgagtat atttteeete aacaacatae gegtatteaa 2280 ttgagccgtc cgcctagtcg cccgcccggg tttggtctaa tggtgagaga caaagaaaag 2340 2380 aagtttgacc ttttcagccc attccttcca gagccccgcg

<210> 1944

<211> 4000 <212> DNA

2127 5111

<213> Aspergillus nidulans

<400> 1944

atcagcccgc ggggtttgta ggtcgcgcga ggcggtcatc agcctaggac cgggccgtcc 60 ctgggatgca tacggtttcc ttggagcagc cgataataaa tcacgggttg tcgagaccgg 120 agacttcgcg agtatcctgg ctgttgagga ccgcgcgacc ccgggggccc gcccatgaga 180

240 gacagatgat tecaggtacg gegeegatte atectetage ecaatetett caaaatteee aatatctgta aacaccccat ccggactgga catgcgcgag gacgatcgat aagaggagga 300 360 cttggacgac ttggacccgg atagttcagg aggcgagttc ggtgcagtca gaacggccgc 420 cattlegteg gteaaccaeg gtaggegtge tgtagttaaa tagttgaata gaatatggtg 480 tagtaaaata agcgatcaat cgcgtcggtg tagacaagaa gagtgcggac cggcagcaat 540 agaaaagaag gactagcggg gactcgatgg ccccaaccac gctgtactaa tattccacaa 600 ggaggcacag ggccattaat ttaccagtca ataaccagga ctgatatcta gggcaggcca 660 gacagcggtg cacagtgcgt tatgacgcca gtggaacgaa aagtgaacag gggttcggtc 720 aacttaagag gtgagactcg agacggaaag ggaggagcga gtgggatggg ataggtagaa 780 gatgtgaagt agaaaagaag aaagaaagat cgacgcaagc gaaggaaggg cagttggagg agttatcgac ggaagagcga gtgaaaaaag caaggaaaga cgaaaagagt gaagatatga 840 agctgggacg attccatcac cgactgcgtt ggaggcgcga attccaggtt ctctgccgaa 900 cqcaqtcaaa agggtctagt ccggccaccg atatgagcgc ctgaggcaga gattattgca aategeecaa tggegettga gaaaegttgg tatteagget tatateeggt ceagaeteet 1020 catttcattc gctgcaagcg gcgatcaaca tcaaaccggt ttagggacaa ggcactgcgg 1080 agtegegacq tetteegteg tegagatgaa ggagegageg getgtteeaa ggeaegeeac 1140 caatgatcca caggtgtggc tttgaggttt gtcgtgaaat aaaagaccac caccgcaaca 1200 acagtaatga ggtctaaaat gtttacaagg tctaaaaggc ctaaagtgga agaatgtagc 1260 agcaaaattg titgtitgti gatatigata aagagatigc caccecetgt cigetegace 1320 actytygtty tcytccyctt aaacctyatc cytygyaaty tctyctcaya ccacacacty 1380 accatggata ggtataatcc catatgatta tggttattgg aaggaccaca actggtgctc 1440 ttgggggaag accgagtcca tcccgccctg ctgtatggta aatgctacgc tgtagatacc 1500 gacccettgg etecetteat tgagttggee atteegeegg eeetgeaatg tetgeaatge 1560 ctgcatagtc ggacattttt caattttaat ttctctcaag ctgtaaggag caaggtcaaa 1620 accgccactc tctatacgtc cgattccctt tctgcaccgc ttgtgccagc aaaacactgt 1680 tgccaacgct ctgccgtgct tccgccagcg tcccgtccag ccaacgcagc acgcccgcat 1740 actgtgtctg tttccgcccc aacacaaatt gaaacgccgc cccccctaaa tactgcagct 1800 gaggatgcgt gaccetgcac agaccatgcc ggccacggat cagtcggtat cccaactgcg 1860 ttgcatcgtg gattgtgcgg accacaacct cgggtcgagg tcgcgcccgg cccggcagtg 1920 accgagtgta tcggtacatc ttcatcgcgg ccgtgacaaa ggacttataa acgttcagta 1980 gtaccgcggg cagtgagttg tgcgtcgagt ctaggtacat tgggtgcatg gattgcttta 2040 tegatgeaag aacttteegg tagaaggaee gteegggggt tegegtggag teaategaea 2100 gggaatcgct gagagcgaca ctcgcagaat ccgccccctc gagcattcga tcctggtctc 2160 tgaagatttc cagagttcgc gtgtcgatga gactgccgca ataagggaag agtggcgtgt 2220 caacaagtcg cgggatttgc gccccgtcta caaccgccgc gaaattcact aggctcttcg 2280 ctgggttgac agaaatgcca taatctggct gtcctcggac catgactcga aggaaatcca 2340 ttgcgaggcc agaatccaaa gttaccagca ggaagtcgtc taacaaacga aggagcaggg 2400 cgtcgtccgt ttgtaagaaa ccaagcacgt cccgctccat ttcagcgtac agcaaactgc 2460 acaaaagact agacagcaca gaaccctgtg ggataccttt gcgctgtcgg aaatacttct 2520 tgcctatctt gacgagattg ttccggatgt gctcgttgag aatgtcaagc aggccttcac 2580 cattgtactc cttctgcgcg attgtgtcga ccaagacggt gttccttcgt cccactacgc 2640 ttccattggc gatagcatcc gccaaattct ctggcctgcc aactgggcca actctttgga 2700 ggtactttga ccatgttctg cgctgctgcg gttttcgcag cggccacatg ttgtcaaatt 2760 cgcttgcaag tctcatttcc acatatttca tccaatggta gttttcctct gagaccagct 2820 tetegaceag acgeactate ttegeetgeg gtatagtate aaaacaggae tggatateca 2880 getteacgaa atagageegt tttegetgat eccageecet geteateaga gaetetttga 2940 atttcttcag cctggaatgc atatctccaa cagagaacat gcttgaacca agcaggtcgt 3000 ttcgtcgccc tctctcataa ttcagcatgc tgtagacagg cgcgatggcc gaattcacgc 3060 tctgtgctgg gtgataccgg tttttcccag cgtatatact tctaaccaag gtccgccgtc 3120 tcaggttaag aattggacga attcccgtcg tcttcggcag cagccgtagg gagccgtatc 3180 ctatcgattt tttaccagac agtagtttct ccgccgtttc tggtgccaac tcctcaaata 3240 tggaagccct aagatgcgcc aagggctgcg cagtaaggcg gcgccaaacg tcatgtcgaa 3300 aatagaataa gcgataccgg tggacttgtg attcggtcac atagaaactt ccgcgtataa 3360 gtggaagaag tatggagtca aacaggtagt acaaaaattc atggaataac tctctgcgct 3420 tttgcaagte agacgetgag atattgtet etgacggage etgacgtaag eteteagget 3480 ccagccaagg tatcagggtg atetgacatt ttagactaat attegtacca agcaaggac 3540 ggtgcgctaa ectttatece ttegcaaace teatgtagae teagagette aaatetaege 3600 atgeggataa atetatecae atggcegagg ateatette ggtgggtgat geeetgttea 3660 ecaaceeega agaactetaa aggtateaaa tttegaatga eggeteggea aaaagetgaa 3720 acagacgetg egggagtgge gtgateegte agattteet tgggettagt tgeacetgat 3780 ecettgetga ageetttgge atatgaegtt gggegeaget eggettgeat gteetgatg 3840 gegagagatg getgggttae eaggeetett gegeteggag tagagggee tetgtggt 3840 taagetttaa etgtgteeca agtteeeggg geeeegaaac aaatagaatt geeettett 3960 ectacetete aageeggea ecateeegt eegggeaaac aaatagaatt geeettett 3960 eetaeeetete aageegggaa ecateeeegt eegggeeaat eegggeeaat 4000

<210> 1945 <211> 4406

<212> DNA

<213> Aspergillus nidulans

<400> 1945

ateggeecat egteggaega eagtgetate gtegttttte eeagaeeteg tteetteage 60 120 catcctccat tctttctgca gtacagtttc cgataatcag ataccgataa ataggtatct tgataagcgg ctcctattgc ctgtcgctcg acgccgaaac gcgacaatcc gatcgcacac 180 ttccccacgg ggctctgccg accaccgatc gcacggattc ctaagagctc atggcactct 240 cetttcagae agaaattgte geatacaeea tecaeeeeaa tatettegte etegategat 300 gagegtgtet gataagagee gaacateege aagtegeete aagggtateg getaaagetg 360 gctacatact acaacaatac aagaacatag gagtacaaac acaggagacc ctgaaagcag 420 tccaactcgg ctcaggatgg cctttgcggt gacgcccgtg gctcctctca gtcagggcac 480 gcgacccgat acagaagtgg gatctgaaag cccggatgtc cctgaggcca acggtcctcc 540 gcgcaaaagg aagaggactc gcaaagtcca agtggaccgt aaattcgact gctcgtacga 600 660 agggtgtggc aagagctatt cgcgcgcgga acatctatac cgccatcaat taaaccgtat 720 gctcatgcct ttctcccaac ccactagcat ggatactgat ccttggctgc cctagacgcc 780 cccaagcaaa tctaccggtg cgattttccc gagtgctacc gttccttcgt ccgacaagac

ctctgcgtcc gtcaccgcga acgtcacacc acccaaggct cgcagctgca gaaacgtgac cactttgcac aggctgcttc tacgagtacc ggcgggatcg cgaaatctca gatcgtccat 900 actgcggtcc agttaccgca aaatgcacct cccgtcctat ctccgccaga ctctaaacga 960 ggctcgacag gtccggatca acctatcgct gcgtcgagca ttcccgtttc ttcgccgaca 1020 tctaggggct tcaaccggtt cagctaccag cccgccgctc aacagcatgc tccgactgca 1080 gaggtteett acteecaace atgegattta cegaacacte etateacgae caegacatte 1140 aattccccgc cactgcagcg tccgttgcaa gttggttcca atacccgtca tgccctgaat 1200 ggctcgccta ccaacgagct gggtcctgca cgatcggcag cgttggatga gccgctcgtc 1260 tccaacaggt ctcaagatct cggggccagt tacgcggtat cagctgatct gaccgggtct 1320 ttggtaagcc cgtccgcata cactgatcaa gcgggcttac aaatccctgt cgatggatac 1380 tecgaeatea acatggegee agtaacetea teggegtetg etecgetega teaaacaaat 1440 ggcctaaccc ttgactctat ggcgggaatg gcagtaggag atatgcaatt tgacgggctc 1500 aattettgtg tetateeggt etttggeggt gaaageaata gateteettt eeatatggge 1560 gatgacttca cggcgtggct gttcaatgaa ccggtgcctg ggtcatcgat ggctccgccg 1620 gcaaatatgg tgcccggctt tatggacgcg cagatgcaaa accagttttt gatgagtgac 1680 ccatcatacg gaaactttct gaacagtgtc atcccagctc atccgatgag tgtgaccagc 1740 atccttgatc ccgggtcccc gcgggccatc atgtctgagg agaagcgtca ggagctgctt 1800 gatctcatgt ccacccggtt caatgaggct gcatattcgg cagtggccaa gcgcaaggat 1860 gccttgatgg acggtgatat ggacgaagac cgccacgtcc ttagtttgtc gaagatgcaa 1920 acctacattg ggtcttactg gtatcacttc catgcccagt tgccaatcct gcatcggccg 1980 acctttgtag ctgataaagc gccgaatctg ctgctgctcg ccgtcatagc gattggggca 2040 gcaacgctgg acagtattca cggacaggaa gtcaccgagg cagcatcgga gctagccgac 2100 tttatcatgt ggcatttgcg gtgggagatt tttatggaag gagatttccg gccgccagcc 2160 aaactctggg tctttcaagc gctgctgctc ttggaggtct atgagaagat gtactctact 2220 cgtgcactcc acgagcgagc gcacatccac cacgacacca cgttaacgtt gatgcggcgc 2280 ggtacgtcct tgattggccg ccattcgttc gactctcctg caagcctgag agatgaccgg 2340 cagcacgctc gaccacaggg tcaacgatga ctccggactt tgcggcagac gactcatggg 2400

cgcattggat caaaactgag gccactaggc gagttgcctt tgcggcattt gtcttagatt 2460 ccacccacgc tacgatgttt ggacactctg cgaagatggt cgcgcatgaa cttcgtctac 2520 cactgccgtg cgacgaggcc ttgtggtctg ctactagtgc ttcagaagtg gctcgggtgc 2580 aggcgagtct acatgccaac ggagtcaggc cggtgatgtt tctagacggg ctcaaaagga 2640 cactcaacgg acagcgggtg cgaacaaacg catttggaag aacaattctt atggctgggc 2700 ttcttagcgt gagttggcat atgaatcagc gcgacctgca agtcagctct cttggggtcg 2760 cacatgccct aggaggtcga gacaaatgga ggtctgctct actgcgggcc ttcgacaact 2820 ggcgacgcga ttttgacgag gcactacaac caggcatggc ctcgtaccct aacggatatc 2880 gcggtcggta cgcgctcgac gaagacaacg tgtttgagtc ccgtgacgtg ctgcacgggc 2940 tggcccatat ggcttcgcac gttgatatcg tagattgcca gatcttcgcc ggagctcgtc 3000 gactgatggg acgtgctatc accccgcggg attacaacgc cgcacgcgag aagatggtcg 3060 agcgctgggc taccaaagca tccgcccgcg acgccacctt ttatgctctc aagttcctcg 3120 ctgaatgtct tttggaccac caaggggccc attatgaagg agagttgtat tgcggtcggg 3180 aagattacct tetgaatega eegtgggtga tttatgtgge tgeeetegta gtetggtget 3240 atggatacgc cttggaaggt ccgattgcgg gcgccccggc gctgtcaacg gtcgcggagc 3300 agaggcaaga tatgcaggca ttcttgcgcc gtgtgggcgg ttgtcgggag ccgagcgacc 3360 ttgagaccat gaaaggacga aatcagtgcc ttggactatt gattattttg cgggatgggt 3420 tcaccaacgc ccgatgggag ctattggctg aagctgcaaa cctgctgggc agttgcattg 3480 ataaattgag ggaagtctct caataagata aaaactgata ctgtacacga tataccctga 3540 gttcgcggtt gcacttgtat atggctttgt tatgaatatg ggtatgaaca tggatatgga 3600 caaggagtac ggagaatatg gcggatcatt gtttaccttt ctactttacc tatttagggc 3660 ccaccatcaa cggtttcact agacataaaa caattgcata gatttatcgt catccatcta 3720 ctacaagtag ctagacacct ttgcggctta attcttgcct gaaagctacg gctagcaaag 3780 cggagctcct ttggttacca caacaacgag cccagcccgc cgcccaatct ctctaacgtc 3840 aaaaccatcc ctctcctgca ttccaccaac agcctcagat tctcagacaa tttgtttttc 3900 caaggttgag aaccaaatct agctacgcag tgaactttcg ttaccagaga cattccatag 3960 ctttccaaaa cacacggaat attcaccatg gtacgttgcc tcatccgatc actggtttct 4020 tegttggaga accetteta gecetgeace gegeetettg tettggeteg getgetateg 4140
agetgtteag etagetagee teaaatteag eegtggttgg egeaeggegg teegaceat 4200
cetateceat eeeteteace caaacaceet gaettteaat teaaeceetg cateaactee 4260
aatatecate acatettace eegtttatee teeteattga aacaacttgt ettgtetgea 4320
aacaaaatgt eeaecegete accagatett eaecacgage aggeetegae aaactacaag 4380
gaageettet egetettega eaageg 4406

<210> 1946 <211> 5512 <212> DNA

<213> Aspergillus nidulans

<400> 1946

tccggagaac gctgcttcta ccaccaagcc tactgttgca gtttcctgag aacccactga 60 gaaggtegag ceagetgaga agtecaaage geetgaaace ggeteagagt caaageeece 120 180 accatccgaa gcgaaagcgc cagttgagga gaaaaaaagc gaagagtggc ggtccaaaaa 240 tactgtccaa cagttgttaa aggatgcgga agccaccggc gttcctctca aagaactctt agccgagcgc acttgccctg tacaagtgtt gctttcgcag cttcatatat cgggcgctct 300 ggatctcaac aatcatgctt tgttcaaccc gtccaacctt aatcagcgct ttgacatgaa 360 420 atgcacttcg gacgattatg aagacctcaa gcagccgatt gagctgaccg agcagcaccg 480 taaagcacta ctgcgcggag accagtgcgg ctgggctcgg attctccctc gctgaaacat agatgcctta tcagcccccg cggttgcgtc ctccaccatt tatctcccga agaggaagac 540 cgctacctcg ccctagagaa gagcatctcc tggaccatcg actccttcca agaatacccc 600 660 gccatccccg tcaccgaacc ggatgccaca aaccgcggcg gcgtcgtgga cgcccttttc 720 gccacgcctg agaacttcaa cctctgctgg gttgacgaaa cttccactgg aggcatttcc gcacaatctc ccatctccgt tcactccacc actgaaggag gcaccctaac gtcaatccct 780 cccaacgttc tctccgccat ggaagcagac agcacacgca accacaactg ggcaatttcc 840 900 aacgccgccg agctcatgaa tgcaacagcg acgtcggtcc gctcgtttgc tgccgccact 960 gcaaaacaca tgcttggtgc tgctggcgtg gttattggga atattcctga ccttgacgat

gttgtcggta tgacagatga ggagctgcgt tcgttcgcgg ttaagagcca gaaagaactt 1020 gaggcgtcga ggaaggagct cgatgcaatt gacaagaagc tcggagcgtt ggtgaaaagg 1080 aacaggaagc tcgcgcagca ggctttagct acttagcgca cgtgctttgt ttgcatggta 1140 tcacgaacct tacatttgta catttatgtc ttcagcgtgc acttggttgt attacttgta 1200 catttgtttt cagttttaca gttttctctg tccttttaaa catcttagac atgatgccta 1260 ttacggtata cttacctcta gactacctgg gacatatgat cgaataaaca tcatatcaca 1320 accggtatat tatgcatatc acaatgtcta accttggctt tgccgacgta aaatgtggaa 1380 tttgactcct ccttcaaacg agcgaaggtc atactcttcc ggatactcct ccagaattct 1500 cctcaactcc ttcatctgct ccctcgcctc ctccgtaacc tcatcatata catcctcaaa 1560 cgcaaatcga atagccggct tcttcgccct ctccgcctcc ccaaactctc tcagtacttc 1620 ctttcgaata ctctccctag cctgccgctc catatcctca ttccaaatcc cctcattttc 1680 aagccacttc cggagcctga tgattggatt atctcttctc ttccaatcct caacttctac 1740 gcgcgcacgg tacgcaaagc tatcgtcgga cgtgctatgg tgcgagacac ggtaagacat 1800 cgcctcaata agtaccggtt ttcctccttg agaaagggcc agagttcgag cagccttcat 1860 agectegtaa acagegaaga tateatttee gtegaegegg ategtgtega teccatagee 1920 cacccgcgg ctggcaattc cgtctccccg atactgctct aatgtgggcg tagaaatggc 1980 gtacccgtta tttcgacaga tgaagaccac tgggcaggat cttgtagcgg cgatattgag 2040 accagcgtgg aagtcgcctt cactggcggc gccttcacca aaatagcatg cgacaatgcg 2100 tggtggcgtg tcgggattct gtagagcttg gagtttcagt gcgtaggcag cgcctgaggc 2160 ctgtggtatc tgggtcgcta gggtggagga gattgtatgc tgggtcaatt tgtcagtgtg 2220 aacttcatca aagggaggag ggatagaagt acggttttcg gatactcgca cccgtagtga 2280 acaggcatat teetteeteg acegttatea ttegeattgg egaagagetg geteatgaag 2340 ttctttagcg caaagcctcg ctgctgaaaa acgccggttt cgcgatactg tgcaaagacg 2400 acatcgtccg gtgttagagc tgctgcggag ccaacgctga tgccttcttc accggctgag 2460 acctttcgag aatgtatctc atcagcaaaa actgcccttc taaggctagg aagaggtctc 2520 gtaccatata aaagcttaat ctcccctgcc gttgtgcctc gaacatgatc acgtccataa 2580 tgctcactgt atatcgcata cccattaatg ctgaaaatag acttatagga atgtacaccc 2640 aaaacccacc cgttaacata ttcctatacc acgccaacgc ctcttcattc gaaacactga 2700 gctcgctacg acttttatcg atcagcacac cgtcggaatc cataacgcgg tacgttggaa 2760 tcccaggttt atccattggg ttgatgaagg ccatctccgt tgtgaatttg ctgttgactg 2820 cgccgggaaa tcggactcta cacattgcat gatagttgat tagctttctc gacctactct 2880 atattgtaga aggtggggac ttaccgatct gaccccggac gctgggagag ggatgtgctc 2940 catcgcttgt ggagggagag tgggtatgag gaccgaaagg gatgttgaag cggagatttg 3000 agaagggaac agcgcacggc gtgcgctgac cgtactcggc ccggtagata tattagagga 3060 gtcatggctg tgttctttaa atgatttgag tcctcaaaag aaaaggagtg ggaatgggag 3120 gtttttttgt acgattgaat tccccagact gaggccctgg gagagtgcgg agaagcggtt 3180 ggcgtcggag ggttaaacgt cacggcccgc cagtagccga agctccctta tcgactcggg 3240 ccatttatat ctgggcatta ctgtattgtg ttttattata atagcctcgt cgggttgatc 3300 tttcttaggg ttgaggacct aaaagtcaac tagctggttg ggccttgtat agaaacagtt 3360 actacgcgct ctctcagatg gactatcaaa cccaattata cacatatgac ttcgaaatga 3420 catataaaga agccggcgac aggtagacat tcatggtgaa catgttccgt cgcttctctt 3480 ctgcatatgc cgccggtcat catcgacaag attaggaggc aggtttgggt tatcgccacc 3540 tggcttgggc acaggaaaat cgtccagaat gccggactct aacatctcgt acacactggg 3600 gtgaattgtc gcaccacatg gaatatccct cgaagctcca aaatttggtg ggagtcgtcg 3660 cggaacccac ttacccttct ctagctcgag acgagttgcc aaggggagga cctctgttgt 3720 gagagacgtc attacggaag aacaggtgaa ctggaaaatt gggagacgaa cctaggatcc 3780 accatagcat aacagacaca tgcgttccgc catgtccaaa gcgcagctta tcgtgcggct 3840 tgtttgtctt ctgtgctatt tgatacgctg cagtgccggg ctcctcatcc ctacataaag 3900 agtgagtege aaccegttte atgtttteta catttteega catgaattee agettgetgt 3960 ccgagccagg caggtttaac acttcctgta tcatccagtg aagagcgata tctgatagga 4020 ggtgcttctg tcccttgctt agaggccacc cgccgccgac atcgccatgg tttccagcaa 4080 accaaacttc tttcaaatct atcgagtctt tgtcctttgg gtcaatatga aataacgcag 4140 gtttgaactt tagccggcgc tcgtgtatcg aaacagcgtg acgaatatgc cgtgccgaag 4200

ggctggcgat gtaccggtat gacttgcgga agaacggtat ctcgaactga ccaacgctgt 4260 ttacgcagtc aaaaagaccg aggaaatgca cgccgacgtc tggacggcaa aatgtcgtct 4320 tgaacttatg catataccgc gctaactcgc ggtcttcttc agtctgtggc acgttccccc 4380 gagagetetg atagegactg aacgtgteec aggegaatgg gaccatttet teattacege 4440 gtgagaggag gccaatgtta tggatcatct cggctaggaa tcgggctgtg tatgcgccgc 4500 gcgagaaacc gaagatatag atatggtcgc cagtggagta atagcgcatg atgaacctgt 4560 agcccgcgat aaggtggctg gcaaacgata cgcctattcc ttgatctagc agggcgctga 4620 egegegetet gaatetegte eaceagetaa accegetggt etggegegag gaacetetaa 4680 cataggtcaa ggtcccaatc ccggctgtat gcgcactagt tagttttttc gttttgaagt 4740 ggtattggta gtcagcttac gctgataata ggcatattgg ccgggtttat gccgctcaag 4800 egacteatag attttgaega tatttgtgte etecteggtt eccatgtaet gatteeeegt 4860 gccatcgaag caaagaacaa gccgacgagg ctgcggtacc gaatcatggg ccgactcggg 4920 accgccgaac gggccattat ggggcggagg aggcataatt gactcgcttg acgctggtgc 4980 caaagtatcc ctccaggttc gaccgagtcc aaagtgaatt tataacttca cggactgagg 5040 tgagatagca aggtgtcata gcagctgggc tgggctgagc cgaacaccat gtaagatatt 5100 gegtettgte eetgeggget etateeacea egaageetga ttegaatgge gategtegge 5160 tgcccagacc agccgttcct tcgtggcatg gtggctggag gattagtggg cgtgaacagt 5220 tcatcaageg gtegagtaaa tggtgecaag gtgatcatgt atgetaattg caactetgee 5280 catcetttgg acctttcacg cgggtttaat tcgctggaag attcagaatt gcagtttgag 5340 gcctttgccg tggtgcagga gtgcagaaag ttcgcagatc ttggctcaag gctcgagtct 5400 cgcgaacatc agcgacttga taggcgagaa ttgtgcccac ctgaccgaga gtacaaagat 5460 5512 cagcattcag ateggteagt aagetgeaaa acaccetttg acgecetace te

<210> 1947 <211> 3818 <212> DNA <213> Aspergillus nidulans

<400> 1947

attgaatatt taaataaaga tggtatgaga aaattataat taaaaaaata tatcataata 60

tgagatatat taatatatat atagataagt gatgaatagt agtagaattg aaatagaaaa tacaaaaaat aaaagtataa aataattaga aaaatataac agaatataga taatgaaata 180 aaattagatt ataacatcca ataatataag ataacacaaa aatagtaaca agtaggtaca taataataac gagaaaagag tggtacttat aaaaaaataaa tcaaacagcc aatttatggt 300 360 aataacaaag cacaataaat taatattccc cacagaatat acccactatt tttaaaatag aaaaatttat aaaatgtctt aactatgctg ttatacatat tatatgttaa tattaaatga 420 aaqtaqqata caaqactcqt ctatttaaca aqttaqtaac aqtqaactaq qctcccaaaq 480 aatcgtgcaa ggaatatgca aagtcgtgtc tctttagcgc atgctgaact ggtaaaactc 540 cctatccata cqtcacqatc tqtatactcc aqccqqqqta tqtacaqtaq cqcatqcqct 600 aatccaggtt gggcccgtct ggaggagcat cccaacctct ccgtcgataa taataggtaa 660 gactcgggtt tagtgacctc atccaaagac tctagaaggc gtcttgtcgt tgatagaagc 720 cqttgatttq gcaqcqaqga tqqaaatgtc tcagtcqact tggctacgct gcccaggtgc 780 ccaggcgcag gtgccaaccc cgcctttcct ctctggcctc aacagtaatt tccggtttcc 840 ttcattcatc cgtccaccca tccagtcttc aaggacaggg atcaactcca tctctcagag 900 ttctgctagt ctcatttcag ccaaagttct gccacccgac gttcgcaaat gtgtctttgt tttaatctat tttgacagct ccgttcagcc agggtgccat tgacgaatgc gatgtcgagc 1020 aggtggcaca acattatcag cctaatgtga cgatacgtct tcaggccttc accgtctgct 1080 ccaactgatc gcccatgatc gtcgtgagca tatctatcgt atgtacatgt acgggaggcg 1140 gctgctgttg tgcttcggac cagccgatgc ttcgattcgg ccacgatatt taaatccaag 1200 tggctgggag aaccatggtg ccgtcttatc qcagtcaggc catcctcgcg cgcccccgc 1260 caatgccacc gttgtccagg gtccttgaat gctcccttat ccacataacg agcccgaacc 1320 ggacaatggc tggaacttga tctatcagac ccagcccca atgcactgtc ggactctacg 1380 teegeactag ggetttgatt gteeagttat tgtttettte agggteeact egatgttgaa 1440 gttgcgtgcc tagtcacgac ggggaagacc tagactacca acaaaggctg ccattatgtt 1500 gagagcgaac ttaccgttaa tgatgacaag gcattgacgg catgattgca gttaaccgaa 1560 atgacgcatc ggcattgtct tccctaccca tgccggggca gggtcaaagg ataagaagga 1620 catggcttgc catcgcttct aggatgtttt ctcttcgagc gagcttctct ccacaagagc 1680

ctctgcaact cacggtcgtt tctccggtgt ttcattgctg cactagtagt gcttgttctt 1740 gatattgete titetttate tiecteaaac tataatatee geaegetett gacagtetet 1800 cqttcatacc tqttccgcaa tqaqqqtcaa ccctttqctc ctqgccacca ccctgggtgt 1860 catgageggt gtccttgegg cacctgtece geectagtte agegtggtgt agagttatet 1920 gggtcctttg gcggtgacca tgactgggac tggggccacg gtggaggtgg tcacggtggt 1980 cacggcggtc acggcggtca tggcggtcat gacgatgatg acgatgatga tcacgactgg 2040 gagectecca caaccaetee etgtgagaca gagaeggaaa etecteegee agagaecaet 2100 ccatgcgaga cggaaactga gacgcctcct ccagagacca ctccatgtga gactgaaacg 2160 gagacteett caaeggagte teeteegeea gagaceaete catgegagae agagacaeet 2220 cctccttcaa ctgagactec tectecagag accaetecat gegagacaga gaegeeteet 2280 ectteaactg agacteetee tecagagace acteeatgtg agactgaaac ggagacteet 2340 cettegaceg aaacteetee acetgagaet acteeatgeg agacagagae geeteeteet 2400 tcaactgaga etectecece agagacaaet ecatgegaga cagagaegee tectecttee 2460 acagaaacac cccctccaga gaccactcca tgtgagacgg aaacagagac gcctccacca 2520 gagaccgaaa ctcctccacc tgagactacc ccatgtgaga cggaaacgga gacgcctccc 2580 ccagagaccg aaactcctcc ggaggaaact ccggccccgg ctcccccgag taccagctcc 2640 tggaccacat ctacatetgt cacgattect cetgatgaga caaccactte gatteceace 2700 ggaacatcac ctgagcagcc tacttcaact ggcacaaccc cagctgctcc ggtctttact 2760 ggtgccgcta gtgtggaccg ttttggctcc cctctcgctg gtgtgatggc cattgctgca 2820 attgttcttg ctttctgatg aattgataat aattggggga aataatgaca ttagggttaa 2880 atagageett eccaggeteg titgaactia attactitet titagatage etataateaa 3000 gattecaaca getgagtgac aaaagtagte attegtggte tetgacacag ceacagtatt 3060 atatagttca tcggctgtgg ctgaaactgt ccacttatct tatctatccc gtcaaaggac 3120 cgaccttcag tactgagtgg cgcggtgagc caactacgcc acaacgattt tccgcggcag 3180 ttccaacctt ccttcggttt catttttgtg aactatctca aacaatttga gggttgtgtg 3240 tcaccctcgg agetactaca cagacactac tatacacgga ctcatcgatc tgattctcct 3300

ttccgcctgt gtcactccta acatcacage aaaatggatg accttcaatc actcgaacac 3360
ctctccctca tatcgcgcat aacaaacgag cttcaaaatc acctgggagt aagcgataaa 3420
gttctcgccg agtacatcat agagcaacat ttaaaatgtt cttcgtttgc cgaattcaag 3480
agcgcgctag aggcgatggg aggtgaccta ttcccgatga gtttaatgga aagcgtggat 3540
cgattagtgc ttacgatgca tccgagatat aaaaacaaaa ataagaaaga caggggtgat 3600
gaacacgttg aaaatggggc aagcgatgat atggatgcgt taaatgcctt ggagaagaag 3660
gcgcgtgtct tcaagggctt ggcggttccg gaccaggagc cgggatggc ggaggaggag 3720
tatatggagg ttgggaataa gaacggattg ggagttgatg agcacgatgc gaaggatagt 3780
gcgatggatg atacattcgc gatgctggag gggttggc 3818

<210> 1948 <211> 1363 <212> DNA

<213> Aspergillus nidulans

<400> 1948

ctttgctggt ttgcagaaat ggcgtgatgg gttcccatga tagagtgatt ttgtatgccc 60 agtgcgtgat cgcaacccat ggagctggcg tagatcacct cggctgctct gttcagatcg caatttgtcc gtcctctatt ctaaatctga gcagaatcct tacttttgag gccacctaat 180 240 catcacgcca tcccggccca ctttgatgct atacaagtac aaataccggc gccgcatgcc 300 360 cgcggggtac gaaagctatg agcgcatgcg attgcgtttc caagaaaggt gggggagggg tectataagt ageaggegte gegeggagte gegagegatg egggattgtt gttgataeta tacaataaqt atataqattc aattgagaaa ggcaccaagc aggcctatct accacacaac 480 gcaatatgtc tacacagcag caacagccgg accgaccgcg caagtcgctc attctcaatg 540 600 cctttgttga gatgtgtatt gtctccctac tttgccttcc tcggcagaat gggccaattc catgctaacg gcttacaggc agtggccacc aatcgccagg tctctgggta caccccgaag 660 acgaatccca tegetttaat gatategace actggatega getegegeag etgettgagt 720 780 ccgcgaagtt ccacggcatc tttattgctg atgttctcgg tagctcacct gatgcaccac gcccaccact tactcaccac tcgtccaatc ccctttcacc attgaaaaaaa tgaataataa

gctaatcatt gtggcggcaa acaggcggtt acgacgtcta caaagggcct cgcaatctcg 900
aaccggccat cacatccggg gcgcagtggc ccgtgaatga gccgttggca gtcgtgccgg 960
ccatggcggc cgcgacaaag aatatcggat ttggggtaac agtgacgacg acgtacgagc 1020
agccgtatca tctggcgagg cggttgtcaa cggtggacca tttgaccaag gggcggtatg 1080
ttctcccttg aacctggatg tgggagcgtg ctgatgctga tcgtgtactg caggatcgga 1140
tggaatgtaa gtgctatcga tctacctact tacatattca gcaaccctgc tggggaagat 1200
aaggcccata ctgactagat agattgtcac cggctatctt gactcagcag cacgaaacct 1260
cggtcacgca gagcagccgc aggtatgtct tcttcgtctc aataccagaa aacaccagtt 1320
ctgagaaatg ccagcacgat gaccgctacg ccattgcaga aga

<210> 1949 <211> 1415 <212> DNA

<213> Aspergillus nidulans

<400> 1949

ttgatacact cctccaacca cccgtcatca ctatgtctgt ctcgtttacg cggtcctttc 60 ctagggcctt cataaggtca tatggcaccg tccagtcgtc gcccacggcc gcttcctttg 120 cgagcagaat cccccggct ctccaggagg ctgttgcagc cactgccccg cgcaccaatt 180 ggactcgcga tgaagtccag cagatttacg agaccccgtt gaatcaatta acctacgctg 240 ctgtatgttt ccgatttgac cgctgcttat aaattattct gtaacgcgga tatttgaatg 300 aattgttcgt tggaccgaat gttgactcat gctgaatagg ccgctgtcca ccgccgcttt 360 420 catgacccgt ccgcaatcca aatgtgcacg ttgatgaaca tcaagaccgg tggatgcagt gaagattget eetaetgtge acagtettet eggtacagea etggeeteaa ggeeaceaaa 480 540 atgagccccg tcgacgacgt cctcgagaag gcgaggattg ccaaagcgaa cgggagcacg cytttctgta tgggagcggc gtggcgtgat atgcggggtc gtaagacgag tttgaagaat 600 gtcaagcaga tggtatctgg cgttcgggaa atgggaatgg aagtctgcgt cacactaggc 660 720 atgattgatg ctgatcaggc taaggagctg aaagatgccg gcctgacagc ctacaaccac aacctcgata cttcgcgcga attctacccc acaatcatca caacccgatc gtacgacgaa 780 cgactaaaga ccttgtctca tgtccgtgat gcgggcatta acgtctgctc tggtggtatt 840

ctaggtettg gtgaggetga ctetgacege ateggeetea tecacaeggt ttegteaett 900 ceetegeaee eggagtettt tecegteaae geettggtte eaateaaggg taceeegttg 960 ggtgacagga aaatgatete tttegataag eteeteegea etgtegegae tgeaeggate 1020 gteetteeeg eaaceategt eegeetegee geeggeegea ttteteteae agaggageag 1080 caggttgeet getteatgge tggtgeaaae getgtettea etggagagaa gatgttgaet 1140 aetgaetgea aeggetggga egaggaeege geeatgttt aeegatggg ettetaeeee 1200 atgegeaget ttgagaaaga gactaaeget geeaeeeee ageageatgt tgaetetgt 1260 geteaeggat eegagaagaa eaeeegtgeg eeggeegeag aageeetatg atagggetet 1320 aaaaetaeee eaeeeeeea geetgataeg ettteteee tgteegtgat tggtagggaa 1380 gegetagagt eetgetagte teagtaeae taeat 1415

<210> 1950 <211> 1053 <212> DNA

<213> Aspergillus nidulans

<400> 1950

60 gaagggacaa ggcgctaagg gccggggcaa acaaaatgca gctgtgcgga ccaaaatcca atacggtaac gacgaagtaa cgacgaatgc gggagtcaga tacgccattc agcagcgtca 180 ataaagttta aaaaaaggtt tataagttag ggaaaatgcc agaaatgaca gaaatgacaa aggaaagact cgacgggaat gggaaatgaa gggattaaag tgagggagaa atataaaaca 240 300 ggacaaggga ctgtagggaa gagaaggatg ggagggaaag agaggggaag taataagaga 360 cgaagaggaa aggaagggaa ggggagagcg cgacgaggag cagaagacga gtgctggagc 420 480 ctgagaagct aggcagggca ccgaggcagg gctgatgggg gctgaagcat cgacattagt acactaacta gtctatgggg aatgggccat ttaatcgatc tgatacacag gaaatacgca 540 600 acaagacatg aaacaaggaa gcagttcata gcaatcagcg ttatatggca gtctaaacag tctaacatga tctcaggtgc agctaaacaa tggaaccaaa ataaggttca cggttactgg 660 720 gegtcaatcc atgetggacg caaagectga aagectgaag acgegagtca ggetccaggt ttgcggatcg agatgatcac gtggtctatg atcccgctgt gtggtctccc aggtctcctt 780

<210> 1951

<211> 4469

<212> DNA

<213> Aspergillus nidulans

<400> 1951

ggggggggcc ctcgtgttag atagaatcct ggaccctgtg aaatgttgtg ctcgcgacgc 60 120 acgaactgaa acacgggggg agcttttaaa acaggattgg ggttgtggca acatacctgg 180 tccagatggc gctggttggc gatactatac gcctctgctg cgttcagact agcacgagcg 240 ctggcgagcg atggggggta tgagacgcta tgggacgagg attgctggag gggcggatgc taggagageg geageteete gteegeettg agettettge tetteggggg egtgaeggte 300 360 ttgtagaagg attcgagtgt gcgtttggcc atgactgatc tgtatacttg agatactgac 420 cagtaagagt tegagegate ategteggte taggtgtetg agetgtgaat gttgatggat gatgtcactg caacgtcctc gaaattcgtg ctagaccaag aattatctga aatatctcga 480 540 gtttgattct atgcatgttt tggactcagg ggccgaagtg actgttgtca gtgtcagcta tatatagttt atataggttg aggctagaag ctggcagttg gaagcgaaac ctaacagcct 600 gtgcacaata tgggcataca tagcaggcac atgggttatg acatttatga cctttatgat 660 cgttgcttac catttatgca ggcattctcc atcgaagtga accacggatt ggtagccggc 720 780 tctcacacca ttctattacc cgtatgaaca caacgattcc cctagttcgt acctctagtt 840 cgtacctcta gttcgatgcc tttagtgttt caggttgaga ttcagtaagc taaaatatca gctgaggtta agcagtcagc actactcagc actgccgcat atcggctacc gcaatgttgg 900 960 atggcatcag cgacaatgag tttcgcagct gcccgtcagt ttggtaacga gtatacattg ctgggtgtcg tataagcatc acgggtcgta tgttaagatc gtcgcttgac ctgatatgaa 1020 acagattgtg ggcaattcag agcgtggctg ttcgttgggc gagaccacgt gcaatgaggc 1080

tgaatcggtc ccttctggga actcccactg tggccagcac caactccact tcatctcctc 1140 teacteateg eccaetecag geaettttet tttetggege ettgteetgt eettgtteeg 1200 gtgtttattt ttgatcgatc gtattctttt ctttatcttc ttcttgtccc tcgctctgtc 1260 ggggtttctg ccaatccgtt tatctgccgc cctattgtta agacatgagc cagcctgttc 1320 cegaceggat eccecagaat tgaeggtege acteacegeg ecctetetet eccgaacete 1380 accetecate tegatgeteg etteceacea tggegaacta teacaatgge aaccegeett 1440 acggccagtc gggaaaccag ccgcactatg atgcctacac ccctccgtcg accgacccgc 1500 cgcttcgacg tatgcccagc tacagtgcgg gggacgactc cagtctcttc gctccccaat 1560 ccagccagtc gagagttgcg gagagccacc gctatccgaa tcgtgcgagc gtgggcgagt 1620 attcagggtc gtttggccag cgcgataact acgccgatcc cagatatgcc catcttccct 1680 cggcagcttc gccgcgggcc cgcgcccagt cccagtcgag ctatcaatac cagtacggct 1740 cactaggacc gatgtcgcct acacagccct cgtacaatcc ccagcagtat gccgcgcccc 1800 cgacgacgtc acaacagcat accgggtaca gcccgttgtc gtatacctca tcgaattcgt 1860 acggcaacgg taacaacaat atatcgccca ctcatcagcc gtacaacccg gccgcttacc 1920 aagcggccag tcttggaaat cttgggtctc ccacaatcca gcgccagtcg agcatgcttt 1980 tegetcaaac geegetetet eecaaceegt atggategee geactettee ttaceteege 2040 cgcctccacc ccgtggccct gaccatccct acggcgggcg accctcagtg gcatatccca 2100 gcacatcacc tggagctcag tatggatttt cacaacactc atccaccgct tcgacctata 2160 gtcttgcctc tcccaccacg ccgggcacag cctacgcgtc cggcagcgga tctctgtcca 2220 gcatgacatc gttcaactcg cggccgtacc gcggagttcc gattccatcg cacatcttcc 2280 atccgtctcg cctttccgat cctagccgga cgccgtccgt agacgaggag ccgcctgagc 2340 ctccagcgca cctttcttcg ggcgatactt acgacaagtc atatggtgag gtgcgcatac 2400 cagegegate cetteegaeg eegeeggtae accageecea gtegeegetg tegeeceaaa 2460 gaacggacac actgacgcga catccccagg cgcggccgct tcccgggccc ccagtggaga 2520 ctgaatatgg gcatatgaac ggcacagcac agcccgctga ccatacccct ggttatgatg 2580 acttggtccg agaagtcgac gccgctatcc cagacaaaca atgggcctct taccagattg 2640 ataggccact ccatattgac gggcattccc aggattctgt tgaccggctg aacttaccgg 2700 actogogoca googtottoa gattoggtta togocoatot ttococtgat gagagacaca 2760 cacatacaaa cggaagtatg gccacaggca cctggcagta tgtgaactac gatgcctaca 2820 gcgatgagag cgaagctgaa gccgaggcgg ggctggcaat gctgcggatg gccgatgagg 2880 aggagcgggc ccaggccgag cggttgcagg agcgggagcg tcgggaaacg aatgcctcga 2940 cgaccagttc gcttgcaaaa cgcccgtcag ttacggctgc atcgccgatc caagccaccc 3000 gtgcagattg gtatcccacc catagtggaa ataattcgct aggacattct ccgtacgatg 3060 atactgctct aggcgcaccc ccgtacggca atgaagccga ctattctggc catcatcagg 3120 ttgcgacttc gggctcccgg cacagctcca atgcttcacg cgaggatcgg gcggagtact 3180 ccgatgaata tgactatccc cccattgaag acgattacgc gtttcatccg ttccctcagc 3240 tgccttcaac cgcacgagtt gacgccggag gcacaggcgg tctatcggag cccagcgcat 3300 ataaccgccg gatgagtttt gattatggtg aggaaaccga tggctcctta ccgcatcgca 3360 ggcaatcgca ccactcagga agtgaaggtt cttttgaaga acctggggat ctgttcttcc 3420 atcctggaat gcgaccactt cctccacctc cggaggagcc tgcggataac gcgaaactac 3480 taccgcacct gctgccagcc ggcacatacc gacaattgga gccggactat tcatccccat 3540 atgttccggc tectteteca gatgtgtacg caacggccgc acccagccct acccaattet 3600 egeggtetae atetttgaeg agteatecea ttgegeeteg tgetgaeeet eetateagat 3660 ccaagaccga tgcagataag ttaaaataca agcagcaaca ggagatgctg ctgcggcagg 3720 gagecetgaa gettgattea eetatggatg etggggeege tgeaatteee etegatetae 3780 ctgtaatccc cgccggtcgc cgcaagaagt tccatccgtc gaaactgtca tccgaggatt 3840 tecgaegttg egetgaacea tgggegetea gegetgttet aaeetggate egggatetat 3900 ctgaagagga gaatgacctg aaaacccacg ccgtagtcga tgctatcgtc gccttgttta 3960 ctcacaaagt teegaegatg aatattgeeg atgetgagae eettgeggeg egagtegtgg 4020 agaacatgtt tgaccaagga gctctcatta aggacgagga atgggtcaag ttcggcaatg 4080 gacagattte tggtgtactg tttcagatta cgggcaccgg ctgctactcg cctgtgttac 4140atgagcaaga gacggatgcc gaagttgttg gacgctgcta ctcgcatcac tgcatgcgga 4200 cgctaaggaa ggtgaatctt agggcgcagg acatggagcc gcagaagaag gcggaggatt 4260 gggtgacatt ctacaaagtt tcaaaagaag tattggaaaa gcaccctaag aaagagatcg 4320

accggcagaa caatctgcac gagattgtca ctaccgaaga ttctttcatc agccagcttg 4380 atgttttgcg agactgctat cgcgatcgac tggcaaattc tgaaccctcc atcatcccgc 4440 cgaaacgcgc aacgaagttc ctcaatgac 4469

<210> 1952 <211> 3784 <212> DNA

<213> Aspergillus nidulans

<400> 1952

gacgaaccgg cttctggagc tactaggctc caaagggttc acgcgggata tgtgcgagca 60 120 gctgaagcgg agtaacatca ctgagctctg cgggcaggga cacctctacc gggtgccgct gctacatcac gccaggatgg acagccgcct ggtcctacaa cacagcctgg agtcgtggaa 180 aatgcccaga ctaagaaccc gaatggctcc actgagaaca atgacgacga cgatgaaggt 240 gttttggatg ttgcggctat tgttagcggc aacaccagcg agttccttgc cgcgcgggag 300 aaagagaagg gaaataaaaa aggcgctgat cagggcgcga aacctgttcg tcttcccaac 360 420 tctaagaagg agaaggccac gttccagtac caggagttcg tcaagttaga gccagagaag 480 catgcgccta gcggtccttc acgcttcatc cgccagacta gggatattga agttggcgtt gageggttet ttgctgcaac accgaagcaa gatactggag acagattgtc tagcagtatt 540 600 cttgaggata tagcaactca gatccatcac accatcctgg ccgtgccgga tgcgacaaag cgcagtgagc tatgggattc actgatcgtt gttggtaacg gtagtaaagt aaaaggttag 660 720 tetttetete tegaageatt eetegteeca gtttatttae taaatattge aggetteaet caagecetca teageacaat caeteagaag tttgteetet egeegteegg caeaatettt 780 840 acttcagaaa ttccatccaa cttctccact ccccttccca ccggcggaac aaataccccc 900 gccccgggct tccctggtca aatgcaccat cccggcggac aaggtgtaaa cccccttctt gtcgccgcca ctcactccgg caatcctatg cctccgggaa ccccttcaat ggaccctctc 960 teccateace getecactgg ceactegeag acteegacet etgttegeae egtaaaacea 1020 ccagagtact tccccgagtg gaaggagcaa acagcaaccc agcagcctgc ccagaatcaa 1080 ccaggtctca atgggcccgg cggtccggca tctagtggca gccaccgtgg tatggaagaa 1140 gcagttttcc ttggagcgca ggttgcctcc aaggtggttt ttgtgatcga tcagggcctc 1200

agtaagggtt ttatgagccg tgttgagtat aatgagaatg gcccgtcggc gattcatgag 1260 tatgttatgt gagettegge taaacegatt atatggatge caatecaett tegeeteate 1320 tgtcattcga cgtcgagctt tttacttctc ctcttcagtg cttttatgta tcgtggtttt 1380 tacgaggcgt ggtctgttat ttcagaaaag caatctgtta ggatcatggt aggataggcg 1440 gagttagtca agtagtagat atcaatgtat tcgtttaata actatgggat cttatagctt 1500 teacetettg aegegagtae etacateteg aaatggaage aegtgataet gacaegtgae 1560 tctgacggat aatcagctta tcgatcaccg ccactagcct ccgctcaact tctcattgac 1620 ctaaactccg tacattttgc gcttgtcaag gatattgatc tgttatcgca aaaatgccgc 1680 qcqctqaaqc tqgaaqcacq aaagcqctca gtaacaaqct gaaqqccqta cqttttcttc 1740 tgttccagac ataccttttc acagaatgaa gagctaacat cgtgcagaaa ggtctaggtc 1800 gtctgcgatg gtactgccaa gcttgcgagc gacaaatgcg cgatgaaaac ggtttcaaat 1860 ggtgagttag tegeateeta tagatgaaag taattttata acagatgtae taatggtttt 1920 cctagtcacg tccaaagcga aagtcacgtc cgacaagttc tgcttatcgg cgaggatccg 1980 aaacgataca ttgaggattt cagcaggcag tttatcaaga atttcctgga tctgctgcgg 2040 actacceacg gagagaagaa ggtgcacatc aatcagtttt atcagcaggt tatcgctgat 2100 aaaqaqqtta qttttaaccc atqctttata cttgtaaaaa gagttgttgc tgacctgttt 2160 tgctgtagca cattcatatg aacgcgacga aatggaagag tcttacccag tttgcagcgc 2220 accaaggacg tgagggctg tgccatgttg aggagacgga gaagggcctg tttgtttcgt 2280 atattgatcg gagtccagaa gcgatgcgac ggagagaggc gatcatgaag aaggaacggc 2340 aggatcgagt agacgaggag cgggagcagc ggttaataca ggagcaagtg gagcgggcga 2400 gagcaaagga aaagcaggag gagattggtc cggaggcgag gaatctgcag cgtaaggaag 2460 gtgagaaggt caagttaaat attggattcg gtgcgaaagc cacgccgcca gcatcgaccg 2520 agcagtcgag aacacagtct cccgatgaga aagagaagga caaggataag gaatcctcct 2580 ctgcaacgcc cgaatcatca gccactgcct ctcccgcacc atctcaaaac cctcaggccg 2640 caccgaaagt gtctatgtcg ctaggtggtg gaaatagcaa acccaaaaac gtgtttgcat 2700 ccgcggcgaa gaagaacccg ctggctggga aaaaagctac tgtcgtggcc cctccgaaga 2760 agatgtctga acaggagcgg atcatgaaac aggagatgga ggccatggag cggaagcgct 2820

tgggaggagg cggaatgcca aattctaagc ggcctaaagt gtcatgaagc gacattgttt 2880 cgtcccttat caaggagccc taagaggagg tctcctcaac ccccgcagc tctgcaggct 2940 ccatcgaccc ctcgttcttg gctggtccag cgagtataat ggttggtcgc ttactctgga 3000 gaatttcaaa caatgcacgg taatgactga aggagctgaa ggacaagaat accagaacca 3060 tttctcccgg tccctgacgt gctttgtccg gagtccagac cattgataat ggagcagttc 3120 atgtcagacg ggtgctggca tccgccacac tcttcatccc tgtatctatt cgccgatttg 3180 ggattattag cgtcaaaata agattatgac ggcggcatca cttaatcctg gcaggtcagc 3240 acgateggtg ceaecageea caateaacet agaeeetaeg tgaeegeatt etteaattee 3300 caatggctct tccactttag aataatagtc tttagttgat taatctagcc tccccagtgc 3360 ccgccggagt tggagtttcc gcttacgaaa gacggtgacc cgtttaaggg gcggtttcag 3420 cgcatcggtg aaacgcaatt ccaccatcca gcgctcaacc tcattttaac atcgttatct 3480 aaaacaacgt cgtctggtga ttggagtctc gacaagcctg gaccaccgtg caatatgctg 3540 gtatctttac cttttcgccc tacggggatg gtataatagc gtcatctctc ccggacctgc 3600 agetcaagtg gaagatcate tagettgteg tteettttgg tgttteeatt egetaettea 3660 tatcgccggt cgatatactt ccgttcattc cgaaaatgaa gatttttctt ttaggcgcgg 3720 tgctctgtgc ggcgcagagc gtcaccgctg ccctcgatgc gtcgctcctt gaaacctatg 3780 3784 ttga

<210> 1953 <211> 3992

<212> DNA

<213> Aspergillus nidulans

<400> 1953

tgttttgat atagaaatct tccaaatgcc aagcaagggc ctcttcgtat ttgattcgag 60

ttcgagcaat ctcttctggc gtcatgtccg tattagtcac ctgttgtgtt ttctgtttgg 120

gcacgttcgt tcgccttgga accgatccga cagatggggc tatttgagca agattatctg 180

ctcgttcttt ctcgcgcgca atctttctgg cctccatctc ttctcgttca atatcatcga 240

cttgattgct cgtctcagaa gattgcctta atccagcttg ccctttctcc gtgttcaact 300

catgctgacg tgtccgcgga tcccggcgct ggagcctaac gggccttgtg aactgagact 360

420 cattgcgggg atccaccgcc ttcttagagg cgaatctcgc gatgtgatgc tttaaaccct ccttgattgc ccgcttcgta gttacgagag gataatccac gtaagtctcg gatactaagg 480 gcccqctaaa tccactagca gcgaagtcgc ttttcgctgc gggtatgttt ggtttctcgg 540 atggcgcatt agacggtgct ggtcgtgtag gaaacgacct aagcgcttgc gtgttggctg 600 aagageeett tgetgtagte etettttttg ggegtacaag egggteaget accetaggte 660 720 qccqaatqcq catagqtggt gcgccagata tcaccgttgg agcctgcggg gtcgaactgt ttgaaggcgt agtagtcatg atgtctgctg ctcgttgtcc gaacgcaaag acagtacgat 780 aatcccgaga caattggaga cacgcgcaac atctgacgtc cgattagttt cagattggag 840 900 ctcgagtaat atgcattcgc ttgactcagt aaccagggga caatccaaat ggagaaagct gacaccctgc ataagatgaa gagagttccg atacggagag tatgtccgta agcaacatat 960 cattgcttat gtaataaaca gtttgaggac cacttaactc tcagaatttg gagagccaaa 1020 gccagcctga acttccttca ataaattgac gagaattact tcatacattc ttaattcgca 1080 gtttaaaaatt ctcacataga aagtaggata cattctttcc ttctagtaac cgcgcataat 1140 ggtctacgca gttcagtcga ctcacgcttt ggaagcaatg aggaacaggc ccattgtatg 1200 tacatttagc atgtacattt agcagccaca gggctggcag atgccatgca aatgccataa 1260 tacagtacaa tcaacataac tgctccacct catccgtgaa ctctctggta taggtcggca 1320 taagctttct atcggatgta tataaatatc atgcattggc accatgaagc gaaggaacta 1380 gaacaattcc acgacctttc tatcatcatc ctgattctgc cctgccgatg agtttccttc 1440 atcetetteg tetegeataa tgacetggae eeatetatea eaggeeteae gaaegeegte 1500 gtcgtcaaca cggaggtgac attctcggat aacgggatag acgttcactg cccttagttt 1560 ategegteet teeegggtag ttgtcaacaa taaaagegte teaagatgag taaegataat 1620 tccattatcg ctttctctct tcttgtcggg gggcagcaac tggaggtctg ggagcatatt 1680 tgcagtatcc tcttcactat actcttccgg ccccataatt ggcagaagta tgtaaggcag 1740 aagattcgcc tcgtcttcag agaagagggt cggatgaaat ggtatttcaa atgcaacatt 1800 ctttatggtc gatgcaacac ccctcctccg gaccgtgctc tcatgctccg tgaaaacggt 1860 gagttttgtc acaggcacga ctccatcata atcctgtctc gttgtgaaat atttgcggcc 1920 ctcctctagc ttcgacaagt cggcaaatag ataagataga tagtcgtagt tcgcgtgttg 1980

gttgagtgeg eegteggege ettteaegaa acaateeate aactggteaa ttgeataete 2040 ggagtttgag acaggattgg ccgttcgacg tttaagcgtc aatagctctt ttatattctc 2100 ggattttcca agattggcaa acagcataca gatcccatcg gcatttccct ctttgttatt 2160 ctqccaactq qcttqttagt qgaccqatgc agtgaqtaaa qatcaaaata accqaqqtaa 2220 cagagagagt gaatgggata gccttggtcg aaccaaatgt tgcagaaacc tacagtcact 2280 ttgttgagga gtgtttccat aaaagcatca tcagtagcaa gtttatctag gatctcctta 2340 tcaccagaaa ggttgacgag aattgttaac gcatcgctcg caataggcta tccagcaggt 2400 cagttccatg aagaaggggc agaatgaaat cccatatgtt caattcaaaa aggggcatgc 2460 tcactgactg tatagtctcg aacaagaagt tttaagtctt ggataggcaa aagctggtga 2520 cgtttgaaga tttccggcct cgacaccgaa tatccaacta atgttgcgca ggctggatag 2580 tgttatcatc aattcagact gtgtttctaa gctgcattta ccaatctgtc tgatctgagt 2640 gtttccatga tggagaaatt caaccaactg gaaacgcagg aacaagttag ttagggataa 2700 gettatgeaa tgagataeea taettegtee agttetgtet teataeteag gttttteagg 2760 ttatttatag tgatttgacc gtcagagcag cagagcagga gttcaagtga gttggaggaa 2820 aatacttcag ctaactttct cagaagcggg gcagttctta tcgataaggg cgtggggcaa 2880 acaatgaatt gaagtcagtc catgaccagc ttagacaatc aatggtctaa agaaatattg 2940 ggcgccctag aacgttaata tttgaatatc tacttctctt gttttactag agggcatctg 3000 gaaaggtett ttgggagaca geteagtgat gataaettag eaggtgegte tetegteeat 3060 tgacatttgg aaagggcgtg gcccattctg acaacccaaa tatcaatatc agtaaactcg 3120 atgaggacat tttgacaact accagegatg cegagegtgg egteettgea geteagettg 3180 ttttgaatcg cagatttccg gcgtattcgt acatgtccat cgattcgcta tcgcaagtta 3240 cgatttccaa gggaatccgg aaagctgcct ggattcttcg aggcctgcct cgacacagtc 3300 gggtgaccat atcaattaca attaggggaa ttctcagatg ttctggctaa cattctctgc 3360 tatgccaacc gccggagctg gacctcccgg gctgtcttcg cagagatact ctgggtctga 3420 ggagettgge eegaagtggg catetactag atgetgeaeg aetggeeage egtaggeatt 3480 tgtgaacata cgccgaacga ttatgttgtt gtgagcgtca ggttctaaac gaacaaggac 3540 ctttegecac gagagteete ggtggtaage cegagegatt tttteeteea etttqagece 3600 cgcgttattt gaaaagtcct tcgcgatatc gtaacctgca gcagtatccc taacctggga 3660
tgtacgtgcc gctacactgc gccggttcac aatgggaggg ggaatgtcct tagggtggta 3720
aacacggtcg tgcaagatcg tacgtggcct tgattcggga ttgactatgt agtcgactgg 3780
gggaaggggt ggcataagga tgtcaccagc tgattcaaat acagttgttc ttgggggcgc 3840
ggtgaagcca gtatcataag aatcatggtc aaagtagggt ccatcttgct gtctcagatc 3900
ttgggttatc gaaggagcga tcgtttgact gcgtgtaagg attttagctt gcttgcgccc 3960
atgctccttt ggcctgaaca aagagaacag gc 3992

<210> 1954 <211> 1048 <212> DNA

<213> Aspergillus nidulans

<400> 1954

ctttatataa tqctqtaaaq qaataaqaac tqtaccaaqt aacaaaqqta aattqaqcca 60 ggattaaagc tggtctttca tatcaagcgc tgtaatggtc gttaaaagcg ggatttaact 120 aatgaaaatc caagactatt acctccctta agctaagaaa tggaaacttg tgttggcacg 180 ccttaaatgc caatacgtgt ttccaatcag tctatccatt aagtttgttt gtttttgccg 240 300 ggttgcatga gggttactat caaacctctt tgccagtctg agcctagatt caaggggggg egggetgtee aetggataea ggtatggegt gggetggagt ttgettttet ateageeage 360 cagccagata gctagaagta ggtggctgat ttatataatt ggagaatata tcctctgcag 420 gcatttgacg ctcctctgat ctgtgtcatt gttagtggaa gacccaactg gtttttacac 480 acagatggaa aggtgaaqag gttctccaga tgggaaagta cggtgtatac gaataatgat ctagacatca aacccgctgg aaacacaccg tacaaacccc ctgtccttcc tgtccaccga 600 acctgaaccg gggatactgc acttttcccc acacaacgag cttcccactc ccattgatct 660 720 ggatttcagc agaagtaaac cacttcacaa tctcctcctc ggtccaatta caacttgtca caaccaagaa teegeeettg egeacaagge tteeegeaat eeeeggatae egeteacaet 780 cgctcttttc gaccatcaaa ctcacagcat caaacgttcc cttgtcaagc acgatatcga 840 agccaccctt gtcatacggg aaccagggaa ccttcttgct ctgcaggtcc tctcgacaat 900 ttagaatgtc acattetteg aategaattt catgecatte ttettegeet tegtetteeg

cettggtete geeteeatea teagaceatg aacettegte ateeteetea teagaateae 1020 ttagataage etegtgaege ttggtgat 1048

<210> 1955 <211> 2695 <212> DNA

<213> Aspergillus nidulans

<400> 1955

tgaccgacta ccaaacaagc tagctctata cctcactacg cttggggtaa taccttagtt 60 120 catggttgct ctttgttttg aaaaatcaaa atgggctttg gtcgcaaacc tcgctgtttt 180 gaaggctggg ggcgcggttg tccctattcg agctgatccc attcagcgtg tgcaaaacat cttgcaacag actggcatta caacgatcct cgcctctgag ggctttgcct cggcgcttga 240 aggtttagtg cctaatgtaa taactatagg cgatgatctg atccagtcgc tcccaagccc 300 tgtcacgcag cccatctcaa ccgttacacc ttccaatgct gcgttcgtca tcttcacttc 360 cgggtcgact ggaaacccca agggtgtcgt cgttgagcat ggcgctatgt caaccagcat 420 gcaggcacat ggcaagaagt tcggcatgaa ctcagagacc cgcgccttca atttcgccca 480 ctttacgttc gacatctcgc tccatgacat tatatcaacg ctgcaattcg gcggctgtgt 540 600 ttgcatgcca tcagaaagag agcgagtaaa taacatggcc gatgcaatga atcgtatggg agttaactac tcgttccttc ctccacgtgt tatacatacc atcaagccgt ctgacgtgcc 660 gggcctcaag accttagtgg taggtggtga agcggtgcaa ccagaatacc tggaaccctg 720 gctaaatggt gttcgtgtat tcaatgccta cggccccgcg gaatgtagta tcgccgccac 780 840 ctgcaatgag gttgccaata aagcggatgt gccgaatatc ggccgtgcga tagcaggtgg cctctgggtg gtggatgaga acaactacaa ccgacttcta cctcttgggg cagtgggtga 900 gettetgate gagggteete tactegeteg aggetaettg aacgaeeeta ttaagaeage 960 caatgcattt atttgcaatc ctgcctggat ctcccggtac tctgaacacg accattgttc 1020 acagcgccgc gagcggcgca tgtatcgcac tggtgatctg gtacgtcaga tggaagacgg 1080 atcacttate tatgteggae gaegegatgg teaagteaaa attegeggee aaegagtega 1140 aatcggggaa attgagcacc atgtcaccga gcatccttct gtggtagaga atgtgatagt 1200 ttaccctcac tgtggcccag cccagttgca gctcgttggg atattgacat tgcatggatt 1260

cattlettet gacgeagatg agggaateea aaccaegeee etegaceage tteeceatge 1320 cctqcaqcaa qcttcatccq tccqtqatca cctacactct tgtattcccq agtatatggt 1380 tcccaactcc tggatatcac ttgcagcaat gccgcacaac agttccgaca agattgatcg 1440 tegeegaete aegeaatgge tggagaecat ggaggtggaa cattttaaaa teeteaegea 1500 aagctacacg gagggtacga caactccaag cacatccgaa gagaaaaaca tccaagctgt 1560 ctgggccgat gtactccacg cttcgattgg aaaggtccct atgagtcgcc cgttcttggc 1620 tgtggatggt gactcagtta ctgctatgca agtcgtgtca aagtgtcgca gccaatattc 1680 catctatqtt actqttcqcq atqtqctqca atqcqaatca atctctcaac tqqcqaaqaa 1740 ggctgtgatt aagaccacga gtcccaacac tgacactcag ctctctacct cttcaatcga 1800 tcaagctcca gccqctacaa gcgcaccaac ggcctttgat atcaacgcca gcgacttgtc 1860 taagettgag accgaegtge tteegeggae eggegtegag aacetttetg eaattgagag 1920 catttactat tgctccccta tccaacaagg catcttgatg agccagatca aggaccacac 1980 aacatatcaa gtgcgccagg ccggagagat tcgtgccgct gattcttcac cggtcgacat 2040 gaaccgactc ctacgcgcgt ggcagttggt tgtgcagcga catgctattc tacgtacatt 2100 ctttgtccct agtccatcgg gacgggaact cttttatcaa gttgtactca aaagatacac 2160 tccaacaata ccaqtqctqc aqtcttqcaq taqtqatqat ttccttqctc aattcqaaqq 2220 actogaacgt coggagtacg coccegggea geogeettac cageteacec tageecaage 2280 ttctacaggg caagtttacg cccaggttga tqtcaaccac gttctaatgg acgcctcatc 2340 catggatcta attctcaatg atctcattct ggcatatgat aatatgcttc cagactcgcc 2400 tgctccatca tatggcatct atgtctcgtt cctgcaacag accttcgctt tcgactccct 2460 gaactactgg acgaatcacc ttgctggtgc agagccgtca tgccttcctg cctcttctaa 2520 totagactee ggaaageget cettgagaac ggtttetete gaagtagata acataaaace 2580 tctgcaagat ttcagagaca cgcatggagt tacgattgca aacatcacac agctcgcctg 2640 2695 ggccacggtt ttatctcggt atcttggttc ccgcqatqtc agctttggct atatt

<210> 1956 <211> 1164

<212> DNA

<213> Aspergillus nidulans

<400>	1956					
atgtgtgaaa	gctccggcac	ctgcggcagc	ttcagctctt	caccatcgga	taggtatgct	60
gctcgacaga	aactcgacag	atttcacttc	ctggcagaca	agtggtaggc	catactcggt	120
ttctttgtcc	gcctgggaca	aaactggtga	agattagatt	tgtatactcg	acageetgge	180
gtgaacaggt	cagctggcta	gatctctatc	tcgaccacct	ttattgcgtt	cgagcatgct	240
gcactcgttg	gaccgtgtct	agggcgtgat	tcggtttgtt	gaagaccttc	ctcaaacggg	300
ttcctttcat	gctggatttg	gtgagtctct	accttagcta	catccgacag	tccccttcca	360
agccaacagt	atctggttca	gagcatccat	gaagacgaga	atgtcttcga	agtgccagag	420
gtagtggata	taattgactg	gccagtttgg	ctgagatagc	agccaatact	gaagcaattg	480
ggaggaagca	aacgagcgag	ccacggcatg	gtccttgaag	ggcgttctcg	ttggttggca	540
ttttactcag	gtcaaggagc	gttccgtata	tcctggctgc	tggtaatcaa	gaccagcttg	600
ccttctatac	ccagaagttg	tcttacctgg	gatctgcagg	attcagatgc	gctagacgtt	660
tgtcaggttc	tcgtgcgtag	tgtaggggtt	gaggttgcaa	gggatattga	tgggcagaac	720
ttgagcaggt	cttagggtta	aggacaagaa	caaatggacg	agttgaaggc	gttctcagac	780
taagtggata	ggtgaggttc	acggcttctt	tatgcttgtt	acgcgccctc	tatagctgaa	840
ttgggggatt	ccgtcctttc	tatagtagct	acactggcag	gcttagctgt	gtgaatagta	900
ctgcttgcgg	actataccat	tcaaaatagg	acgatgtttg	atgactcgtt	tctcatgtct	960
atcactatgt	acaaattcta	tatctaaata	acatgtaaca	agctcagcat	ccttcattaa	1020
agcggtttat	tagatattag	aagccaacaa	cacgcggctt	ctcaaatggc	tctgcaggcc	1080
atccctgcat	ggtgacggca	tcgtcgacgc	: agtctcctga	caagacaago	gtatgctcca	1140
gcaaacaggo	gtccttgccc	c attg				1164
•						
<210>	1957		`			
<211>	3186					
<212>	DNA					
<213>	Aspergillu	ıs nidulans				
<400>	1957					

agatetatge cegteatace eetgggtteg aagegacagt ttetggacet gageagaagg 120

aaaggttgtt gataaggaag ggctcgccta ggtggagtat tggtggccga tggaatgata

cacaattggt ttggcaggct catccccgtc cgactggaat tccgttcaat ctgacgccat 240 tegteataae ettaaatgeg ettaetgaea geeteegaee geaaetgeea eeeaetgata 300 cccgccttcg tcccgatcaa cgcgcaatgg aggaaggcga atacgacttt gccgctaccg 360 aaaaacatag qqtcqaaqaa aagcagcgtg ctaagcgaag ggaaagggaa gctaatggtg aggagtataa gcccaaatgg ttcagcaagg ccaagtgtcc aatcacgggt gaagaatact 420 480 gggctcacac cggtgattac tggggttgta gggctaggca agattggagc aagtgcgaag atatcttctg atagtacaag tcagttatat ttttataata ctatcagtat atacaagctt 540 ttgactacgt ctgtgcgagc tgcttctatc aggtgtctct ctaccggata aatacctaga 600 660 ccqtqqcttq tccqcaagcc ggttaaattc aagcgcctaa tgaagattcc ctgcgcaaac 720 cccqcaqccc cqccagtgga caaagctgtg gcagctccaa gcaacctgac tgctcgattg acceatttgt cctgtgggcc atagcgggga gtatctggtc ccatgaccgc cttctctgag 780 840 attatttcct gatggactta gataattaac tgacaatcca cgccatggta taaattccgg 900 ccactctctt cgcctaagca tgcttttgtc aattatctat actcaatcca cacaatgagc 960 tcacagaccc caacagctca ggtatgtgct actctaattg ggttgacttg tataaactaa tataagtaga accteteett egteetegaa ggeatteate gggteaaatt egaggatege 1020 cccatcccaa agctcaaaag ccctcatgat gtcatcgtga acgttaaata cacaggcatc 1080 tgcggcagcg atgtatgtac atgaccacaa acgaccggga caatcgggct aacacaccag 1140 gttcactact gggatcacgg agctattggg caatttgtag tcaaggaacc catggtcctc 1200 ggccatgaat cttccggaat agtcacacaa attggatcag ccgtcactag tctaaaagtg 1260 ggcgaccacg ttgcaatgga gcctggtatt ccctgccgac ggtgcgagcc ctgcaaagcg 1320 ggcaagtaca acctctgtga gaaaatggct tttgccgcaa ccccgccgta tgacggtact 1380 ttggccaagt actacacgct gcccgaagac ttctgttaca aactgcccga gtcgatcagc 1440 ctgcccgagg gtgcactcat ggagcccctg ggagtcgccg tacacatagt gagacaagcg 1500 aatgttactc cgggtcaaac cgttgtagtc tttggagctg gtccagtggg tctattgtgc 1560 tgtgcggtag ccaaagcttt cggtgcgatc agaatcatag ccgttgatat ccaaaagcca 1620 agattggatt ttgcaaaaaa attcgccgca acagccacat tcgagccgtc gaaggccccc 1680 gcgaccgaaa acgctacccg catgattgca gagaatgacc ttgggagggg tgctgatgtc 1740 gcgattgatg cttcgggtgt tgagccgtca gttcacacgg gtatccatgt tctccgcccc 1800 ggtggcacct atgtacaagg tggcatgggt cggagtgaga tgaatttccc catcatggcg 1860 gcttgcacta aggaactgaa tatcaaggga agcttccgat atggtagtgg tgattataag 1920 ctggcagtac aactcgtggc ttctgggcag atcaacgtca aggaactgat tactggcatt 1980 gtcaaatttg aagacgccga gcaagctttt aaggacgtta aaaccggaaa aggcattaaa 2040 acgcttattg ctggccctgg cgccgcataa gcgcttgatg ccgcgtacat agtgaatctg 2100 atataaccat tttcaattta ctaatttaca ctatatgatt tacatactaa gctttaaacg 2160 tcgcctcata tctatgaact cattagccat cagcaacctt gaataggaca aagatcatac 2220 ctcttccctc tgaacgccca caaaccccag ttgccacaag aaatgtcatg tgggtcaagg 2280 tcattaagat cccaccgcag actacggaat atattctcac cgggctcgag tagaatgtca 2340 aattcgccgg cacacttctc acgcacccag ttgatatctc tctccatatc ccactgtgta 2400 tagccagtgg tgatgattgg aaccttggtc tccagcagca gaggcaatgt ttcctcccac 2460 tcgtgggagc tggcagggtg tccaagaccg gggtggaaga gcacaatgca gtccaggtag 2520 gggtcgaaag gctgaaagta ttgtgcctta tacatcgtgt ggaaataatc cacatatgtt 2580 gttattttca tctgaccacc tagtctgtct tcaacaattc ctccgaaagg gttctcaggc 2640 gtgcgctcgg gcaggggaaa ctcctcgtcg cggttcgcca tgctctcagg gccgatgaag 2700 atgagatgga tgagagaccg tgggaaaata tggctgagtt gaagccacac atcgcgaggt 2760 agagatgatt cagcgcgcgc tcctaggata aagatccgca caggaggtgc ttttactcgc 2820 aggccctgga tatcgacgcc ctccccggtc ctaggcggat gtagggagta tcgaagggct 2880 aacagtgatt agcggtgtca aaaattagta ccagaaagct taccgctcac actcttaaga 2940 ccctcggttg taagtctctg atttttctg atgctataag ggctcagttc atgcaataca 3000 cttccgattg tgagcgggta tgtcagcatc cgcgtcacct gccgcatact ccggtcatca 3060 ttaatcgcat caaactctct tgtgtaaaga aaagtatccc agttcgtcat gtttatgacg 3120 aagttttcat cttgcaggcc gggcattaca aactccggga aaaaacgccc agagcgcaga 3180 3186 tcatgg

<210> 1958 <211> 4128 <212> DNA

<213> Aspergillus nidulans

<400> 1958

atccagctag attgctcctc ctggtattgt agaacctaaa cgtcctccgc tttcgactta 60 gaaagccatc aacatcaata cttaacacaa gaagtcggaa agaaacggat taagtacaca aatgcaaaca atcagcgtca tgaagcgaga actagcctcc agcaggactc gacaactcag 240 ttgccaccat gattcgctgt cgaacgtttt cgtgaccgta taatatcgta acatcgtgat 300 cctcatcatc qctqctgtaa gtactgtgcg agaaggtaca tcactgaaga ggaaaagagc gtagttttga taaatgacaa acatatgctt cgggctgaac atgcgagaca cgaaagggaa 360 ataccggttc ccagaacaaa ataaggaaaa acgtaggaca gttgaggaat gaccgagaca 420 atcaaatgta ggtgacagag aaagagcttc aatgcgagtc tcataatcat aaatgcttgc 480 atatctcgtc gtgcttttcg tatcgcttag ttgccgagcc atatatatgt gcttagattc agtcgttcta attctcacgc atcacaagtg tcaatactac ttccttggaa aggcagtcaa agtcgttcct gttgaatttt gacgctgaac ggccacggag gtaggttcct tgcgaatcgt cagtatgaaa ttccatatag gaaaggggaa acttaccaaa tttttcaacg tgctggcgaa 720 780 cttcagtcat tgtgttgcag acgtcaggat ttgagtgcag caagtgatga tgcttggatg tgtcccagtc ggagaatgaa ggcaacttct gagagatcgc ctggaacaaa ccgacaatga ctccgacagg agtagtctcc atatcatggc agaatttctc cactgcagca gcgtcctatt 900 ccttaagtta gtaagaaccc ttgtgcctca aaaaaaaagg acatacggga gtgcggtagt gacagtcaaa ctgcatttcc tcccagactg cgagaaggat tgacgcgagc atgaagattg 1020 taggccagtt cttcaatttc tcgccgctgt agacactgga atagagactc gacagttcct 1080 ccaggacatc cttctgtagc tcacgccaca tgctagctag ggcgcacttg acttggaaat 1140 tgatcatcac gggtgccacc gtcttgccct tgaatttcga gctcgggtct tcaatcttgc 1200 ccaggaagcc ttcttcatca ccaacgccct ccaccattgt gacatgaagt gtcaggttat 1260 aagcaagaat aagcttcaag gccttgcgga tcacgggcat ctttgtgcgg aaataatacc 1320 ggaatgcggt ttttagcatc tgcgttagga atggggtgcc ctcgaagtaa tcatcgacga 1380 acttctcaaa ggtaccgttg ccgtcgatat ggcgatccaa gtagtcggac agcatggcat 1440 gtgagactcc ttccataccg gcggacaatt tcgctgtttc aacctcgaac tggctgggtt 1500 cgcggttcat accetecace cagteaatae tgaaacaetg ttegttgtge acatacaett 1560 cgcgcgcatt gatcggaagc acctgcccat atccgtgggt aatgaagagc gtcctctctt 1620 ggtctgagaa tcccttaata ttgccaactg agaaaccgag ggtgatgtgt cgctcatagt 1680 ctgccttcca gtccttcata aagtaaccga tttccttaat gtcaatacgg gtgcagggaa 1740 cctgccataa tctagcatgc gaaggttggc aacccgcgca tggctcgccc ttgtcgcact 1800 atttcggtta gtgaattttg gatgttggta ataagcttga gagtcttaca gtcttcttga 1860 ggaacttgca acgtagacag gctcgtaact tgcgaatctc actggcctgc tttcgctggt 1920 cgggcctcag aggccccttg cgcttcccta ccttcttctc acctggctca gacttcccgt 1980 gcgattgctt gcggaccttg gtctcagcag tcttcgcagc gatcgggctc ttgcgagacc 2040 cctttctgct cgggggtgaa gacgagctgg ctgaagagcg tgtcggtgaa gtgtctttct 2100 ttgcaggaac ttggatgggt cggacaatag cagcggggct aattgccgtg ggtgattgcg 2160 aaccatgaga tgtgtggtcg taggaaacac gtcggttcac gggactgttg aatgcggact 2220 cgaaattggt ttccgagcat ggcgaattga ccggattgga gacctccaca aagctgccgt 2280 atgatgtcga gtacgaggac tcggagagac ttctgtcgtg tagagtctgt gtcgggttga 2340 tgaagacctg atccgggaaa gaaaactcat gtgaatgacg gggctcgatc atactccaac 2400 cgttatcact acttgaacta gtgagcgacc gaacctcgag gtacgtgtcc gtcggcgaac 2460 tgcttccaac catattctgt ggtgccgcat aggaagacat gtccggaagg ccgtgagttt 2520 gaaatccaag cagatctgtc tggagatctt ggtactgata tgaaaccatg tcaacgggcg 2580 cagcgagagg taaataaggc ccgtcgagca ggctagtgct catgtgaccg tgaggtgccg 2640 acatcatatc aataggagac gagtggatag tcatgccata gcttgcggtg gtgaactggg 2700 gagcggcagc agcctcatcc tgaggatatt gaaggtgggg ttgtaaatgt tgaaattgcc 2760 agtcaacgat gaggtttgga tcttgggcta ctgtctgctc gaaggagtga ccgctggttt 2820 gcaagggtga gatatctcgc gaagcgtctg cccgctggtc caccgccaca ggccatgact 2880 gagectgaat gtagtteete gagteataat caagecegat aaageegteg eeggteaaat 2940 ccacattaga catggtcact gtagcctata tccagagata aagacaacaa aagtcgaaat 3000 cagagaggtg gagggtgtcc aaagacgaaa gtcgtacaaa agagaagaaa agctggatgg 3060 aagatgacca cgaagcctca gggaaaaggc actcggatga gcagaaagcc cagaatccgg 3120 gggtgcgaga ggaagaagag ggcacggcga taggatgaga ccatggcggg cagaagcggt 3180 ggggagcaaa gcagcggtga agcggaaggt gcgtgagccg gagatacgct aggggaacct 3240 gggaaggagt tatcgctatc ggggtggggc accgcttggc cttcgagtag gaagactgcg 3300 tactgctgct aatgccacgc gcgtggcgct ttcgttggtt ggagttggtc caaactcgca 3360 cacatgttgc ctgttgcagt ttagttctcc tacagccagc aggattgagg cgatgatgga 3420 ccactaaggc gtcaagcagc cagtcccatg attatcatct catcatcgaa ctcgaaagac 3480 gagtgctggc tgcaactcgg agcccgcggc gactacgact ggaaattggt catagagata 3540 ctcaatagag agtagcttac tccgtctgtt gagctaacaa tgcccacagg gtccacggta 3600 cggcccttct ctttttcagg aataagaatg ctgacttgct gacaggatca atcccaatcc 3660 actccagagt ggtgattcta cgttgcagtt ggcgctcgtc atcaacgtcc tgcatattgc 3720 ttcagtcgag actcggccaa acctcaatgc ctgaaggaaa cgcctgggtc ttcaaaaagg 3780 agtcccatgg caccgtgcgg ctttgccggg cgagagacat gggacgcgct ctcgggaaga 3840 ggaagatcag tggaaattca tggcctcaga tctgttgagg cgagcgccga tccgcgggcg 3900 tggcaataat acatacgcag gaccgtcgga ggcgagaaag cctggcccgg actgaccccg 3960 ctgaccatga agcacaaggt tgtaagcacg gccgtgtcaa gcagctgtga cagggctgct 4020 cggagtaaat tcgcttgccc gaggactcgc catcatatgg agcaagagca ttcttctgtc 4080 4128 gcttaattct atttgtttag tgaggaagaa acaagttgaa agtcatgt

<210> 1959 <211> 1913

<212> DNA

<213> Aspergillus nidulans

<400> 1959

gaactaatgc ccgtccgtca gagttgctaa gcctttcacc ctccctccg aaactcacat 60 tctacgcttc cgttacacca catacatggg tgagtcgcac ccggccgaga ataaggtcgt 120 cgtcgaactc tccagcagcg atctcgtccc caggtacctc accgaggcgc agcgccaaac 180 cctcctcaag ctggtcggcc cccgctacaa ccctgataca gacatcatcc gtatgtcctg 240 cgagaaattt gacaccgcg cccagaacaa gcgttatcta ggagatctca tcgagaccct 300 gctcaaggag gccaaggaag gcgactcatt cgccgacata cctctcgacc tccgtcacca 360

caagccgaag aagacgctgc agttcccgaa agaatggatc atgactgagg agcgcaagaa gcaactcgag gctacccgtg ctgagcgaaa acgtcttgag caacagagac agggtgttgt 480 agatggaaat gcggtcattg cgcaggcggt caagacactt cccgctctaa atcctgccct 540 gaaggeteat gegaeggegg agegegagaa ggttgetgtg aaagtegggg etagggggea 600 gaagcagaag ctacgctagg agaatatcat gaagtcagcc atggacgttg atgttgtaca atctctgtat ctttgcttga ggatagcgca gggccgttta gactattttt cacgttaatg tactatacta ttagcacttt atcttctaca tacctcattt ttcgatacaa gaaatagttg 780 gcagccagta atatcgggat tctataattt gttattccgt aaaaatcctt tttcgcaacg 840 gaaacccttt gtagttcagt aagatttcac cttataacgc cgggcggctt acttctccgc 900 tttctacgtt tctatcctcg tccgccgtcg ttaggtacat tatgccggac cgaagggaag tacatataaa cgggagaccc agtatagtac aagctaagac ggcatagaat gacaaacaaa 1020 ttgaaaggtg agagggaaaa gaaggaaagg aaagcacaag caagaaataa gaagagaga 1080 aaggaaatga ggaaggggga aaaggaacag agaaatagag gagaaaatag agaaagctgc 1140. tgaagaaaac ggagaacaat aagaaaaaat cggtgtagat gtcgaacggt gataatccaa 1200 ccatggccga ctgccttcaa agcaagtcgg tcgttgtatg tatgtatccc aagaacaccc 1260 gccgatgaag tcccttcgtg gtaaaggaaa ggtattgacg tgggggaata gcgtgtggtt 1320 ctcttaaagc catttgttat cgaaacaatt cacatattcc cttcacctta ctaattcata 1380 tacgacacat acatgcctct gttgccgaaa aggtgcagta ggtatattta agcgagaagc 1440 ggccaccgtt gtagcatatt gtagcataat atgggagttt ataccctgcc ctgaagttgg 1500 cgtaaaccag ggaagaaca aatagccaat gctcgcttgg tgtgagaaga atctattggt 1560 ctgatgtcgg ttttggtaga ccgtgatggt aaatagtctt gttacttttt gccgcgcaag 1620 tatgtatcat cctcaagagg actcaaccga ttgtttgcca ttggatctct tcgtgccaat 1680 cgtaccgaaa gccttggctt gacctctgtt attccttccc cggccgcgga ataccccagg 1740 gctagcgcca ggggatgaag cgcttggaga tgggccacga gtgggcgggt tagagttagt 1800 acttctgcga ccaatgtccg ccaccgggct ggcaaccgcg gagccagtgg tcttagaggt 1860 gggcgaggcc ccattagacg atgccgtggc ctggttatgt atgcaacaag gtg 1913

<210> 1960 <211> 2743 <212> DNA <213> Aspergillus nidulans

<400> 1960

cgctaaccat gctaacaccc ggagagggct ctggagcggg ggatttgtcg agcgagctat ccataccttc ctacaatcac ctgctgttaa cagcagacgc ggatggcaag atgcactgga tatcatccct gagaatcttc ggcctgacgt attccgtctt gatcgcgagg tggccggcga 180 cctcccagag ctcgatgatt cgagtgcgct gaacggtcta tgtgagttac catatagcag 240 ggtcggggcg gatttcgcgg gttgggttta acaagtctac agctgactgt gtcaaagtta 300 tcattcagcc ggttgtcctt cacggcaggg aatgattcaa gaaaacttcg atgactttac 360 ggaagggaaa cagcgttagg actttaatat cggtgtcgtg ggataatcaa gtcgtgaagc 420 ctttttagtc tagcacaggc aggacagata atcactattg cctgcaatat ctgcatatac 480 atagtttcta tcacttctat catacgctct accgcgactc gtagtactcg gtgttcatcc cccgttctat ggcagcaatc tgtaacgcga ggatgccaga gaactgtctc gaccatataa agctgccggt catgtaccag aatcccggta caccagtcgg tttccatacc tacaagcaac 660 gttagccggc tgcaaccata agatttataa gagtttaatc aataaaacgc accccaatcc gttcctggct gttgtgtaag gtgcatattc ttgccacctt gttcataaca tcctcgccca tgaggcgttc aatcagttta gtactgagct caaaaccagt cgccagtata acaacctcag 840 900 attcgatctt ggtgccattg gccaagatta ccccgtcttc gtagtacccc tggacgcctt gctcacattg ccggaccttg atcctcccgt cgatgatcat ctggcatgca ccctggtcag cgtagaaatg tccgcccttg atgagctgat aatctaaaag gctgtctcca tccccctct 1020 taactgccat tccggctttt tccagggcat ctaacatgtc tttgtctttt gccgacatca 1080 tctgcgactc tccgacacta agagtccggg caacggctat tggcagtgag tggctcaaaa 1140 gatecgeate etcaaggett acceeeggag tgttecaeag eggtaattga atecteteea 1200 tcgaatcccg agatacaaca tacatggcgc ctcgttgcac catcgttaca ttctccgccc 1260 catggttgac gaaatcctga gcaatatcat gcgcactcgt tccagaccca atgattgtga 1320 tettettett cagggeetee ggeateageg cegeegattt atgegeegag gtgtgeagga 1380 tctggccttt aaatgaagcc tccccaggga acgtggggcg attcgggatt gcgcccagca 1440 accetgtage aagcacgaca tgettageat gaacagtetg tatacagtee ttgetttgga 1500 ggtcgactgt ccacacccgt gacgtctcat tgtaacgaaa attacttgca agggtgctgt 1560 gcctgacgtt gaggcccatg atctcttcat agtgctccat ccattttgta acatgggccc 1620 ggtcaagata tcgcggccag ctggctgggt acttcaggaa tggatagtgg tccgtataga 1680 tgggagtatg taatcttacg gtgtcatatc tggctcgcca cgagtcccca ggacgcgaaa 1740 atttgtccac gaccagatag ttgaggccta ggttttgcaa atgcgcggca agtgcgagtc 1800 cacactgacc tgtgaggggt gttagtgctt tgcttccgac ccacttgaaa ttggtttcaa 1860 atggctcacc tgcaccaaca accaaaacct gcaggccacc gtcatcgctt tggacgctgg 1920 acggctcagt tccataacca gaagcaccag cctgcgcttc cgctttctct gccctcgttg 1980 cttccagctc atcttggccg tttaaccgct ccagcacagt aaacaccgtc caagccttcc 2040 actcctccgg ttccacatta gccaatctca gaacgcccct cccggtacca aaagtatttc 2100 tgaagctgaa cccagcctgg acgaactgca acccaccgat ctccacaagt tgcggtcgca 2160 atgcgccggg ctgatccgct ttgggctctg caaatccact cgtcgaaccg gctaggtact 2220 cacatatage egetgegeea ttatgggatg egaaateeea egagaaagag acgaaatete 2280 gaaaccacga ctctttttcg aggaagaggc ttgagatgtt gctttgctgg ccgctggaca 2340 atttctctgt aaaggaaaac agccaatcgt tgacgatctt ggccacgtcg aggtggtcgg 2400 cattcacgga tgggtggagc gttagttgcg ggagcaccgc caatggcgga aatataatag 2460 gcatgataag ggaggagtaa tgaagaacga aagaatgtag ctgacgatta ggaagaaaaa 2520 acaaacattt ctcttcagtc atatttccag aggatgaatg gcttttatac ctcaacagct 2580 cgaagatgag tagcgttatc gtgaatagtc ctagagaacc ctaagtcgct agggtggcgg 2640 tagatacgga acaattgaac ccacttgagt attcgtccta gggtggttca gatgcggact 2700 2743 gagcccgaca attcgtctta accagggata gttttactcg tgt

<400> 1961

qccaccatca acgccggaga actgcggacg ggtaagcgta gcctgcgccc actaaattta

60

<210> 1961 <211> 3337 <212> DNA

<213> Aspergillus nidulans

ctatgagaag aagctctact tgaccctgag tggagagcta cctgcataca acagtttgca agatttgtgg gatatcgctg atcagctttt cactgctttg gaagaactta tatatcgcat 180 240 gccttttggg ctccgataca ttgctaaaga gatgtacgag agccttctgt ctagattttg caaccaagac ccgagtttta tactccaaac aggtggccat tgggtttgga agaattattt 300 ccagcccgcc ataatggagc cagagaagta tggtgttgtc gaccgggggat tgacgcagga 360 gcagaagcga aatctgtcgg agatagccaa agtcattgct caagcggctt ccggaaggct 420 attcggtgca gagaatgtat acctccagcc cctaaatacc tacattgcgg attcgattca 480 gaggcttggg aatatttggg gagactgtaa gtgcgacctg aagataattt gcagaagatt 540 600 tttgaaatgg cactaatcaa aggcaacagt gatctccgtc caagacgccg aaacatactt 660 tgacattgat gaattcaacg atctctacgc caagaccaag ccgacattat atattaagat gtctgatatc ttctccatcc accagctcgt ggcttccaat attcatttca tctgctccaa 720 780 tccagacgac attctaaaag aggtggttcg cgacttgggc aatgtcaagt ccaatgagaa tgagctgatg agcgtcaatt cttccgagat caatctgaca ctgaacccga aactcgccca 840 900 agctgaaggt aggaagcaat tacttctatt atctctggcg tacatactaa gataactcga tcagatcctg aagcggatat caaggctcta ttcatggaga ccaagagatg cgttctgtac atcatccgcg tacagtcggg cgctaacttg ctggaaatca tggttacacc acccactgaa 1020 gaggacgaag aaaagtggat gacgttcgta cgtgatgagt taagtgctca caatacgcaa 1080 cgaagcgcat actctgaagc gaatagtctt gtagacattg cctctatgag ctattctgaa 1140 ctcaaacgaa cggctttgga aaacatcttg caacttgaac gagcaggaaa gatccatcgc 1200 agcaatcact accaagatct tctcaatgca attgcgattg acatacggac caagcaccgc 1260 cggaggatcc aacgtcagcg agaactggaa agtgctcata tgacactcac acgtcttaac 1320 gaacaagctg tctggttaga ccagcagctc aagacgtata acgattacat cgagcaggcg 1380 atggtgacat tgcaaagcaa gaagggcaag aagaaattcc ttatgccctt cacgaaacaa 1440 tgggaccacc agcgcgagct tcagaaatcc ggcaaggtgt tcaagttcgg gtcatacaag 1500 tattcagccc gaaacctggc ggacaaaggc gtcctagttt actggaaggg ttatacagag 1560 cgacaatggg accgagtgga tctgaccatc tcgagtaacg aagttggcgt cttcaccctc 1620 gatggaagca gtgggccgat gatggttcct ggggccaatg cccaggttcc cttggatgac 1680 ctcctgcaag ctcagttcaa caacatgcaa ttcctcgact tctttgacgg acatctgcga 1740 gtgaacgtca atcttttcct gcatctgatt atgagaaagt tctacaacga ataatattca 1800 cagatgeteg agttgtttet eetgggaggt etttgteeta taegtatgat gaetatttgt 1860 ttctgctttc ctttttttat gatatccccc tttgccttca tgacatgtac agacagcaaa 1920 agcacctata tecaacgage teteacteeg agtacetact tigitatitt tgetgittie 1980 ggtgctgcac gactgcctac acttttacct tctatgtgat gatatggacg aaacgatgta 2100 tttatgagtg tacgtatcga ctaaatgact tctcatgagt tccagagtct tcctaatgga 2160 ctttaagtgc aacgtcttat atgactgagt tgttgccgag agtcaggggt gacacgtgac 2220 gttgtcttcg ggcccgacgg gggtgaccag ctggaacctg attctctcct tcatggcgcc 2280 cccggctctg aattaccgat cgttctttgg gctagctttc tctcatcgaa ttgattgtat 2340 gcgcaattag cctcttttat ccgcgcacca tggatttcga ttccctcaag aaccaagtca 2400 gtaacctgac tetttatgat etcaaggegg gagtgegeaa ggteeaaaat ggtaageeag 2460 gctctcagag cctcacgtca ccttcagact tggaaaatat atgctaatct tcttcgtgac 2520 aagccgtcat gaattacact gagatggagg ccaaggttcg tcgtattcct gactgtatcc 2580 atccgcgatg tcggcatcgc tccgcgcctt gaagaagggg gggggtactg ttatgatatc 2640 agtcacttac accttccagg tccgagaagc tacaaacaat gagccttggg gtgcctcaac 2700 aacattaatg caggagattg ccactggaac tcatcactag tgagttatta taaacattgc 2760 gtgatttgat ggtagcgtaa cggattcatg gaattattgc tgatctatat cgctttgcgg 2820 ttaaacagtc aattactcaa tgagatcatg cccatgattt acaagcgatt tacggacaag 2880 acatcggaag aatggcgaca gatctataag gtagagatga ttcaatattt attctttgga 2940 aggtcgctga ctgtgccttg cgaaaattca ggccctccaa ctactcgaat ttctcatcaa 3000 gaacgggtcc gaacgtgttg ttgacgatgc ccgatcgcac ctgtccctca ttcgtatgct 3060 tegecaatte cactacateg ateceaatgg gaaggaceaa ggaateaacg teegcaateg 3120 agcgcaggaa ttagtgaagc ttctgggcga tgttgagctg atccgcgctg agaggaagaa 3180 ggctagggcc aaccgtaaca aatttcgcgg tttcgagggt ggatcgggca tgggaggtgg 3240 aattgggagt tctggaggag gtcgctatgg aggttttggc agcgatagtc tctctttttg 3300 <210> 1962 <211> 1544 <212> DNA <213> Aspergillus nidulans

<400> 1962

ttttatggac attgccttca atcggcgact gaggcagcgg acggcgactg gtcccctttt 60 agcaccgatc tactgtttgg ccagccaacg cctcaaattc tgtctgatac aacaggatct 120 actacgacgt cattgatgta tacagtcatt gaagactgga ataggtgagg gacgaattga 180 240 ccagtgttgg tcttgggtgg cgtacggcca gtagggctaa cccctctgtg ctgccgtggc ggacggcagt gataacagcg tcgatgctct tctctgggaa gatgtcgact tgagcatata 300 gctgcagctg cacatgatgt ttctagagta gaatatgtat atggccctgg ttcttggtct 360 gcagtaaagc ctagtcggcg actcaccacc ggtcactcta acgtggaatc gccgattccc 420 cggttacgag aaaggcctat ttatatcccg aaacagccca tttaattcca atcgtctcta gattcataaa tcttgaaata gagtacaggg cacaatgctt ttcgctcgtg ctacacggcg 540 ctccatcttt ctaccatcgg ccaggttggc cgtcagtcga catgcatcta cggcatcacc 600 atcaccatca ttatcgccat cacaatggcc cgtgaactct gctgcccaca gtcatagagt cgtggtggtg ggcgccggga ccgccggttt gaccatcagt caccagttac tacgatctaa 720 acgattetee caggacgaga tegeegtgat agaccegtea geetggeace actateaace 780 cggttggaca ttagtcgggg gaggtctcaa agcaaaagac agactgcggc gtccactgca ggatctgatc agcccgcgct tgaagtttta tcgccataca gtaaacacgt tttgccctga cagcaacatg atcatgcttg acgatggctg tcggatcgca tacgaacatc ttgtggttgt teegggeate gagategatt atggaageat cagaggeett eeceaggete tggaaaacee 1020 ctctgcaccc gtctcatcta tttatgggta tgagttctgc gacaaggcat tcaagacgat 1080 cgagaacctc aaaaaaggca cggccatttt cacccaaccc acaggcatcg tcaaatgcgc 1140 cggcgctcct caaaagatca tgtggctggc actagaccac tggcaaaaaa caggccggta 1200 tacctacaga ccaggcaccg gcgccgcaac agcggcagta gaagaggatt cgccaatcaa 1260 ggagcagctg cgctgccaga gaggcgtcga gggctccttc cagcacgacc tcgttgctat 1380
tgagggtaac caagccgtct tcaatgttgc ccttccacat ccagagggag atgcaggtag 1440
gaacggaaac gggagtggga gcggacagt tgcggcctcg acgacgcgga aggtacagat 1500
tgacctgctg catgtcgtgc ccaagatggg gccgtacgcc ttta 1544

<210> 1963 <211> 2612

<212> DNA

<213> Aspergillus nidulans

<400> 1963

caagatette tgcatecact teagtgtett caaacettte tgaaaceett ettgactttg 60 tctgtttaaa cgcaacgcac gtaatagtgc ttgaatggct gatttcgaag cgcacatccg 120 agtegaatgt geteeacaag eteageatge eggaetteet acceacagee aaaatgette 180 taccgccatt ctcggacgag aatgacagag atgtcacata attcgagggg tcatgttccc 240 300 cgagtggcgg atgctgcacg ccgaaagcct cagaccatag gtaaacgcgg tgccctaatc caactgcaag agtcccagcg atgctggagt atgccaacgt cgaacagtag aagtcgtcac 360 420 gcaggagagg agcatccaga gttcgaaagg gaagactcgg aactatagtg tttttatcct ttttcgaact gggttcccct tttgtttcag tttatgtcag ctccttccat tcctgtggtg 480 aaggagatgg agaaatcaat gcgagaaata cattgacagc agtcttacgc tatacagaag 540 600 tcatggtgtt ttatgggttt gaaatacatg aaagttaaga gaaggaagtc gacgaagggc cattctgctg cctgagattg ctcatatgcc gaaagaagag gacaaagatg gaaagtgagt 660 720 gcgctctacc ctcctccaag cattgtcttt ccataccagt ggtgagagtc gatcgaacgc 780 840 tggagatgat gggcttggta gagggtcaga tatcgacatg agcttggagt tgctgaggac 900 tttcgatgca gtatcaatct ccagtgcaag agcaatccta gactcatatg tcaagcggtc ctctgttgaa gagcgagtct gtggcagaaa cttggctgta tacatgggag ctgtggttcc actagcaaat atgctcctac ggccatctgg agagacggtt gaccgtctac ctagagcagc 1020 tgatgttcca ccaacggtcc aaattgcccc gttgctaact cgtctcgtcc catctctggt 1080 cccagttgag actgatcttc cggatacagt tgagtcaccc acaagatgag gtccaaagtg 1140 tgggctaaag acacggccgg gtcttgtagc actctttgtt cttcgaattt tctttggtgt 1200 gaaagggtcc tctcctggtg agcggcggcg gaagagcttt tcctcgggtg acagatcttg 1260 qqqqtccttt ccaaccctat atqqqqtaqa tqqqqcqtca atcqqctctc qcaatqqqac 1320 aaacctgtcc ggtgaagctg aagcttttat atcgctccgc acagctgcga tccgtcggcc 1380 geeteteace tteectegge caegateagg geaaccetgt agettgaaga tgtetggetg 1440 aagcgttgat gggccaatta agtagtcgaa gtattccagt cttatatccc tcgaggcggc 1500 agttgagcca ggcgatattg ttgaatcgtg ctctgtagaa tccgacatca gggctagaaa 1560 tggccggtga tgagaacgtt caatggtgta tcaaatatgt tgagttcaac gcattgtaga 1620 tgcgatcatt gtcaaaccca cgttggtagt cccagcgaat ggcaggccca actggaaaca 1680 ataagtgcgg aatcagttgg aggctgtggt tatgtacttg aagtcaacaa tatatccaaa 1740 tgaacggacc gggttggtaa gctgaataga gtctcctgcc gccggatata agactaccag 1800 attacggaca ccacgggact cttattcgct gctaagagtt ggaatgatgg aacagaaaag 1860 ggacgacgtg aagctatgtt gagtggcagc tgcttgtatt gacagacaac acgtgactcg 1920 cttgatcggg aagctgccta ctcagcccag gtgaggtctc gagcttgctc taccactctt 1980 ctcaccgaca ccttccgaca ccgctcgggt caagtaccat ttataggagt ggaagagcgt 2040 gatttgtggc acaggcaaga tagtagcccg tgtttaatat ggctagtgta attgtccctt 2100 tcatggatag acttggccat ggttaacggt cgttcgacag catggcattc cccgtcacag 2160 ctcacttgaa gcgactggtg aaacccgcca gcaggagctc cgcaaaatcg agacatatcg 2220 ccaactggaa tatgtcgttc qcgaggaggt agattgtgaa agactttqtt qcttqqqata 2280 gatgcagccc ggctaatcaa gcggagtaga tcatgaatcg caaatacacg ccggagacat 2340 tacagaagtt atctgaattg ctcaaaaaga atcccgagta ctataccatg tggaattacc 2400 geogeogagt gettetgeat gagtttteac aggeagttee egagetteea teggagaeeg 2460 atategaacq cateacqace etaatecaaa eggatttqca gtttetgate eccettetee 2520 gtagctttcc caaatgctat tgaatttgga actatcgact gtggcttctt gacgaagcca 2580 agcgtcttct tcccaaggcc atcgcccgta ac 2612

<210> 1964 <211> 4587 <212> DNA

<213> Aspergillus nidulans

<400> 1964

taggttaaag ctgacacctc ccacatgatc gtcgccgcga ggatgggggg gattttccga 60 cgtggcaggt ggtaaaacag cgcttcgtaa aacagacagg tcgatatctt cgaaaaccct agggcaacaa tgaagaggag atcggcggca tacccggcct tgaatcccaa tatcttcatt tagaaaggca tagcagacgg gtaaggaacg gtacgtacct tgagcatccg agcctggcca 240 gtcgcagagc tagggccggt gcgtgtcccc cacccataat gaacttgagc taacacgacc 300 gaagcctggg tgaacgctat agcctgtcgc ttatcagacc ccaaaaccca atcgtatatt tatcggcgcg acaatagggg gaccggctag gtaaacccac cacgagcccg gcgaaaacat 420 agtcgtccgc ctgtacgatt cgtttgcgat gcagcgaaaa caccctcgcc aagacacttg 480 ccagagtcag cacaatataa aatgaagcga ggacgacgac cagcccgcta tggtcgttct 540 600 ggagagctag taaacaagag aacaggacaa gacgcggatc attggggctg gtcaaggttt 660 taacaagcaa gacagaacat gcaagactgg ctttgctttt tacgctgtgc gcctgccatg 720 gcagcagcga ggaggtgcgg ctgtgactgt gagggaccgc aacagcgggc cccaacgatc 780 gactcagtcg aatcagaacg agctcttttt attgcgaatc agcgatgtcg agtcctcgtg gcaatgtttt aaaaggggct ccggaccgct gaccacgagc tgaaggaatt cggttgccaa 900 aaagacccgg ccggttgcac gcgcattcca ttacttgccg aacgtggacg gggaatgtgg ccactggcat tgcatggttg agcgactggt cgtacaggaa atgcagcaag ggagggtttc 1020 tgtgcagaca acaatgaccc cgtcgagctt ctatgcagat ctctattata ctccggagaa 1080 agcacaagga gctcgggtcc cttgttgaac tgccagcgga ctcgagcagg actcgaagaa 1140 tggtgggctt tgctagcgct ctcgagatgc taaccctaga aaaggtcgaa gccatcccca 1200 gctcggccaa ctgtattcga cacaatgcga taccatcctt agatcgtctc aattgacggg 1260 accacaaaga aatccagcag ccactaatgc atctaagccc aggttgtacc acacaagcac 1320 acttggcggg agattccata gccaatacaa aggagaggcc gtctcctcgc ccggccgagc 1380 ctattcaata gactcaaaag tccaaacggc cgagcccggc tcatctcggc tttgttgatc 1440 tcgccaaagc tttcacgctg gagcagagcg tttgatcgca ttcgggggcat tttaacgtgg 1500 aagacacget ttetecettt catggaacce ettgegteee ageeteaact getgaecetg 1560 acttccgtct cgtttcaccc ctctccctcc cttcagttga attttctgtt tttctatttt 1620 cctatttttt ttttttattg cgtctcctcc cctgctagct tgataggaag tcatagagcg 1680 tgataaacat tgttatcatg gaggtgcaca ctaaaccgcc ccggctcggg acgatggacg 1740 tcgaggtcca ttcgccagca ggtagccatg agggagggag acaggcagga acggtgcttg 1800 atgataccga tatgcatcgc atgggaaagg tccaggaact gaaggtgtgt ttggttgacc 1860 gacctgaccg tcaattcgat tccaaccctc acagtcttga atatgacagc gaaatctgcg 1920 ccctgtcgcc gcactcagtt ttgcgtcggt cttacaggcg acctgggagt ttgttttgat 1980 gtgccactct cctctatttt tcgcaccgaa acaaggctaa tccactctgc gqcttagctc 2040 gaacactgaa gggctcgaga acggaggact ggccgggatg tgctggtcga tgatctggac 2100 atttgtgggc tttggattca ttattgcctc gctgtcggag atggcttcga tgtaggcacg 2160 tacctgacgc ttgtttgaac ctttactcac ttcaataggg caccgacatc cggcggacag 2220 taccactggg tctccgagtt cgcatcgccg cgataccaga aattcctcag ctaccttaca 2280 ggtacctggc ttctgccatc tttttcccca attatgcagt cccagttcca actgaccatg 2340 cegeceaace aggetggatg teegteeteg cetggcaage eggttetgea tegggeteet 2400 tectcaeggg taegateate eagggeetga teaegateeg caateeggae taeageeetg 2460 aaagctggca cggaacgctg ttcgtatttg caatgatctt tgtcatctac gtcttcaatg 2520 tetacgeete tgacgeeatg ecceptgetta ataaceteet catgatatte caegtgetat 2580 cgtggtgcgt tatactcatc gtgctctggg ccatggcgcc ccatcggacc gccaagtcag 2640 tgttcacaga atggtcaacc cagggaggtt ggaacagtat aggactgagt gtcatgatcq 2700 ggcagatcag tgctatctac ggctcactga gtaaaacccc tcgccaatcc ccttgtcgtg 2760 gcggagtata ctgatagtga tgagcacagg ttccgacgca acagcccaca tgtctgaaga 2820 agteageaat geeggeegea atgteeetet egeeatagee tggggetaet teaceaatgg 2880 catcatggcc atcgtcctgc tgatagcata tctcttttca atcccctctg tcgaggacgc 2940 actttctgac gaaacggggt tcccgtttct ttatgtattc agaaatgccg tctccacggc 3000 gggcgtcaat gggctgacat cgatcatctt gatcccggtg atcttcagca acatcttctt 3060 caacgcctcg acgtcccgtc agacctttgc tttcgcgcga gacaggggtc tcccattcgc 3120 agactggatt gcgcacgttg ataagcggcg caagatcccc gtgaatgcga ttttcctctc 3180 ctgtcttatc agctgcttat tatcgcttat caatattggc tctgaaacgg cgttcaacgc 3240 cattateteg etcaatgteg eggeettgat gtacagetae atcatetega teagetgegt 3300 catctacagg aagctaaaat gccccgagac cctgccggct cgacgatggg atatgggctc 3360 ttgggggtta ccggtcaaca taatcggact ggtctattcg tgttttgcgc tcttctggag 3420 tctctggcct ggtcagaagc atgtcacggc cgagaccttc aactggagtg ttgtgatatt 3480 cggcggtgtt ttcgtcatta gtctggtctt gtatgtgctt aaggggagga gggaatatac 3540 ggggccggtt gttattgtgc agagggtccg tgttgactaa acaaccggat aaggatatat 3600 caagtgcgac gcaacgagcc tttcaaatcc aatgagcttg agaggggaac ggacgcaacc 3660 gcatcaatac agtggtcatt tacaaacaac cggcaatcgg aaccatttca gcctgctggc 3720 aatggtaaga cacaacccat aacgtctggt tatggaggtg tctttcgaaa aagtccgatg 3780 aattgtgccc ccgattagct tgttctgtcc aggaaacacc ttctcggcag tattcataaa 3840 ggttgttttt ggcgtttagt ataatcatta aaaccaagat atatagttct acatctaaat 3900 cgcacagaat caagggtggt atatcagagt tactcagcaa tgaggcaggt aggagttggt 3960 tettgegett gggatatetg agecatactg egeagetegg ceteacecae gtatetagge 4020 agccaggaaa ctttcggaat cgccttgtat cagaaatgac cgtatcaatc tctctgttcc 4080 ttaatactgg ctcgaccttg ttgtgtctga acagccctca gagccgtagc cttgaagagc 4140 tacgttcatt atctatggtc ggctacgcca gatcattctg tcccaatcca gcaatcggac 4200 cctggatgtc agggcataat caggagcgtg gactgaatag atagatttaa acaggtgatt 4260 ctactccctg gtttgctttg ttctgctctc aagctggtac tctgcttccc gcatgcccgg 4320 ttcgttcgga atctgctcaa agacaaggat gaagctgtct acttatctgc atagttcagc 4380 cggatgtggc ctcagttgcc cttctgagaa atacaaggtc aaggctctag catttcatta 4440 gtttttgaag attcgattga gttacccctc cataatatac tcaggatgtc aacttcattg 4500 ttggctactt ggccagctta attttctctt aaatttgtca cttaacatgt tctggacagg 4560 4587 ctgttgttgc accagcagtg tgtacat

<210> 1965 <211> 3879 <212> DNA

<213> Aspergillus nidulans

<400> 1965

ccggtccgaa gagccgttgc gatttacgcc cattcacatg aaaacgcgta ctcatccaac 60 tcgccctgcg agatgagagt tgtgcaaaag caatctacgt tgagggcccg cttagcattt tgtccagagt ataacattaa tgcgcgactg taacttacct taacgagtag acctcccaca 180 acagctgcga aaatcatcca tgaaaccccc ctttgcgaat ctctccaagg ctctatacaa 240 gcccgtcgat atcccatttg cagctcacag gcgttatcat cgtgcgcccg gtccttgaac 300 ggccatgcac gatcatgaat actccttaac ccgcagcact gaaagcggtc ctggattgtg cggatcgcat ttgcgttctt ttgctggtaa aaggactgcc atcgactttc gaggtgacag 420 gggagtatct gggaggggaa aagataggaa agtgccagtg tgccaagtgt cgtgaggagg 480 attgtgtgga tctgggatga gaggggtaga atcaacctag caatattggt attggattcg ttgttgaaga cgattcggaa gttggcaagg acaaggaggg cgacgggagt gaggaaggtt 600 gttgtgatgg ggatccaggt tgggagtgga aggtagaggc ctgtggttcg ggcccaagag 660 atactggctg agggtcagtt taacaagatt ctatcttgtg atcaagtgtg atcattaggg 720 tgggcaagct cgtacgctcc gaagagaagg gaagtgaccg aaagcctatt gaagaagtgg 780 ttaattacag aattggacag ttgaatgata gctgacttgc cacaagaagt aatgcgtaaa 840 gagccaatga tgaatcgcac ttgaaaggca ttcttaacag ctagtttgga tgtgaagagc 900 cgaaactgat ggacggtgag gaagagaaga agatagacgg ttgtttgttt gttggaagaa ggcggggtat ataaacacgc atatggtagc ctggcttcgc aatcagtctc agtcactgtt 1020 cctgctgacc tatcacactc aatgccctta tagcactgga gataagtatt cttaggaatc 1080 taccaagttc taacaacttc atctgtttgc gatagaaagc gtgcaggtat ctagtctggg 1140 cctatgcaaa gacggctgaa gatgtaatct tggtaaaaca gctggcgtcg ctgcttgagt 1200 tcaatattga gaagtctgta tcctcacttt accttggagt tcatgttgga tgactgtttc 1260 agtctgaatt gaccattcgg catggcagct atgcctttca tctgacctat aaaaaggtgt 1320 atagttcttc taagagtttt gcgttattgc agtctctcta ggctttactg atactacagc 1380 agattctatt ctctttgcca cagatgcggg aatgataaat atccaactag agtccatctg 1440 ccaacggaat accettcace etetgattgt tactgegett tgttggttge gegaattatg 1500 ctctaactcg ccagacattt ttggatgggc tggccgagtt tacgatggtc ttcagatagc 1560 atccgcttag gttcatctat gttctaaaat tctccgagct caggcatgct ccttcattct 1620 ttgtgaaatc attatgattg cgtctgctca aaattaatgg agttaagaaa ctggaagggc 1680 attcagtttc aataattgag ccgcatttct ccagcgaatg cctccaacac ctcttcagtc 1740 accatecege tetectecag etettecaae caetteaaee categgeaet etttgeaaat 1800 ggatagtcca cgctatacat gattctatca tgttttgtat tacgcaatat acaagccagc 1860 ggatccaacg cccaattgcc actcgtcgtc aaccacaggt tctgatccca gacttccctg 1920 aacgatetet eettteeca eegegatgae accegeteta teetetgaag eatgtagggg 1980 accatctcac ccatatgccc gataataatt ttcaacttgg gaaaccggtc gaagaccctc 2040 gctgcataca gacgcaatat atgaatcgcc acgtcgccgt gccagccgaa tccaaatgag 2100 aggatagctg tattcacgtc ctcgggaatg ttggaggaac ggtacgctgt gaaaagttgc 2160 tgggagggcc aagtcgaatg aatatatatc ggcacgtcca gcttcgtcgc ctcatcccaa 2220 agcacgtcga actccggccc gtcatagtat agtccgcctt ctgtatgact gtccacgagc 2280 gccccgacaa agcgtatccc gtcaagcgct cctgagcaca tacgacggag ttccattgct 2340 geeteetgag gtteatgeat tggeageteg gegaaceeag egaatettgt tggacaagea 2400 cgtatggctt cggcaagctg gttgttggtc tctcggcatt gggcgggaga caggtcaccc 2460 ggaccgtggg atattacttg catggtgact tgcccgtggt ccatgtccgc aatgcgccta 2520 ggtccaagct cggtgaaatt gtcgaagagc ccagggatgg ctcgcattct ctcgttgagc 2580 gcatttggag atgcgagggc ggcgcgcgag aggaaatgtt cctcgagggc gatgatcggt 2640 cttgcgatca atttggttat tgagtgaggt ggcatgacgt agtaggcgtt atttttcgtt 2700 ttttttcaac attctatgat gaggaccagt ggaagagttg gtgttttata ctgattgata 2760 aatattccac agctccggac actaccgctg ctaactccgc caagctccgt catgatgcta 2820 tatccgttac ccccgtttgt tgtgtaggca ccagccaaat agatagctta acgattgttg 2880 tggatgtatc gctagatatc gatcttctcc ggaacactgt caggccaagc atggatcaga 2940 ttgaaagaac aatatagcgg attttgtgtg ccagattcag gccaatttat ccaagccaca 3000 ttgagcgtga gcaagatgtc aaattgactg gcaagtaagt tattgccata caatatatcc 3060 ataacttctc caggccactg cccgaacgag tttaaagtcc ttcgccaata ctgttagtct 3120 <210> 1966 <211> 4222

<211> 4222 <212> DNA

<213> Aspergillus nidulans

<400> 1966

gcactaagac agcgctcgtg tacccagttg gcgtataagc ggatccgttc gctgacgttg cggttgccgc agtggacgaa gtaacggggt ttaggcttag aggtggtgcc ggaaattgcc aggagtttga gccgtattct tcaacccgtt tttgaagagc cggactgtac tggagacgac 180 gggtacgcgc ggacctgaaa acttgttgta caggctttag atagaccgtt gcgagggttc 240 cgacgttgag gcagagttcc tcgagggtgc ggttgtcgag tttctcgctc acagcggaga 300 tgggtggttt ctggcccatg acgacttgac gggcggttgt tgggtcagat gaaagaagac 360 gccagtacat gtatcctctg tcacggagat ccggatcatc tgtttcctct gtacaccatt 420 ttaggacttg cggaacgagt tgctgggcct tcgttgggcg ctggatgaag agcttgacag 480 ttgctgtaag aagggagagt tgcacttcaa ttgtctcgtc gtggaatgta gcgagatagt 540 cttgcaagag gtcggctgag ttctcgatgc ggtctgcgta ctggccaatg atccagatta 600 eggeegeett ggettetggt tegteeaggt categatgtt ttggatgaet tggeegatga 720 tgctttcgta ctggttgggg tatttgcgga agatattacg gatgacgacg gttgcctctt 780 gcacgatata cggaatcttg gcgtttacca agtccaggag acaatcgata cactgtttgg 840 cagcggactc gatcttgatg gccagtttcc caatcgcccg gactgccttg cgcacaaagt 900 ggacatcgat ctcagttgcg tacctaatta aattagcagt gctctttgca aaaacacaga 960 agctgcttac tctctcagtt ctgccagcac aactgagatg ttctccttag tggtcaacat gaatatcaac tegagettgg teacettgae gtagattggg teattgtaat tgeagaagaa 1020 gacccgaatg tcgttacgca gaacttcggg ccgcttctgc aggataagaa tggcattgcg 1080 gaggacaaga tattgcacct ctggcggttt ggacagaagc gtcacgagag gtggtgataa 1140 tttctttgag agtgatgtga gatgccgttc ttcggcgata tagttcataa ggtagaggat 1200 gacgcggatg gaagtgagga caacggcgga gttctgatga gagagtcgag gagcgatacg 1260 ttccgccaaa aggagggctt ctgcggaatc ttgtggaaca taggacatta gggcttccag 1320 tatataggat tgaccccatc tgcgcaatgt tagacacgaa cagaacttca gttggtatat 1380 ccgtactctg aacagtctgg taagattgat accagtttag acgcgcttgc gtaatcaatc 1440 gtcaaagata ttgtttcgct tcgtccccag atatccacta atgaagccag gacgcttgaa 1500 acaaccettg ggttttcatc cttcagcatc gcattcagcc ggtcaatcaa atcggatgcc 1560 tccaccatct tcctatcatg ctcgtagagt ttggctacgc aaaaagcggc cgtcttgcga 1620 acatagggat ccatatctcc catcagcctc ttgagcggtt gtacagtggc ctcgacatat 1680 tctcgaacat ggatatacgc gattgttcga agcgccaaag cgcggacaag cgggttcgtc 1740 gcctccatat cctgcggccg ttagcttata tagttgggca gaaatagcgt cgtacattaa 1800 ttaatatagg aagagcettt agtgegatgt caggetteat eettgagtag ttgaccagga 1860 atagaaagca cetgggacag etgtcaatat egegtcacec aaatategte eeagacetac 1920 atcttcttga tctccaagct cggcaaattc atacagtcga taacatccgg gaacaaggcg 1980 atcatatcgt tgttgctcat ggtcatgttg gcaacgatct tcttcaacgc aatcttcttg 2040 gccgaatagt tettgteett ettgeegeeg etgttgagtt eetgeeggag eteggeaact 2100 ttgccctgtg aagtgcgaac ccatggtggt aagctagatt gtacataagg cgcaataaac 2160 atggggacag tagcaagtaa gtgctgggtt ggagatgcaa aacataaagt acagatgcag 2220 cattagaaag aggagcaaag aggggtatca agaccaagga aagagcacag ttaattcgcg 2280 gacaaagtca tgagacgagc ttcataaagg ggggtagcga taaactatcg cgcaactgga 2340 agggccaatg cgatagagat atagttttt tttccacata ccctagcgaa cagctttgca 2400 tetececeae tegaacteat ggeggattat atagetteae ggeagegaat eggaeaggte 2460 tettegttte ttgaaggata egggttteee agtatggtte gegeggette ttaggtegte 2520 gtatcacata agaattgctg agacaaggag gaattcaaaa tagcgaatag cttcgacggc 2580 gggacgactc cttagctggc acgatgcttc gaaacgtcca taccttaggt tatgacggga 2640 tttagactgt cagcccagaa gagtcagcgt ggcacaagcg tagccatatg caggcggcaa 2700 actcacctag accgagcgaa tccagcctgg ccttcaacta cgagctgaga ttggaatcat 2760 ctggcgtcag agagaatagg agttcgagac tgagaatcag gagtggaccg gcgccgccag 2820 ctccgcggtt tttgtggaga atcctttgct tcctgatttt ccaggcgatg atcaacttcg 2880 acctccgctg tcgtgccgct gagctagcta aagctccctt cgcaaaccca ggaccttcaa 2940 ccatctgtaa tattggctct atcgcaatgg ccactcagca aactctaccc cctcttccac 3000 cccctaaatg ggtcgtcgat ctcaaatcac cgttaccgcg cccgtcaatt tcagcgtcca 3060 gcatccccga cccgcccggc ttctcgcgca aggctggtaa aggcgtgggt accccaaagc 3120 atcccataca tatataca tcatgtcata ctaactgtat atatagcgct cggaaaaatc 3180 gaccacttcc tccgccccgt ccaagcccgc cgaaaccgac acgctgaagc tcaagaaagc 3240 ttgggaaatc gccctcgcgc cgtcgaagca gattcccatg aacgcgatca tgatgtacat 3300 gtccggaaac agtctgcaga tcttcagcat tatgatggtc tttatgttgt tcaagggccc 3360 tatccagggc ctcatcaaca ccaataatgt gtttgccaag tttgattcgg agacattgcg 3420 gggcaagttg ctaggtgtaa aggctgtgta cgtcctgatg cagttcgttc tgctggggct 3480 gggggtgtgg aaggttaatg ctatgggtct tctgccgtat gttctcgtta ccttactcct 3540 gctttgtagg aggtccttat gcgctcttct ggcttgctaa tgtgtgatga cagaactacg 3600 agateggatt ggetggetgg gaateggage ggeageetta gaaagagtte actttgettt 3660 tggttgaagt tcttatgtga tactgaagtg ggtttatata agagtgattg gtcatactcg 3720 aaaagaaatt tgagcacgca gattgcccta aaactgtgcc ttgggtaaaa tagatcgtat 3780 aatgcaccca tagagagaca aggctgctag tctttctttt caagagcttt gcggcaggct 3840 tetgaaaaa tetggcaaaa etgccacace teetegtacg tgttgtacaa gggcggggg 3900 gcaaccctaa tgacatetgg cttcetetcg tegatcacaa ctgcatatte ttccaacgtt 3960 tetaaaacgc tatccaggag acetggagce agccgcaaac ttagctgagc aceggttet 4020 gagggggtteg gcggggtaat gatagaaaaa ggcttgtcgg aaactccate aagagacgca 4080 aggatgtaagg atgaacagtt ccagagagge tacaaccgca ttcatgacgaa teteggccat 4140 ggatgtaagg atgaacagtt gcc

<210> 1967 <211> 2587

<212> DNA

<213> Aspergillus nidulans

<400> 1967

atcactagct tgtgatctaa gcaggcccag gtgtgggact gcactactga gtcgctcagc 60 catcattgtt ttgtttatgc aggcaaagtt catacgccca tagtttgagc tctactcgcc 120 tttcaaatta cacatctacc ccttcggcaa gatgggtgat ctgtttgttt atatgtgttt 180 tggctttatg gctacagagt acttcatcat acgtcatata tctgttcgat acctttatta 240 tctagttgct cgagcggccg gcatgcggct ctttgactat accgtttctc acttgaacag 300 tactgcagtt ccgatggaag gatcgtattt ctatcttcgc ttagggtgca attcttgagg 360 gccccttatt ttggtattga gcagccccag gcctcgccgg cctgattttc aaagacgaag 420 tcaattcgcc acaggtaggc gtcaatcaag ttctgacaca agagctcggc ttaaatctcg tctgcgcaga atacgggagg tttgaaagtg ataggagact ccgtgagaga taacactaca 540 ggtagattca gcaaccgttc atgattatct tcgccgtagg gagtaaacaa ccaatacaca 600 ttgactcgaa taactgccat gcaattgagt tcgctatcca gtagcatact aacacaatga 660 720 attgattgat tgcacatggt tgagaaacaa cccccgaccc actaacccgc cgagccagct atgctagete aataggaggg acagtaacaa eectattgte taaeggaaca geeteeecat 780 caaccctccc gcaagattcg aaacaattgt gcctccaaac gcactattcg catatgtcga 840 cgcctggcta aagcggtcac agcgggagaa tgcagtcgta ttcgtgatcg tcagaaccag cgcaatcgct acacggaaca aatcagcacc cttccaacca ccgcgaatcc ggatctgtgt

ttgcgtagaa aaggtatacg taccaatcag actcaaccaa atcacactat tcagcctgac 1020 gatggccaat atgcccaagc caatccacag cgccggcgca acgtagagac tcagccagaa 1080 gaagcgctta tccgttgccg cgatggtgcg tgtgttcggg tctgcggatt caaacaccca 1140 gtgcgagtca ccggtggtgg tgttgacttc gttccaccag cggaggccga cgaggcgtcg 1200 accagcgatg ttcttgaggt agtagaagtc tgcgctgagg aggaggaggg tcaggatgaa 1260 gacaaggatg ctgcagaagt ggcattgtta gaacgattgc tctggcacgg ctgggctgca 1320 gggaaagggc aggatgtaca agttgtttat aaaaagcacg ccgaagagat acatcagcaa 1380 tgctcccagg cggaagccga ggaaagtgag gagggtgatt gggtgggcgc tgagtcgcca 1440 attcaagtct ccttgttgag gttgcgagtt gagaggttgt tgctccatgg tgacgggtcc 1500 gggtacaaga gcccgcttag tgacaagata tcagataagg tcgtgtgtca atttcgtgct 1560 ttttcccgtt cgtggcaaca gccgctgccc tcgctatcga gagtgagagg tttgagacga 1620 tgctgttgcg ttgcgtgtct ttacctaggg cggtgagaat cgatggtcgg cagaatagcg 1680 tgcgccgcgt catggtcgaa gcggcgttcc ataaggactt aaataagtta gaaatatgca 1740 tctcgctgtg ctgagctgta tcctatgatg aggactccgt ataatgcctg agtttgtgtc 1800 cggcgctgcc agctttacct caaatgtcga ggcagcgcgg taatctcgcg tacatgggcg 1860 geoctagett ggagaageet ttatgeteet gttgteteeg eegeeteate geegaggatg 1920 tcaatctctc caacactcga cattatctta atgcttcttt ctgaccattt gacaggctca 1980 cttctgaagg caatcaagta atatttacag ggaaaagcca taatggcagc cagaaacacc 2040 ctccgccgcg ctctcctcta cagtacatca cagctctccc cgcatttccc tgtaaaacct 2100 ggggtttagt taaacacage taacgcatga ggcacccgca gtccccggct catcgcagcg 2160 ctttatcacc aaatcgcgct ctcttacggc tgattgcgtc gcctacgacc tcgaagacag 2220 cgtcaccccg cacaagaaag ccaaagcgcg gtcgctggtg cggagagccc tggatgagcc 2280 cgcacccccc agtatccgcg agcgcgcagt gcgcattaac tcggtcgaca gtggactggc 2340 actggcggat ctgacggaag ttgtacgtcg ctgcacatgc cgtaagctct cgctgtctag 2400 ctagatagct aataaactgt gcagctcaag tctccaaatc tctccacaat tgtgatcccg 2460 aaagttaact ccgcgtcgca cctgaccttc gtcaacgatg taataacaca aacacaagcc 2520 cagcaagaag cgcagggtcg tgcctgtaac gaaatcaccc agctcgctct tggcaatgga 2580 tgagtcc 2587

<210>	1968	
<211>	2185	
<212>	DNA	
<213>	Aspergillus	nidulans

1968

<400>

agtagctgaa cgatgggtct gaagtcgcct cggatttcca gacgcacaga tcaaaatcca 60 ccggttaggc aaaagtcata atactcatcg aataacaagc acgagaaata atggcaagtg 120 agcaatgacg gcggtgcaaa aaggtttccg gctcgggttt tactaagatc agacgacagc 180 240 cagccaggca aagaatcggg agtggagcag taccagcgca gtggtataga cagactcgac ageeggegga accagtettt tgegtetgaa atgatgetgt ttteetgteg geagagtege 300 360 agggtcgccg gttcttcagg ccgaccacgg ttgggcacgc gggctaagat gattctcaag tctcaaaggc gacgatccga caggagccct tgtttttgta ccatggaggt ctgaggtgat 420 gcgcacattg gcagggccca gtagatcagg aggggacgcc ggcaaaatta agtcagattt 480 cagttcggcg acctgcgcaa gcctgaaagc ctaccttgcc tagccagatc gtctgacgac 540 cgatcgagtt aagcacgaaa tccactgcgt ttgcgggcaa accacgactc gctttcccga 600 ccactcccca gcccaccgac gtaacggctg gcctgtgtcc gttgacgatg gagccggcta 660 tgcaggtgac cagacccgta tctggccgcc aacgcagggt ctccgatcct tccagctttt 720 ccagcttcct gtgactccag gtgtaatggg tgatgtctgg tgcgcggatc tgggcattcc 780 agtcaaccat gattccaaat ccaacgtaca ggatcttgtg aagaagccaa taatgcgatc gctgcgcttg gccagtaata tgtacttacc taaactttgt tgtatctcat gcgttagcgg 900 cgagcattca tagatagctc tctcctttct cgcaaaactc ttcttctcta cgtgccaaag caaagtctcc cgaataacct gctggcgatt agcgaccacc tcaatctcca agcaagaggg 1020 tgccgtttaa ttatccaaat caggaaaata cgaacctcaa tagcgttttc ccaccaccaa 1080 agaaagttcg acgaaaagcg cggggaagcg cggagcaacg cctacagggc aactgttaga 1140 gtacttataa cgcgcccgtc acactttttc tgttctcgtg agctggcttt gtcctttttg 1200 gtcgcgagtt ttccggcagt gccgcaagcg cctcgagaag gagtatgccc agatcgtccg 1260 tctgttccta tccccttcct tcgtcgaacg tacctagatg tcttccttcg ctgatagtcc 1320 gtcggaattc tattccaggc tcaagcgaca atagcttttt gtaatgggtg agacgcaacc 1380 tcacaatatc gtcgcgatgt tgaaaccttc ttcggccata tctcaaaggc gaggagagcc 1440 ggcgaccagg cgatgcgaaa gtaccccaaa agccaatagc gaaggaaggc gaggtgttga 1500 tatatcagtg attaggaagc gctatgtaag aaaggaatgt gggattgggc gtgaactctt 1560 ttcagcgcga actcttttca aagtgttatg caagagtccc ctcgcgacac agctgcgtgc 1620 gctccattct agcgcggtag atgcatcaca tcgactagcc ttctcacaca ggtcgcagag 1680 atctgccgcc cactgcgccc gcccaggatt agaaagcatc gtttgaagca gttgattcga 1740 catgcgctct ccagccggtt cgtaccgtcg gcacacctcc gtcaaaggcc aagttggtcg 1800 atgcggagaa aggagacaag gatgcacgct cctgttggaa cgagtcatca atgcagtgac 1860 tegeteccag accaaggeeg gagaacaaga aatgagaeta actaacetta etetggaett 1920 aaggtgggtg ttgtcactac gccgcattgc actcaggact ccatgtcagt atgaatctgg 1980 aggagetege ggetgageeg ggeagattae aeggtttgtt eeecagegte aaactgtgee 2040 aatggtatct tacgtatacg gggtgcatag gcatgaatcc tggtttctag caaatgcagc 2100 cgcgtaagaa agctttaaat agtcttcctc ctcctgcgtc caatccgagt cgtatgagcg 2160 2185 agctgttcgg ttgatagcca ttggt

<210> 1969 <211> 2531

<212> DNA

<213> Aspergillus nidulans

<400> 1969

gacccaaagc gcagagggt gagacaatgc catatggtaa ttgcatcgat ttgttgcgcg 60 aacaacaggc acctatgcca gcttactacc atagggtaca atactagcat actcgtccgg 120 cttgaagaca acccccaacc cggacggatt ttacggttgc tcgtttagca gcggaagata 180 gtacggctcg ttaccagctg actgtgacgc acggtcctgc atacactgct gcagcacctt 240 ggctcgtcta tgctcgggct tgtaagtgag gtctgtcaga ggcgcgatgg cgaggacgcc 300 360 gcggattcgt ttgtccgttg tcgcggcgca gagggcgacg acggcggaga atgacatgcc ccagaagaag agctgagatg gatatactga agcctgcgtt gaaagaaagg tcaaggcgtc 420 ggagtagtcg gctgcttgtt tgacggggtc gatttcgttg cgcggtgtac cgtccgatag 480 gccggttgag cgcggatcgt agaggaggac cgttactcca gcagtttgga aatgcagggc 600 gacgtcgggg agaccgagca tttctttcac gcaggcaaac tgggcgctga agtgtcagtg gcgtcatatg gtgtacgctg gatatagaag taaagccagg aggataacgt actccggggg 660 720 tcatcacaat ccccgcaccg cgagcaatgg ctggatatag agtccctcgg agtgtcagtc catcgagagt cttgaattcg atgctttgtt cctgtagaga cattggtttt gctcctggtg 780 tggacggtga cggcatacgg taactgatct gttggttgtg gacacgatct gtgattaaag caggtcaacg tggaaaacat agagcgtaga acacagaata atactgcctt ggttttaccc gaacaagaga agattaaaaa tacttgtttc tgtaatgaat caatatgact gcaaggcgag ccacaaatct tggcggtttg gtcatctgtc acgctataaa caggagggta ggacacaatc 1020 ccggatgcaa ctactgcgta ctggggcgcc tgatcctcag tcgattttga aaggggtgta 1080 ggcataactc agcacgattt catgttcagc ggcatagcgt agccaccttc atgcgagtcg 1140 teggagttgg accteagtet agacatttea ggatggeett gaeggtaage geaagggetg 1200 ccattgtctt tcctacaaag tttgctgcag caattcccat tagggatgca ggacgcgccg 1260 tgtccgctgg acgcctaatg cccatcttgt aaactggtcc gcgaccttcg gtaccttgtg 1320 gagcatcaac actggtgctt atcaatgcgg acgttatatt gtacgctgga ttgcggctct 1380 tggtacgagg gaccatccga ccaatcccgt cggtaccctg tggacatgcc agtcggatat 1440 ggatgtgctt tgcattagag gtttaggtgc ggttttatca catccgtaat cgcagaagat 1500 tggtgtaggg agactcttga tttcactccc gtcaccccaa aacgatctgg tggatatctg 1560 cttggtttgt aagttcccgt tgtgttcttc catcaacagc tataggtgct gtgtattacc 1620 tgttcaagat gaatggaata acctcaacct cgttaccctc acctcgttac cacttcgagc 1680 ccattgcggt gattgggttt gcctgccggc ttccaggaaa caacaactcc cccacagcac 1740 tatgggactt cctcgaacgt ggcggagtgg cgagtcgggc tgttccagct tcgcgcttca 1800 acttggcagg ccacgagaac ggcagcaagc ggccgggtac aatgcgcacg ccggggggta 1860 tgttccttga gagtatcaat ccggcggata tcgatgccca gttcttcggc ctctcccgtg 1920 cggaggccac ggcgatggat ccgcagcagc gccagttgtt ggaggtcgtg tatgagggac 1980 tggagaatgc cgggatcacg ctggagcagc tgagaggaca ggatgttgga tgtttcgtgg 2040 ggagttatgc gtctggttgg tgcaatgatc atacggtgtg ggatatgtgt atcagttgtt 2100 gatgctcata ctttctagac tatggcgata ttcaggccag gaatccggac gatcgggcgc 2160 ctaattcaac cgtgggtatt ggacgcgcta tgctcagtaa tcgattgagc catttcctgg 2220 ttctcaaggg accgatgttg acatattcag tcttcttgga acgatgttca taacaggact 2280 ggatgtttac ccattaatcc gacttccata gaaccgttac atagctggga acgtgctcat 2340 ggacgcactg ctgctggttt ctcctcgggg gctacgaaag aactcgagct cgatataccc 2400 tttccgcaca actagatact gtgaacattc aatgtgattc ttgaaaacat tcttttagc 2460 ctatataaag attcattgg gaagaacatt tcactcattt tttaagcgac cctctcatta 2520 ttaacccttc a

<210> 1970 <211> 1017

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 1970

atacttacta tcgttctacc ataccccctc atttcccgcc cccagagcat ttatcctcta tcttactgtg ttgtacccta ttatctgtga agaaagtacg tatacgtacg tcaatgcgct 120 tacatgatgt aatgacctga tgttgacgct tgctttcttt ccacctctag ctttttagtc 180 ctgttttctg aatagcatga gcatgagcgt ncggatttat cgattatgat atggtattta cccaagcata gggctacctt gatatgaagc aatgcggcgg gttatatata gactttcctc 300 ttttatctgt ttccctgcta gctccactat aatggtatac aaactggata cctggaagat 360 gagtgttaat gcagagagta taaaattctt tgaagatgaa attatagtct tatcatatac 420 ataacaacag ggaaagtatt ttttcttgtt ctatgttaga tggcttacaa tagcgctgtg 480 tatctgcata aaatggaatg ggtagaatac agctatgcca tgtcccagct ctgaccgaat 540 gatgtggaaa tgggcttaag tgcgggcgta gatgttgcgc aggggcgaac agtggtggtg 600 atggccagct gcagtgatat atacggaaat aaggaagtta ttgctttaag ctcactctac 660 tttgcgcggt atccaccct accgcggcgc gaaggatttc cagagtgcgc ggagtgagtt 720 tgagtatgag gttttttggg cgttggtgtc gacaactgtt gatgttgtcc tcgatcagga 780 gcaccagett cagaaccgtt cegegacgee tggetetget gegeeggtga egatgeacee 840 tgagactggc cctgagtctg cgcctgaggt cccttccccc gcctcgtccg ctgactttga ccaccgggac ctttactccc acgacctctt cgtcccccac ggccgtctcg ttcagccttc 960 ttctgcgtat cttcgtcttc agccccgggc tccggaatcc cctgaatgcg tctactc 1017 1971 <210> 1723 <211> <212> DNA Aspergillus nidulans <213> 1971 <400> 60 cgaatgcgat atcacagacg cctcatccgt gcaatcggcc tttgcggccc tgcaaaaaga ccagaccgct ataggagctt tcccaagcat cctcgtgaac accgccggat acgtctcgct cagtgatatg cacctcacgc caccagagga aacactcaag cacttgacga cgaatgtgct 180 aggccccatg ctctgctcgc aagcgtttgc gaacctctat ttcgccgcat catctttaa 240 ggggcaaacc cggaatgcgg aggcgccccc gggccggatt gtaacgctcg cctcgcaagc 300 cgcgcatgtg gctctccacc ggcacggggc ttactgcgcg tcgaaatctg cagttttggg 360 420 cctgactcga tgcatggcgt ctgaatgggg gccgaagggg attacggcga atacggtgtc gccgacggtg gcgtggacgg atctcggaaa gaaggcatgg ggggagcagg gagtcaaaga 480 gaagctgctg gagagcattc cgacgggcaa ggcggcgctg ccagaagagg tggccgacgc 540 ggtggttttc ctctgtcaag actcgagcgg gatgatcaat ggggctgata tcagagtgga 600 tggcgggtat actattcggt gatcggacgt gcattttctt ttattcaagt tatagatgcg 660 ccatgcgcaa tgaatggaac gttatattga tcaatactat agactctttt gtcttatttc 720 tgatcagaca ccagaagttc caacaccctc gggtgtggcc cagctcagga gagagatccg 780 aaaaatttca acactgattt cgcaggcatc tccatcaaag acatggttgt acatttacag 840 900 gatggagagt tatcgtctcc tttgacctgt aggcctgtag gagcaagccc tgtcgtccaa cctaccgcaa gctctagtgg ccttaggcag aacttcgggg aacataccct cctccatggc 960 gacgacggtc tggcctttca acaccccag ccaaggcccc tgcttctccg ttggaagtat 1020 gtccgttgtt cacagcagtc tggctgatat ccccctccat ctgagccggt acgtggcttg 1080 aggtagacgc agcaggcgcg cgagcgccgt tttcctgtag aagacttttg ggcacgtagc 1140 cgccgccgtg tttgacactg ctagaatttg tctgcggaga agaaactgct gccgtctcta 1200 cactagctgg tgcattgatt tgcggctgct getgcgttgt tgcgccaaa ctggacacce 1260 ttgtattggt agtggaaggg acgaagccgc ctccgtggcg cttagtagta ttcgaattgt 1320 gagacgaagg caggtttgac acgggagtag attcactctg ggggcgtgaa tagcgatcct 1380 ggccactgct ggactggtcg actgttgac gccgggtgaa tgataaggac gcctttacgg 1440 ctgggatgaa gccgccaccg tgtctcttcg gcgtagacat tttttcagt tatctgagat 1500 cgtaattcgc accgtgatca gttcaaaaa gaactctcat atataagccc tgtatggtga 1560 ggaatccctg actggggtgg gggccgcct atctgattc ccatgctcag cctcagcctc 1620 gtagagactc ccccaccat gccaatcctc caggggctta acctgattt tttacaggaa 1680 ccgaaataga tgccagagat aatggaccaa gtcttcaacg acc 1723

<210> 1972 <211> 1920 <212> DNA

<213> Aspergillus nidulans

<400> 1972

cttcttcttc accaccacgc cttctgcagg cgaccgcctc cgcgtccagc acgtcagcca 60 tccgaatctg atgtcccaat gctggatagt gagaatgttc atgaggtttc gggggttgcg 120 180 gtaccggcca gggaagaaaa gaggtcagaa agggttcttg aggaaggaaa agtgtttgag ctggatgggg ggttcgatgg ggcgagacat cagagggcta taaatgggga gcctgaggtg 300 gatgccaaac agtagaagga atagcatgac gagccaatga aaatgaagat caatgtccaa 360 tctgtcgtgt cctatctaag ctaaacaagc tatctaccca agtgaagaaa taaggtaaag gcaaggggta taaccaccac gaacactatc caagtcatgc acatteteat tettteatte 420 cgaactcgcc agacaccgtt tcaatgtaat gcagcgtatg cgtccggact cactcgtgat 480 aggtacttaa tatacaaacg taggtcaagt cgacgcaaag gggataaaaa aagcaggtgg 540 gaatttgaat tattcagaaa gcaaaaggaa gtgaaggagt aaaaggggtt ccgtcagtcg 600 660 tctatattac gtaggtagat tttatgaggc cggagctggg gcgcgcactg cctgcagtgt ctcgcctgtg tctgccagtg ggccgcacca cccgtaaacg tcgcagcggc attgctcgta 720 gcggggacag ctgcaatcga gctggttagc aagtggattg gaacagaatg cgaacgggac 780 atactaaata acttccatcc caaagataat gtgccagatc ttctcgtata cccagccaac 840 cccaaaactg tctgtgcgct ctgtctccgc cgcccacttc aacatccgct cgtagtcatg cettggtege tgeaggatge getegegget taeggeaaae tgeeegeage atacatteee 960 aatatgctcg ggtacctggt cagaaggaac attgaagatc gtttggtata cctccgggaa 1020 aaatgcgcgg atatcgttct tttcgatatc gatctgcgtg gggctccacg ggtgcacgct 1080 cgtcggacac ccagggtcat gctggcagcg cagattgacg tatcccattg catccacggc 1140 ctcgagacgg agatttcgca gggcgttgct ggtgtagggg ccaaaaaggt cgttgtgcca 1200 ttggttaatg ttagagtgga tgaagagcga gtacggcggt agtttatcgt agtgatccac 1260 gataaaggac aggtaggcgg ttgcttcgcg gccgcgggtt gtgcgtggaa ggaggaggcg 1320 tgggtcaggt ttctcgtcgg tgctgtagat gaaagggatc gtatcggggc cgctgtgaaa 1380 cagtaacaca agtcagtcct tcgctgttgg gcttgggatc ctaggggtag acgaaccgct 1440 ccctgcaata atcgagaagc cactgcaaat cctcagattg tgtagctgct agcacgagcc 1500 cgactcgact tgtattgctg tatgccgatg tgatttcggc gagttcacgg atgacctggt 1560 cgtgaagcga ttcttgcgct gcgatgacgc cctcagtact gtcgactgac tgcgcactct 1620 gtaaagacga acctcgctga gctggcgtca tgggaaaatg acccttccgc catataggaa 1680 taatgtgaga ctgctcagca gcagagcgag gaacgtcaag ccagtggtcc cgggggcttg 1740 gccacggaag agtcgccgct tggccatcag gacaaacctt ttcgcggaat aaaaaggcgg 1800 ggcgcaatgg gacggcaaaa aaagaaaaac tggcgaaaaa atgacccgga tgggagtttt 1860 tggaataaaa acctttcgag gaattaaatg attccctggg gggggaggga tttaaattgg 1920

<210> 1973 <211> 5224

<212> DNA

<213> Aspergillus nidulans

<400> 1973

ttcaatgcgg cgggatagtg tggcatgaaa cttgcgactt agtagggtta taatttttt 60 cagaaagacc gtatagactc ccgcctcatc ctggctgttg tacgggaaaa accatgttgg 120 gtactaatat gctggcacca agaccaagag ttcacttttg gcatgctgtg tgaagcgagt 180 tgtatagttg gcacagtacg actaactttc cccacgtaat agctgtgcat tgtatactcc 240 aaggcacgcc ttggatcagt tgaattgggg ttgggtgtca ccaaggtgcc cgcctatgta 300

cgcaggagat tggtgatacc ttggctttga ttagtttatg gtgtaatatg tcaaacgttt actgtggtat ccactaggta gcaagattat attcacaaga ggagccggaa tgaggaacaa gcggccaaat gggcgcaagg ttcgatccgt tccttcaatt catagattga taataagtat 480 attgtccatg atagtgataa ccagcctatt ctcttcattt ttgatggcga agaccgtctc 540 600 tggatcatgt aaatatccgc gatagcgttt caaccgtgcg gtaggtgaac ccagccttga attcaagccc tatcgcctcc tgacgcaatt gagccaactt cgtgtcacat tggctaagtg 660 720 cgcgtgaggt ttgctgtaaa gtacgatagc atggacggca tccgcgatat ggaggacaat 780 agcagctgca atgggatgca tcgccataag gaggtacagt ctcttgattc gtcagtatca gcttctcatt gagagaatcc ttgtaggcag cctacgacct catctcctta tcaacgcttg 840 gggttttggt aacgatagca gactggacac ggtcaacctc gtaccgacga atcagctcgt 900 ttcgctttcg gcttttgatc gcgaaaatag gagggtgggg tgaaatgatt ggattttgct 960 tctggcccgg cagcataaac ctcccacaac ttgccagacc cgctagccct tccctgtgtc 1020 ctatccacag ctctcgtggg tctgctggcg ctatcaggcg acccttctaa tcctccgtac 1080 ceggtetgte teetggtgeg getgttatet tgtgaegtte tttgageggg cagegagatg 1140 ggcctgaaaa gagccggttc tagggtcagt tcaagaacca ctcggcgttc tgcgaaccat 1200 gaaagcaaga tttgcgtcat acagacaaga agcgttctgg aaagccagaa aatgcacttg 1260 gaaagatagc agcaagtgtt ctgctttctt ttgtcttgag cgactcatca aacagttgta 1320 gtgcctgatt aggacagtgt catatgcatc aggcactgca tagtactagc gtggtctctg 1380 ctgtgtttga ttgcttcctc acacaacaca gatgaaaccc ccaagtctca tcagcccatt 1440 tgtcagaatg cagagctaag gagtgtgtga ctcttaggga cgctgctttg caatgctatg 1500 tatcacagat agcttccgag cttgggctac gacttgcaat gacgccgcca ggataactga 1560 cgcagcgtct caaatatccc ttggggactt ttatagctcc cagcagacac tcagtttaca 1620 gctatacaaa gcaagctgag actggcctta ctctcagtca ctcttctctg ctagcataat 1680 ggacgttttg gtgagatcct gcgtctcgat tcatccggcg gtcctcgtct gtcgtctctc 1740 ttcctgactg tttgaaatca gtcgaggata atggctgcta ccgtgagctt cattgactgg 1800 aactcctcgc cgtgcctgaa tgtttgcctg aaaccatttt cattagctgc cttatggagg 1860 agagaaggtc aaataaaacc atgacaattc aaccaaacac atcccactac tgaaccctag 1920 ccgtatacgg aaggggatta gcataatata catgtatcgt agtatgggag ttctcgggga 1980 gcacaaggtg agatactcct tgattacttt atagtctatt tctagttgaa tgcaatgtgc 2040 ctgtcgtata accataaagc aaaaccatga gcttggagcg aactttcctc cctctcagag 2100 agaaacaaca agctggtgtt ctccttgtgg tagatggatc tcgctcttcg aagagactcg 2160 tacctttgtg ggcagtcctg caacgaccct ggcaccaaca ggaagaacca gcctacagtt 2220 cgtactcgtt gggatcctca catccaatct gacctttcca gattcccctc tctcaaatcg 2280 cactttgatc agcccgtacg gacagtcaac ctctccctcc acaagtccaa actcactcac 2340 aaacggtggc cgcaatgtcc acgttttata cgcatccccg accggcttca cgccaagtac 2400 agcttcatag aaccattcat atattgttcc cagcatatca tggcactttg agcggcaccg 2460 atcttgccag aactcaagaa gcgtcgtttc gccccgtcgg agaaaccgca tataactggg 2520 atgctcttcc tgccgcgcca tggccagcac aatatctggg cggtcgacat ccggttctgc 2580 gagtgtgttc caaaggtact ttaggcctat ttcgccggcc tcgatgcgat ttcctgacgc 2640 ctcgcaggcg gacaggaagg cttttatcac ctctgcccgg tgctctacag gaacgagacc 2700 gaattgcaga gcgacagctt gcgcgaccat cgtgcaatcg taggtacctg gattgtcgag 2760 tgaggtgtag aaggcgtatg ggcgagaagc tttgtcattg atcaggaggt gcttgttata 2820 cacagcataa atccgttccg cccacgcggt gaatttcgct tcatcgtctg cttggcccag 2880 ttctttggcc attaaggcaa cgttgcgtag acatcggtag tacactgctg tctcaatgtt 2940 cgcctggtgg ttcccgaacg caatatcgcg gccccaatcg ccgagtccgt gctcaattag 3000 acctccttgt cgctcttttg ttttcatgta ctccatgtac cgaatgcaag gctgatatat 3060 cttgccgaat acttccgttg agccatagta tcgcttgatc agttccggaa gaaatgcaat 3120 tgcgcagccc caagtgatcg tgtcgtggag cggaccacac atgtatctga tttctggtgc 3180 cattgtgggc acaagaccgt ttgattcctg ggtatcgatg atatcgtcca ggattttgga 3240 gtaaacagct tccatatctc gaacgtactg agtcgccggt gcaaggagtg aagttacctc 3300 gagccagccg aacttctcga tttgtgggca gtctgtgtgg tagctgaaga tgtttgagga 3360 gaacgtccag taacaggcat ttattaggtc attcacgtcc ttcctatctg ttttgacgta 3420 tccaagctgc cttgcagccg acgagatgtg tcgagcactg acagaatgga ttgttgggag 3480 gttgtcggtc tcgtcgagcg acgcaccttc aatctgaata taccgtgcgc ttgtaaaaga 3540 gaagtetggt gtecagattt egaceceagt eeetgatagt atgagtttgg aatacaegee 3600 atactcgaac tctttgaaca aaggatcggg cataaacact gaacccacat cgtcgaccgt 3660 ctctgagtac cggatgatga tctctgagcc agcaggccca ctgacctcaa cacgcggcat 3720 gatactggaa ttctggccca aatcgaacat tgtcaccccg ggccggagct gcttgtgctt 3780 aactggggtg aagagattgt gtaggataac tggcggctga ctctggtatc gaagtttgcc 3840 tctaggccca gtcaacggct tagcagaggc ccaggtgcta tcatcatagc ctggtgtatc 3900 ccacccaaat ggataccccc gccggtcatg atcttcagag gcatatatat tggccagcgt 3960 cgtcgcgctc ttgcgcacct tccagcttgg gtcagaaatg atcgtttcat gggaaccgtc 4020 gtcatagtgc acatggatct ccgcgaagaa acacagctca ttcccgtacc gaacgtacgt 4080 gttgtcctcg tacattggcc agaagaaccg gtccccttga tcgcccgcgt agaaaccgtt 4140 accgacatgt gctccgatca cattctcctt ctcgctccac tgcggcgtta cgttgtagcc 4200 gacgaattgc acggtccggt ggtagtttgt ccatccgggg tcgagaacgt gcgtcgaggc 4260 aggettteeg ttaacgaaga gattgaagtg acceageeet gaagegaaga tgactaettt 4320 ctcgacgcgt ttagcagaag acagttggat cgatttgcgg aggtatattg gcttgtcgcc 4380 tecgttteca atecagaegg etttecateg gteegeetea ttttegaaee aggtgeggaa 4440 gatgagatta gtgtgcggca tctattctgt cagctttaat atattatctc cggaaatgcg 4500 agcactgaca taagtttggt tcatgctata cggaggaagt agcctcgatg agcgcgggta 4560 cgaggtataa aaatcattga cagcgctctt cgactcttta ccttcctggt cccagactgt 4620 cacttgccag tagtacgttg tcgttgactt gaaaccggac tcgggtttgc atataatgtt 4680 gegetgegea tegeteteaa caegeeeaga gteeeaggea teeggetget eetegagaee 4740 cttcttctca gaagacactg ctatacggta ggcagtctgc tctgacctcg aacagccacc 4800 ttcaaggacc cagaagaaac gaatctcatc agtgtcgatc ccaagggttt catggaaacc 4860 gtgaataccg caccgagtga cttccatatt gcgcaaacca ccggctcgag tgagaggtag 4920 aagacaactg cgccagcttc agcggattac aatcccagct taaagtaatt caagctgggt 4980 ccacttcagc tgcccatcgg tttctgattg cccgagcgcg gtcaccagcc agaatggttg 5040 gacteggaag tgeegaagta gtgeeaacta eeceaaceeg ggaggegaee aageeagete 5100 cacatggttc ccgactcgtc ttaccgagat accctagacc tggcagatga ttgtatgaga 5160

agtctacgta	gtcattgagc	tcggggtatc	gttccccgtg	tggccccgca	ttgcaaaacg	5440
tctt						5224
<210> <211> <212> <213>	1974 736 DNA Aspergillus	s nidulans				
<400>	1974					
gaggtatata	ttcccatact	aatactgttg	aggatcaata	tctctctt	gtatatagat	60
gcggctgcca	ccagaatagc	tatttgtcaa	accaggaatt	actacccaag	aatttattag	120
tgaaaggaaa	gagtttgtac	tcctctggga	ggattaggtc	cttatttgtt	gcacaacttc	180
atgcagaaca	gagatcacag	tagtggccta	aattttactt	ctcacccccc	actcactcaa	240
gaagtgggtg	atttactcac	cttgttgtaa	cccatctcac	ctgcacccac	cctaggctag	300
tgtctctcac	tcctaaaagg	agaaacacac	tcagggcttc	ttatcgcact	tgtatccgcg	360
ttgataatgg	tgacagtcaa	gtacaaaaag	aaaaacatac	aacagcatgt	atatttcggt	420
gctcacccat	cccagctact	gttccgtcgc	cgctttgccg	cacatattcc	ggcgccttaa	480
ggtgaagatt	caggcgcctg	gatattctgc	acctgagcta	cctgaagcta	catttcgaca	540
aaagcgcaaa	aagacatcct	caagagagag	ataaatcatc	taaaacccat	ggtgtgtatg	r 600
tcttactcct	attccttctc	ccatatttaa	ggctaatctg	acagtatgcc	acaagaaccg	660
gcagctaatt	ttacgcgcgt	gatcaatctt	gatgagcaca	atggtaagag	atcaaacgag	720
cattctttca	cgaacg					736
<210>	1975					
<211>	2603					
<212> <213>	DNA Aspergillu	e nidulane				
		dinatabili d				
<400>	1975				a agat at aga:	a 60
	g gttctgagtt					
	g ccaatgcgcg					
gccattggta	a aatccaggto	: cgccaaaaac	ttcagtggcg	gaaacgatga	a gcgggaaagt	t 180
2000122200	r asatootoac	· tgagatggat	ggttttaaca	cttccgacca	a agtggttgt	t 240

ttggctggta ccaacagacc cgatgttctt gacaaagctc ttatgcgacc tggacgtttc gatcgacaca ttagcattga tcgacctact atggacggtc gcaagcagat cttccgtgtt 360 catctgaaga agatcgttac caaggaggat atggattacc tgacgggcag gctgtctgct 420 ctgactcctg gctttgctgg tgctgacatc gccaactgcg tcaacgaagc tgctttggtt 480 ggtatgtaaa ctccctcatc cttcctgttc ccacaatata gtttcagttc actgatctgt 540 gtgcagccgc ccgtgaaaac gcagagagtg taaccatgaa gcatttcgag cgagcaattg 600 agcgagttgt cggcggcctg gaaaagaagt ctcttgtgct ctcaccggag agaagcgcac 660 tgtggcttac cacgaagccg ggcacgccat ctgcggttgg tatttccgct gggcggatcc 720 gttgctcaag gtttccatca taccgcgtgg ccaaggggcc ctgggatatg cacaatacct 780 gcccgccaat ggagatacat acctgatgac cgctaaccaa atgatggacc ggatggccat 840 gaccttggga ggacgcgtca gcgaggaact acacttcgac actgtcacta gcggagccag 900 tgacgacttc aacaaggtca cccgcctggc cacagctatg gttacaaagt tcggcatgtc 960 gccgaagctc aagtacatct actatgaaga ggacccatca tcacagcttc acaagccctt 1020 ctcggaagag accgccaagg atattgatat cgaagtccgc cgtatcgtca acgaagcata 1080 caagcaatgc cgcgatcttc tcacagcgaa gaagaaggaa gtcggcctcg tcgcagaaga 1140 acttctagcc aaagaggttc tcagccgcga cgacatggtc cgcctcctcg gtcctcgcga 1200 atggcccgag tcaggagaat ttgctaagta ttttgatggc aagcatggcc agaccatcgc 1260 gcctcctgag cccgaagttg gacccgaagc tggacctgag acgagagaat caccatcatc 1320 atagagctgg atttaaggaa aaaatatcga taagtgattg actgatcaat ttttttctgc 1380 tgctctttca tcttatcttt ataggaggaa cttgtattta ccagcatttt atctactccc 1440 ctcttatttt tttctccctc catttcacta cctgcttata cctactctat ccttcctcct 1500 ttcttaccaa aatactcgat ttttttggta gcttcccttc cgacccgttc gatccccctc 1560 gtctttgtat ttctgcctcc gaagcgtcga gtctaatgta tcattgtata gtaggtagct 1620 gaatgattta tttcctttgt gaatcctggc tggcaattct gcgaattacc agatatggct 1680 gggaagttag gtagaattat gtacttatta gatcgatttg aggcgttccc aactccggct 1740 gtttttgtcc gagaagtgaa aagaaatagc ccaaggccaa tacattcaaa atagactgag 1800 aatcaaaacg caaaccatta tctacttcaa cctccgaatc taatgtggaa aaataaacgg 1860 cgacgtggac cactcaaacg gcctgcaccc atgtaaaaga agcgaagtat gcgtttccaa 1920 ccagggagag ttaaaatcgt tagatataac ggataatatg catatttact cctctttctt 1980 gccgtgagca accetcttct tgtttttgtt gcctttgcac ctaggcgtaa tagatagacg 2040 aggaatgaat cttccgacgc gagcctggta ttcttggtac tctgggtact ttctagcact 2100 gatctcctca gtgagggga cgcttgctt gaagatagcc ataaggccga tgacgcctag 2160 ggcagtccac tggacataat gctcagttcg gtaggcgttc cagaggtaaa gagtgagcca 2220 aatggcctgt tccgcggcaa agttgggatg gcgggagagc gaccacaacc cgctgacgac 2340 ggaggtgtt tattcgtgct tggcattctg gaatctccat tgttgctggt cggcaaagaa 2400 ctcgagaatg atgaagacca aggcgacacg gaagacgca ggagaagaccacg ggaagacgc caaggaggag gaagttgtag atgaagacca aggcgacacg gaagatgtga ggagagacg caaggaggag gaagttgtag gttgggtcg tagaggaga 2520 tagcaggac ggctggatca cgctgatgaa ggtgatgtt aaggaggaaga aggccaaacg 2580 gttgtttaca ccggaccgg taa

<210> 1976 <211> 2592 <212> DNA

<213> Aspergillus nidulans

<400> 1976

agctectteg ecagateatt tteettgtet teagtgggtg gegetgeage aacagetagg 60 cccgcgataa gtaaatggta ctcggcaatc ttgcctgtga atcccaactg ccggacgtcc 120 tgtattactc gagtcaggct gcccgtagac atggacctga aacgttcact tgttgcacgg 180 ataaaaagct gctgatcctc gctgtacata tgctgaagtg gtagggattc ggcgtactgc 240 300 acgacaggaa tggtagcact tttttccgca ctctgggtag ccaaaacgcg gcgtctgatg agcettetea aagaagteee tgagtegace gaettttega cataactete aatettgaae 360 agatatetet tgacetette atgateegta getaaateet egaaateete caaggeatet 420 agagtettga teactgtgae tgtetettee aagggttgtt tettgtaetg atetetggee 480 gagegeaagt eggetaceae aagaetgaag aetttttege ggetageage aageteegeg 540 acatctatcg cgtccattaa ttgttcctga tgaacccaga attggtatag agagatcctg 600 aggaagaagc actccataga gctgcgatcg attgactgca acttggacac cttcgcagat atcttgcgga acatcttctt aaaaagcttc cggcgctctc cttcagctag aagaagcaat ttcgaaacga ccgcacggtg cagaaatctg aatgccttca ttatatcaag gtcaatattc 780 gtatcctgca acgagagtgc tttcgcaatt gtccagagcg gttcccagtt tccagtgatc 840 tccgcggtgg atttgggtaa atctgccagc ttggccatca atgacaatat accaacggtg 900 actatggaag tgctgtcctg ttctgataag acgccctgca atagatctag gagagctcca gtttggcggc gtgtgataag agaagccggg actctttgca aactctcagt gtagagcttg 1020 agattcgaaa catcgtcctt gattcgctcg gatatgacaa aaatcagatc gttcacaatg 1080 ctgggggcgt tcaaaagata ttcgtgagat gcgacgctag cccacgtttg caaaaaacgt 1140 gcacctgacg agaagttctc aagagtcgac gaagatggct ggtattgggc cgtcgcgaaa 1200 gagagaatat gagaaaacag cgggcgtcga atgttggact caatgtgact ccaaaggtca 1260 gggattcgga taagacctag aaaatatgct aaagataggg tggctggaga gtccagtgaa 1320 ttcaaacgac cattccaccc agagttcatg gagtctagtg cagcctttgc cgagatagaa 1380 ttcatcaact tgatgacttc tttcatcaaa gatgacagat cctcgctgct gttcgtgcta 1440 ggtgagtgct tggtgattgc aagaacaagt cgatatgcct caatacactc aagacgtgcg 1500 ctgagcttat gcgtcaactc ctggtgtcgg cgtttgatcg aacttgtagc cgcgccagtc 1560 aagcttgata aggaagcgcc gagaccgacg ttgacttttt caacattgtt ctcaatcaga 1620 ctgcgagtta acttccacag acgccaccgc caatgcaaag cttgatccga agaaagcgtc 1680 gacacaactg tttccattgc agatgcgagg tcagcattat tatcggcaag attgatgttc 1740 cgtttcctga acccagcctc agcaatcaac agctgcgcat atgcctctgg agacctagca 1800 agtttgccat catcaccacg aatctcgacc gccgcagcac gcatctgagc ggaggcaaat 1860 gtttggttca gagggttgcg cataatttca ccgtatgcat cacaaaggtc gtcgtcttcc 1920 cacactgtaa agaggctgag attactgtct tgcattcttg cttcctctat atcggtcagt 1980 tgctggtacc agatctccat gaaagtaggg agatccctgg cattcatgaa cccgcgtagc 2040 aaaggcaaaa taatgccggc tttgataatt tcgtagctac tatcggtgga attgccactc 2100 cgccagagca aattaatctt gttcagcaag gccgccagat acttctcaga gtccgcaagt 2160 ccggagtttg gaaggaagat atccactcct agttctatga ggagtgcaat gagattccac 2220 tcaaccagag ggagctggtc cttcagaagg ccggtatatg cagcatgtgt aagaagcgtg 2280
tgtagcgata attgcacatc cggctttaga gccacttgaa acagcagctc taaaatacgc 2340
acaaagtggg aaacaaatgt ggttggcttc gtcgatttca tagatgagaa tgccaattcg 2400
gcagcagcaa cgaagagtgt ctccaaccaa ggtgcttcgt ccgttttccg tcgaaatgag 2460
tcccgcggga ctgatcgagt agcgatgtag aaaaactctg gaattagctc cgccgcattc 2520
cagaattctt tctcagcggc gttgtcttt gtcacagtgc tgccgggctc ggatagaggc 2580
tcggcggcag aa 2592

<210> 1977 <211> 3822

<212>

<213> Aspergillus nidulans

DNA

<400> 1977

cacgtcggct ggatctgcgc ctcttcaagt gactacgcga ccgacaaagc cctattcgat 60 aaagaacttc ggattattga aagacttgca aagaggtaaa gcagccgctg acggctctac agaggccaat caatgccctc aaggcgaatc attgccctca aggcgaatca ttgccctcaa ggcgagacat aaaatgcagg ggaatcctat tcattcaaac gtccgcacca ttgagcggta 240 tccgcatatg aagacgagtt tggacggccg aatctagata gtgataagct acttaagcta 300 tataacgcac caactcctct gtgctgacgc cccggggtgc tgcgcgggta cgggctcgtc agtettgatt gaacgecatg ategateaga gagaetggae gaeecaatga teeactaega 420 tgccattggc tcaggcaaca ctataatgaa gaaccctttc tggcgagatg agcttgcgag 480 540 caagacggac atactatgtt tcgatacggg agctgctggg ttgaaggacc aatttccctg tctggttaaa cgtggtatat ccgaccatgc ggattcgcac agcaccgacg agtggcgggg 600 gtatgctgca atgacggctg ctgcctatgg gaaggacctg ctcaatccta ccggctatca 660 gacttgaagc ggagatagaa atctgtgagg tgttggattg gcatacgaat gacgactaca 720 gcgtgcagca gaatgataat ttggaaccgc gcgagcctgg gactggcgga tggttcctcc 780 aaacactgga gtttgaggac tgggtggaga gtcctggcaa actcttattc tatcctagta 840 tcgccggtgc agggaagact accattgcat ctattgttgt cgattacccc caagaagagt 900 acgagaacga tccaaactgc agcgtcgcct atatttattt caatcatatg cgccttgaaa 960 agcagacaat acgacatctg ctcgccacac tgctgagaca gctatctgaa aacgcaacac 1020 acctacacag tttaatcaga tatctatacc agaagcatag gaaggaaagg aaaaggccgt 1080 cagttaatgc tctagtgcaa ggcttggacg agtcagctgg cctgcaatcg cgacagttca 1140 ttgtcgttga cgcactggat gagtgacaaa ccgccgatgg atgccgtgag caatttctgt 1200 cegttatact accactecaa geaaaacaeg getteaatgt actagttaeg tegagagage 1260 tgcctgacat cactcgtcga tttagcgcaa gcagagcgct cgaaatacgc gcaagagaga 1320 aagacatcgc agcatacgtc gacgcggcat atcgaggtca ggggtgccat tactccatgc 1380 ttaccgagag atgataaaaa tgaaactcgc catgatagcc aatggcaggt atgttgtcta 1440 tatcaagcat cacaatgctt cccgccatct aacacgagag ttaatattaa tctcccaaga 1500 ctccgcctgg cgcggctgta ttatgacatg ataagcatgc agaagacacc gtggcaaccg 1560 agaaatgcat aaaacccagg ccatcccaag atggcaaggg tacagtcact ggtatatgag 1620 gcagcttggg cacattatat aaggagaata acagcggcgc ctgtatccaa tccggcgtct 1680 gctgaaatag cgagaacatt tcttctattg atagcctgtt cgcagcagga actcactgtt 1740 ccgacagtgc agcgtgcgct ggcagtcttt actggttcta ttgatgatgt cgaagaaaat 1800 gtcctggaac tcgatgacat gatttccgct tgcgggggct cgttagagca gaaaccagta 1860 agaaaaacag cacagctcga cttgccctca ttcatcatac attgcgtgaa tacctaaatc 1920 tcacgcaaga tacatggttt ccagacgcac acggtttgct ggcagccacc tgtcttgaaa 1980 cccttctttc agacgcttct ccaacgggac cttgtaccag cgagggggga ctcgaggaga 2040 ggctcacatc ggacgcattc tatgattgtg cggcacgtag ctggaagtat catctgcgaa 2100 agctggtgta acggactgcg cggatagtgt agcgccagct gcagcccaag caagaaagct 2160 ggctctatca ctactccagc acaaaatgag aagagcgtgc tgctgaaaaa aggcttttac 2220 agctgcccaa aaagcatccg gccactacca caatgaacta cctggcgaag tcgcaggcct 2280 gcatcttgcg cgccgttcgg cgttacggaa tccgtggcaa gatacctaga tagtcgagtc 2340 agtcgttatg tccgggactc acgctgtcag acacgcaaat gctagctgtg gaggatgtta 2400 tggagcagtt gcttcgctgt tccttgatgg ggacggagtt gatgtggaag atggggatcg 2460 cgatggtaga atgctggtcc gcgcaacagc tagcgatggt cattgtgaga ttttgagagg 2520 tgtggaacag aagcttacgt ttgacagcga gagcggcagt attgtcgttg tgtaggcgga 2580 gaacgaaagc tgcggtggtt aagataggct ttgaggcggc cgtctgtcct gttacctata 2640 cttagagtgg atgtataaga gacgggtgaa gcgtgtccga cagataacgt ctgaatggcc 2700 tatgaatttc gggcccgagt tgtagtttta cagttttgtt tggacgaaca aatattgcat 2760 taatctagtt taaatgttgt tgagctatac atatagcacc tggcctagcc cataacaaga 2820 taggaggett ctatgcaagg aataaggatt cgaagcatca agegegaage aatgcaagca 2880 tgagatggct cttgagcacg atgtgctcag aagaccatac ccttgacctg cgcaatcttg 2940 ccgacattga tgttccgaat catgatggtc cagacgaagc acagagacat gatacccaca 3000 ccagcggcca gcatcctcgt ctgagcatac ccatacgcct tctgaatagc aagcctagtg 3060 ggagtcccga cggcatagct cttctgggta gccaagtctt catagatcat atcgagatca 3120 ggcatcgctg actcgggcaa gtaccgaata agcgccttgc ggaatgtatt tgtccagatg 3180 ctgccggaga tagtgttgcc catggcgccc ccgatagtgc cgaccacatt caagattgcc 3240 aggaccgtcg caatgtgctg gtggtccacg gcggccagga tagccagctg ctcgatgatg 3300 atgaagatcg acccgccgat agagatgaag atctggcaca tcaccaagta accaacagtc 3360 tggttcggac ggcggaagta gatcatcagg ccctgggcga agatgtacag cgggacagca 3420 atgtaaagaa gccacttgaa gcggcctgtc ttgcggatca ggaacccgac gccgaagaga 3480 aggacgcccg agacgacgtc gaacgtgttg ctgacgtatc cagattcagc gagtgtcagg 3540 ttattcacga tctgaaggaa agaggtgaag tagttggccc agcaatagta ggagatctgg 3600 taggtggcgt cgagcaagca ggcgccgacg acggtgcggt tccacaggaa gctgaatttg 3660 agcatgggca caggagcaat atagacctcg tgcaggatga agatgcccag cataacaacg 3720 cccacgacga tcatcgcgat gatgtaccca gttccccagc cgttgggggc gctgtcggcg 3780 3822 atatcgaagg ggaggaagaa gatgaccaga cccggcagag aa

<210> 1978

<211> 2749

<212> DNA

<213> Aspergillus nidulans

<400> 1978

tttttctcct tctgtcttgt ggcagccgcg ggaaaagaaa tccagatcat ggtggtggag 60
ttggaggccg attgatcaag gactcttcaa ctccttcgtt tcactcgctt tgcttcctac 120

ctcagtgcag agggtttgtc cagtccagaa caaaagctcc tagggttaaa cgaatccgca tcctgtcgcc tttccaaggg tcgccttcgg ggcgtaatag acttctgtcg ctcatggtta 240 gtcagtgttg gcttggatct ggttgtggga ggtaggctga gcatacacgt ttccctgcat 300 ttgtagtcag cagtgcgaga gatgaatgca cgggtgaagg ctcgtcatgc acgatgccat 360 catggcattg agtaccgggt ctggccaata tatgcagggc tgttgcccag catcaggcgt 420 480 ccagctcgat ctgtcaaagc gtccggaata atacatgaat gtaacccagt ggggcttctg ctctgatcct tagttgttgg ctgttgactg ggaaagagaa gttgctccgt gcagtgtgag 540 600 ttgtaagata aatatctcca cattcgccgg ccctcaaaag ctaagtacgt tggattgcac 660 catatctaat attgtatata tatatatctt ccgtaaacaa acgcatctgt ctctcgaaaa aaaagatcag ttattctgcc ttgcaaaaag gcctttcggc tagagaatag atgcatcgat 720 780 caattatctt agtacttgga gtgccgaata tgtgaagcct cgaaactcag taggctacat ctcgttgttt actaggtcta catattcgca gatctggacc tcgctttcag atgccacgac 840 tgcacttgca ttaggtaata gacaatccgt ggaagaagca caaataggtg gatgtacata 900 cgctataaaa tcacgtgtat cagtgctgag gttaggaatc aagacagtga cccgctacat acggggacaa aaagcttgct ttgatcttct ctgctggaga acaacgacca gttgaaatac 1020 atatatgatg teetgecaga attgtgegtt gtgeectage tegetgtgge caacgaccaa 1080 agtacatcat agacaaacat teettgacga ggaaatgtge eetggagtaa aaceetagtt 1140 attccaggta tccagcaagc attgagtaat tatatggagt cgtatttcta gggactatcg 1200 tgataactaa aaggatacct aagtctccgg aatactgtgc attcatagat aaaatgtagt 1260 aaaacagggc aacataactt gagacttcag cccaaggcta ccgggatttc agctcccctt 1320 cagetecaat tteegaaggt aaaggtgegg getgtteegg gggatgetae eetgacatte 1380 agtagtcgac taaccacagt agatccaggg cagccgctcc ttcggagaac ccgtagttgc 1440 agacactgtt gttagagatt agtacatagt tcatgatggt agtagagata tatctcagct 1500 tcagcagtca aagctgcggc tctgcagtat agaactgtcc tgattcagga ttgtgatgcc 1560 tgcttatcca attttgagca atgctcgcgc taaattttct aagaatagga acaaagaccg 1620 ctagaagacg gttaggccgg ctgctcagcc actggtggaa tctgagagcg taccagggaa 1680 acgacacgta tgcaaatttc agataatacc gtatagagga aattaagtgg tgggtgcctc 1740 agcccaacac ctggtgtttt gaaacggagg tgggacaatc caaagtccac taagccaggc 1800 agatcetttt aagageteeg eeacaaaatg eeacgattte tetgattgga gaaataagat 1860 ctttagggat catgatagcg tctcatttgt ggcactctga tatgtattga ccaatagcag 1920 agaaacacaa ttgagtctgt caatggccac agctatattt ggttgccagt gggatctaag 1980 cettttcagg agcgtcggat gaccccgccc cctgaaatat ttctctgttt gtcctcgtac 2040 tgtaacctca aactgacagt acaagtacag gtcaactcac actactatgg gaaacaccga 2100 agcttcacaa tataccaatg agtgtgcact ccaagggaag acctaactta tgacggaggc 2160 cagcaaggta gcatttgaga atggcatgcc tgccacatac ttggttttgt cggaagtgca 2220 gcccggtcaa cgatgctggc tagggatagg aatgcagcct ctcaggaaga ccaagagaac 2280 caagacagtt caacatttgc tggctgcaga atttcgtatg aagtagatgg atggcatatc 2340 cccaaatcgt aataatggag tcaatgggca aaggcagctc aggggtcaac aaatgagaag 2400 agcgcgcaga gttttatact ccctaagaac aacggtgagt gaaagtcgga aggcatgagc 2460 tctctgagcg ggactcgggt ggcagaacgg gaaagaacta aattaccgcc aggccgcttg 2520 gtgctcaata agattggctg gggggaagtg ggctctgaaa ttttgcacct cagtttttgt 2580 acccctggcg gtgaggcagc caatttttgt ctgtatactc tgtacaggta tagtgtaggg 2640 agcatcgatt tcaggattca ggaatcaaaa ttcaggaaca gttgtagatg aggaatgaat 2700 2749 tggcgaagtg tgttaattag atagacctga tgatagattt gatagattt

<210> 1979

<211> 1715

<212> DNA

<213> Aspergillus nidulans

<400> 1979

atcaatatac ggagttgatc atggtggtta ggagccgact ataaatgcat ttacctaact 60 gtttactccg ttccacttcg gcttttccga gcgggttatc cgactcatta cccttttccg 120 ccgttctacc aacatctacg gtagtgagcg gattatatta tatcagtcgt tattcatcac 180 catcatattc catacttcat gcctatcgtc gctactccgt aactatttag cttccccatc 240 ttccatttga acctccatct gcacctccat ctccatatcc atccatcata aatcatcgca 300 aggctgctac atcacgtaaa cgtaacagag cggtcttgtc tcttcctgat ccattcatat 360

cccaccaacc tagcaaccat cccccggacg cgagtcgagc acagctcgtg ttcgcgccag 420 aacggtggcc agccgggctg ggcgcctttt tttggtattt tgcatatata tgtcggcatg 480 gcattatata taatgccaga tctgtgatta aagagtgact gatgtgctag tgatatactc 540 600 gaagtgcact gcacctgtca agtcaagtcg atttgagttg aggcatgtca aggccgatct 660 gagccagtca tcgatcgcgc gacgaggtcg gataagagag ggaggggcaa gaagactgcg 720 tttctctcat ctaccggcgg acaacgatac cctggcgcct cacgccccga cgagcccggc ggtactcctc atcgctgtcg ctgtcctcgg agcaggaatc gccccaagtc tcagagaggt 780 840 atccacaccg ggaaccgccg caatcgagct tgacgcggtc tcccttgcgg gtgatcccgt accgctcaca atggcaaact gaaggcggat cggacatgct ggacagcgag ctgggcgagg 900 tgcttccgct gctgcgagaa gacaacgacg aaccgacaga ggaaggcggc gagttggaca 960 ggtcgctgta accgtcgtcc gagaggcggg acgacccaaa gcggcgagaa agctcatcca 1020 tggcgtgggt cggggcaaag tcggcctcgc ggatctggcg cgacgcgtac ggcttggaag 1080 gcttagggtg gtggatcttt gagggcgaga gggcgcggcc ggtcgcgata tctgaggagc 1140 cacggcgggg acggcgcgc gacgtgctgg actctttgcc tccggggaca tcgaggatgt 1200 tgagcttgcg gttggttgtt ggctcgacgg tgtagtctgc tgccgggtcg tgcgagacgt 1260 ggtagccgtc gaggatgtac tgttctcgat tagcatatac atttatctca agatataccc 1320 tctgggaaaa gcccatacgt agtaccagta ccgaccacca agcttcagca tcgaggtctg 1380 gaagcggaat ttgcccaccc aggagccggg cttggacgag tcgcgagaca aggggatctg 1440 gcgagagtag ttgtcccagg aaccaagcag atgcacggtc ttgacgttgg acgaggtgcg 1500 caagttgaac ttgagctgga cggcggacat ggcgattaaa ttaaagcggt atatcagtag 1560 ataagtgaat cgtaaacaag cacaaaggtg tcaggtctgt cgtagatgga cggtttaaaa 1620 1715 caggtcgcag cgcaacgaag gatccagtcc tgaca

<210> 1980 <211> 3006 <212> DNA

<213> Aspergillus nidulans

<400> 1980

60 cttgatactg ggttatgcgc ctatgccctt tgatggaatc ctcctaggga gccgcatgat ggtggctcgt gaggcgaaga catcgttcgc tgtaaagcag cttatagtcg aagcccccgg 120 agtcaaggat gatgggaatg acaacggtgc ttgggcaaaa tgtgaacatg acgcagttgg 180 cggtgttatc tcggtcactt cagagatggg tcaaccaatc catgtgcttg cgactcgagc 240 aatgcgtttg tggaaggagt tcgatgaccg gttcttctca attcgggacc ctaaacggtt 300 aaaagctgca ttaaaacaac atcgtgttga aatcattaat agactgaata acgactttgc 360 ccggccgtgg ttcgcgcaaa cagacagcag taaaccaaca gagattgagg agctgagcta 420 480 taggcaagtc ttacgccgtc tctgccagct tacatatgtg cagcatcagg cacgctggat cgattcttcc tacctcagct tggtgcatga ctttctccgt cttgcacaag gacgcctggg 540 ctcaggttca gaagctgaat tacgctttct ttcctgcaac actcccatag agctggaagc 600 660 gtcgtttgac gcagcctacg gcgtgcaagg cgaccagata ctttatccgg aagatgtaag cetteteate aatetttee geegacaagg teagaageeg gtgeeettta tteegegget 720 cgatgcagat ttccagacat ggtttaagaa agattctcta tggcagtctg aagatgtaga 780 cgctgtggtg gaccaggatg cacaacgtgt ttgcatcata caagggcctg tagccgtgcg 840 tcattcgcga gtatgcgatg agccagttaa agacattctt gatgggatta ctgaggcgca 900 tttgaaaatg atgctcaagg aggcagcttc tgacaacggt tacacttggg ctaaccagcg cgatgagaaa ggcaatcgct tacctggcat tgaaacaagc caggaaggct cgctgtgccg 1020 gtattatett gteggaeeta eceteceate gaeggaggea atagtegaae acettgttgg 1080 tgagtgcgcc tggggctatg ctgccctcag ccaaaaaaag gttgtttttg ggcaaaatcg 1140 cgctccaaat ccgattcggg acgctttcaa gccagatatt ggagacgtca ttgaggcaaa 1200 atatatggat ggctgccttc gtgaaatcac gttgtatcat tccttgcgtc ggcaaggaga 1260 ccccagggcg atacgtgcag cactgggact gatacatcta gacggcaata aggtatcagt 1320 gacattgcta actcgctcaa agggcaaacg acccgcgctg gagtttaaga tggaattgct 1380 cggaggaacc atgggccctt taattctcaa aatgcaccgg actgattact tggacagcgt 1440 gaggcgcctg tacacggacc tgtggattgg tcgagacctt cctagcccaa cttctgtcgg 1500 tctgaattca gaatttactg gcgatcgagt gacaataaca gctgaggacg tgaatacgtt 1560 cctggctatt gtcggtcaag ctggcccggc ccgttgtcga gcttggggga cacggggccc 1620 agttgtgcca attgattatg ctgtcgttat agcttggact gcactcacaa agccaatact 1680 gctcgaagca cttgatgcgg accetetteg acteetecae eagtetgett caactegttt 1740 cgtgcctggc atccgcccgt tgcatgtggg agatacagtg acaacttcgt cgcgcataac 1800 cgagcgcaca atcaccacca taggccagcg agttgagatt tctgcagagc tcctcagaga 1860 gggaaaaccg gtggttcgac tccaaacgac atttataatc cagcggcggc cagaggagag 1920 cgtatcccag cagcagtttc gttgcgttga agagccagat atggtcatac gtgttgactc 1980 ccacacaaaa ttaagagtct taatgagtcg aaaatggttc ttgctagatg gaccttgctc 2040 agatettatt gggaagatat tgatatteea actgeatteg eaaaeggtat tegaegeege 2100 aggageacet getteeetge aagtttetgg atcagtttea etggeecett etgatacete 2160 agttgtctgt gtctcttcgg tcggcacccg gattggacgt gtatacatgg aggaggaggg 2220 gtttggagcg aatccagtca tggattttct gaaccgccac ggtgcacccc gagtccagag 2280 acagccgctc ccacgggcag gctggactgg cgatgacgct gcatctatat cgtttactgc 2340 ccctgcccaa agcgagggtt atgcaatggt atctggagat acaaatccta ttcacgtttg 2400 ecetetytte tetegtittg eegggetggg teageetgtt gtgeatggge tgeacetyte 2460 tgccaccgtg cggcggattc tggagtggat cattggcgac aatgaacgga cccgtttctg 2520 cagetgggeg eceteetteg atggaettgt eegggeaaac gaeeggttge gaatggagat 2580 acaacacttt gcaatggcgg acgggtgtat ggtggtccat gtaagagtgc ttaaggagag 2640 tacgggtgag caagtaatgc atgcagaggc ggtactcgag caggcccaga caacatacgt 2700 ctttaccggc cagggcacgc aggagagagg aatggggatg gccttgtatg atacgaatgc 2760 tgctgcacga gcagtatggg acagagcaga acggcacttt agatcccaat atggtgcgtt 2820 acctecteaa ecegageteg acagaacggg caactetaat accgattaca ggcatttege 2880 tectteacat agreeqtgag aatectacga geettactgt caactttgge agreggegtg 2940 gtcggcaaat ccgtgatatt tatctttcta tgtccgactc tgatccatct atgctgcctg 3000 gcttga 3006

<210> 1981 <211> 1488

<212> DNA

<213> Aspergillus nidulans

tegecgccat tgcgagette tteeteggte ttetegegaa tetgecegte getetggeee 60 cgggaatggg tctcaacgcg tactttgcct atactgtcgt tggtcatcat ggtaccggat 120 tgatccccta cagtcttgca gtgactgcgg ttttcgtcga gggctggatt ttcctcggtt 180 240 tgactttact cggtatccgg cagtggcttg ctcgtgccat tcccgcctcg attaaactcg cgaccggcgc cggtattgga ttgtacctga cgctgatcgg tctcagctat agtgccggtc ttggagttgt gcagggggt acaagcagcc ctattcagtt agccggctgc gcgtcagata 360 cgttcggcga cgacgggttg tgtccttcgt ccgaaaaaat gcgcaatccc acaatgtgga 420 480 ttggtatctt ttgcggcggt gttttcactg tcttcttgat gatgtatagg gtcaagggtg cagtgattgc tggtatcctg cttgtctcga tcatctcatg gccgcgtccg accccagtta 540 cctatttccc ccacacagaa accggtgaca gctcgtttga tttcttcaag aaagtcgtca 600 ccttccatcc gattcagcat actctggtgg cgcaggaatg gaatatctcc agtaatggtg 660 gacagtttgg cctcgcattg atcacgttct tggtatgcta tctagctcgt cggtatatac 720 agagccctgc taactgggat agtacgtcga cattctcgac gctacgggta cattatactc 780 aatggccaag tttgctggcg ccatggacga gcgcacccag gattttgaag gcagtgctat 840 ggcttatgta ggcctctcac accctctcgt gaaaacatcg ctaactatag tagatggtcg 900 acgcaatctg catttccatc ggttctttgt tcggttctcc gcctgttaca gcattcgtcg agagcggtgc tggtatttcg gaaggtggaa agaccggtct gacatcatgt atgaccggta 1020 tctgcttctt catcgccgtc ttctttgcgc ctatcttcac aacgattcat ccatgggcca 1080 ctggcagaac attggtcaat gtcggctcca taataatgca tgcgacactc gagatcaact 1140 gacggtttct tggagacccg gttcccgcgt tcttgacgat ttcgctcatg ccattcacct 1200 acagcattgc cgacggcctg atcgccggta tcttgagcta catcctcatc aacgtaggtg 1260 tgtggattgt tgccaagttg actggaggcc ggatttctcc tcctaaccgc gaggaggagc 1320 acgagecgtg gaeetggaea ateceageag gattttteee geeatggetg gtgegtgegg 1380 ttcatgggaa gaagcacttc tggcgggctg aagatgatgc caatgaaata agccttggcg 1440 1488 tcaagcctca cgggtcgctc tcgtcgcagg atccgaggtt tctataag

<210> 1982

<211> 1502 <212> DNA

<213> Aspergillus nidulans

<400> 1982

tgagatggag gcacctcggc tacctggggt tactaaaacg atgatcatgg caagttcaga 60 ttgtcacctg gaaagaagat ctcagctcaa ctctagatat catcgacttg gaggtggcgc tctctgccct gccaccggtt tggtgtcgag ggcggggtgg ccagctaacc agtaaatgaa gagateggea cageettgee aaaggtggga aagatteeea eetgggeeae getaagttge 240 tgtcgaggat accaagcagt catagttggt gctcagttgc tgcggctgag ttgttaggca 300 tccacagttt catcccctag cgccgtagcg agatggccgt gcagcaggat acgcattgcc 360 gtaatgctca atcccggcgg atatttccgt tgtcgtgtct tttttggaga agtggacaaa 420 aatggaccac agataaacaa aaatctgcat agataaggta cgggttccgt ttcggctgca 480 tgagttgttc gcaatggacg ttaatggata tatacgaaaa aacatgtagt tgcttactga 540 600 gcagatctgg ataaggaatg gccgaacccg ttcattaagc aactgcaact ggctaataga 660 ccaattgggt ctgcgaggct gggattgcat gttacaaaag gaacgcagga tatcccatac gtgatcaagg ggatggaatc agttggcaga ggcacgccgt gcgactgcac cagcaacggg 720 gaacggcctc cttgcagcct tcaagaaaca tcatattggg aaatatcctg gcaagcctct 780 caagtetgta gatacccatg acaccacgaa aategtgata aatgeetega geteaaggat ggcaagctga caacggagac gagagtgaaa gagagaggca cagtcaccaa caactcgctc caaatcaacc gcacgcagag acaatgtccg ttcgcttaac gcatgctcac tgtccgtatc gacggccagg atgaccgtga actataggac cacgcaagtg acactcatgc ggcctgttca 1020 agagaatagg cgctatttaa ggctggctcg tcaagggcag gacgtatgac tgctagcatt 1080 gattggaggt ccagtttccg ctcacgcagc agggcaaaga gcagcagcaa caggggccag 1140 accaggccag atggcattgg cacggccaca gctccccgga aaataggacg agatcattga 1200 gattcctcgt tgtcagcaag ggatagagcg caatgcgcct gagaatgccc tctccggact 1260 ttgtgacctg gcttttctga acccttgacg cgggttaggg ccaatctccg gtttcggggg 1320 cattgataat aaagtatacg ctgccccgtc ggtttagatg acgcagaacc gaccctacag 1380 cttttgaaaa acgaaaagat tcaaattcat attccgttca aatttggctc attttttatt 1440 aagtcctcaa ttgagtccct aacccctgaa tggtctgaca cagcagatga taggtaaagc 1500 1502 ag 1983 <210> 2257 <211> <212> DNA Aspergillus nidulans <213> <400> 1983 . ctggttgtat tagggtcagc tggttttgac cgaagaagcc attttcactt taagtggtga 60 gttaagataa actcaagctc gctgaggctg attgtttgat ttataccagc ccctgaggta 120 cggatgtggg atagtggtgc aaagcacata tacttcaaac cgatgactca ctgctttagg 180 agctacaggg tggaaatgcg gccgtttatg gcgcggtaac cgatattttc gacgtcggta 240 tgcaagtctt cacattctat atataagaaa ccttgcgttt ttccctgcca tgcgcaaccc 300 gggtaaatgc gtcaacacaa aggtctatac gctacctaat ataggtagaa tcagatacaa 360 gactatattt cacatttcat atgacattga ccttgaccaa ggacagaaca ataccattat 420 ctttattgga cgcagatccg ttgccgccgg caggtaccgt cggcattacc cgtcagcctt 480 ccgttcaggg cacgcttcaa gtccttggcg aatatcaaga ccagatataa atttgcaatt 540 ctagtatttg tgttctcctg ccagagaatg tagctataca cattgtttgt aagagtgccg 600 atgtcttgat tttagccccg aaggcgttca ggtatacttg atagtcattg ttcattggtt 660 gcaagtette gatgeegeea taacatatet teacetatat etgteteett cataateage 720 ggcctgaaag cttgcttgga tatcaaatga aggtactctg tcaggatgta 780 tctagttata cacatttact ggctctgcaa tcggagggaa aagcatgtag atcggcactt 840 tattttgctg gcccagtgtg tctgcccagt gtccagacgc aggcggttgt tacctgaaat 900 tcagtcacgt cagataagga tcgtggtgta attaaatctg gcgtgattga gctatagcat gaactacacc actagcggtc aatggggctc atcggttact tcgagactgc atatacctgc 1020 gaacatggtt aggccgccat acacgaatgc cgggtatcca gcttaacgtc acc " gaactcgccg ggctgggcca gataccggtg agcctgcccc tgctgc aas leasetcggt 1140 actctggaca ttggttctgg tacggtgtcg cgcccagtac catccgagaa gcggggactc 1200 atttcggcgt tagacctgca ttgccccatt gcagttgctg tattgaatgc ccgacaacgc 1260 ctggtgacta acgtcctctt ggcgcagacc agccgcccgg gccagagctg ggctagaacg 1320 gtataataga aatactccta gtagttatgc aggtgttgtc tgatgaaaat caacagacat 1380 cagtccctcg tgggtttaca ttttagctgg aaacattatt ccgttccaga aggagcagaa 1440 taggattagc catgttgctg cttacattta gctcagacct cgtgctttag agctgctcac 1500 ctacagaatg gcggagagca gattcatccc gagtatgcct aacacgacat taagcagcct 1560 ataagcggcc attcagccat tgtggtcgag ccagaccact acctgtcgta cggtatgaaa 1620 ggtgcgcagt ccaagatacc caggtcgcgt agttacccta gtataggcac agtccagaaa 1680 aaaaagaccc ccgcacgtca agccactgct gcattgtata aatcaggtgc tattatccgt 1740 aaaccttgga ttatgacatc attaatctat ttttccagag agacctacct attcaggctg 1800 ggccaagggc gtttggccag tcaatcttcc ccggattcgg gctccggtgg ggactccgca 1860 ggtattgtgg ggagagctgg agtagaaatc cccttaattt gcccgcaagg ttgcggaggt 1920 cctccgattt ctcggaagca ggtaagagca aatccttaaa tgctggctct cctcgggtcg 1980 gtgtgcctta gctcaaggag ttggagtggt taatcctagt gctaccatca ccatcatgtt 2040 ccgctcatcg gctacggtgg ccgcagccac cgccatgggc ctgttgacgg ccgccgacca 2100 tggctcattg gcgattgcgc agggtaccac tggttccaat ggtaagcgca ctccgtctct 2160 ataaagtata cggctagtga gttgaaacag cccaacaatc ccaagcggtc gtcgtcgacg 2220 2257 ggacgaactt cgcgcgcatc gcagccaaca tgtccac

<210> 1984 <211> 2572

<212> DNA

<213> Aspergillus nidulans

<400> 1984

gatcttgttg ttgaggagcc gccacctgat tcaaagatag gaagttagaa cagcggcttg 60 gtcgctattt gcgttcttca ggactggcaa gccaaggcgg aacgcgacat tgactcttcg 120 gcgtacgcga tatccacgct tgaggctgcg ctggggtcgt tcttcagcac gtcgaccctc 180 gagggtggag ctcttaaagc cgtgaacttg ggctgggatg cggataccgt gggtgccgtc 240 tatgggggct tagtgggcgc attctatgga ctggaggcga taccaactcg atggattgac 300 ggactacaga aaagggaagt tatcgaagag attgtagatc gtcttgccaa actcggagaa 360

420 acaacttgtc tcaacatgac atcgtgacca gaaaagcgac atgttcagcc aaatatgatg gtgtttatgg atagagaacg agttcagtgt tgcggatgct ataaggccaa ttaatgaaac 480 aagcccgcac caaagggagc atcttatcta gtttgccgtg ccgtagatcg atagttaccg 540 tgccagcctt tgaataatct attttatagt tctatgcaac catcaaatca actatcattc 600 660 caagatgtaa ccaactagca caggaataaa catatcaatg ccccaccaaa gcctggtgct ccggcccata ccgattgccc gcaggttttg cagcgtcaat aatcctcctc atctccttcc 720 actettecce actaaactea atetecetgg aggeecagtt etettetaaa egettegeet 780 840 tggtcgtccc cggaattgca atcatcccct gcgcggcgac ccaagcaagc gcaatctgcg 900 agatcgagac accettette agegeaaget tettggtete etegactatg geaeggtttt tgtagaagtt ctcgccttga aacttggggc ctacacaagt ttatccgtta gttgatgagt 960 teettttggg caggtgtegg gattaggtgt ttegtaacgt acteeteegt eggaaateat 1020 ccggcgcaaa atcgtcaggt gtcttgtagt cgaagttatc gacgagccag ccgtggccta 1080 gcggactgta ggcaatgtag gcgatgccta gctcctttgc tgtgtcgata agaccgtctg 1140 tttcatggat ggtttcgaag gtggagtatt cagcttgtat ggcgtcgatt ctggcgacta 1200 tcacaaacca gtcagcacca agaagccaag gtgggacgtt tgaggggtgc atacttgagt 1260 tegeettteg eagggtegea getgageatt eagagaggee aatgtaettg gtettteegg 1320 ccttgcggat ctcatccagg gccgggattg actcttcgag gggcgtatct gttacattat 1380 ggttagatga gtgcttcaat ggccatttat tccggtctat ggcgtactag ggtcaatccg 1440 gtggagatag tagagatcag gcgtgaaatc aaggcgttta atggttccct cgatgtactc 1500 cttaatatgg gtagcagagt tggtgacgcc gcccttgcca aagacatcga agccacactt 1560 agaggcgact ggtgttggtg ttaacttggt acatagagag aagcctcaat tcgcaaaaaa 1620 agaggggatt ttaccaaaca ctttatcgcg aacgttatgc tttttgatga atgcgccaag 1680 aagetteteg titataeegg ettggtaaae aacetteeet teegateaga ateegteeta 1740 gtttcagtga ctcgagtcag cttacagcgg tatcccagaa tgtacatccc agctcgatgg 1800 ccttcagcag cacgggctct gcctcttcca agctgaggtt tgagcccaac ccgaaactca 1860 gacccatagc cccgaagccg ggagatggaa catggatatc agcaaaaggg agtgttttga 1920 ccatcgtgat atccgtactt gcaataatgt tcttgaggat tgtctagtgg attgtttggg 1980 aggegagtec agggetttaa atattgtace acceptetat caagtetegg atatactace 2040 gagaaatgee tgtggagaae tggetgaage atecateaeg acceettatg teetaageee 2100 gaaaatatag teeggagetg teateaagat gggeegtagg acaetggetg tteeacatet 2160 gaagaaageg aagetgagat tataatetea aaaceatgat catgetagtt egttaceeae 2220 tggeaagaca ategtgaaet taecegaagt tttggeteeg egetaattge tgacaettge 2280 agateattga gaetegagga ttggatgat aagtatagae etaaaagatt etggetegage 2340 gtgtacaagg actaacatta eeteetgetg gaageaaett egtetacage attgggege 2400 cateattea tgtactaatg acataataat eagteatta eeagtaaaa attgggtgea 2460 tgtgagtage actaactgg ggetaaaate eagetaaaet aagegacaat gettgacagg 2520 gageageace tgteeacta gtagagattg ttacaateee ttgagegea ea 2572

<210> 1985 <211> 2480 <212> DNA

<213> Aspergillus nidulans

<400> 1985

actgaattaa tgaaacagta cagtaccgtg accatttttt cttgctttat caacacgatt 60 tccccatgca ataagcataa aatgatgctc tatcgcttga aacgatattt tggacgtcgg ggatgcccga gcacaaggca tggaagagac cttgcgccgg ctctagaatt gaccgctctt caaggcagtt attcgtagtg ctgatacatt tgagggtcgg ttaaaaccgg tgacgataaa 240 tgtgcgaccc gcgcaggcag aatttaactg cagaaagcgc cgctttttag ttgctgtggc 300 360 tgatattgaa gcaattatac ttgggctttg gctcgatctc tctcagtggg attatatcta 420 atagtgcatg agttaaattt tagtcaccta ataactcgag atgcttaccg cagaagcttt tcaatcaagt caacgtgtgt catgaccatt cggcgacagc aatagcgctt gcacccgagt 480 tgatccatag cgtctctaga agtccgcaag tttagacagg taatataaga gcccatggaa 540 600 atactgaccc atcggggata ccatcgtcaa gaagctgtag gtatcgctcc cagagatcgc caacaaccta aacatgatgg catgtcagta ataagtccgg cacatgatgt gagtcacaga 660 accttgccgc atgagaagca ccgaaccgga attatcatcg tgttgaacaa aggagtacaa 720 780 gaacgagaat tatcaagcga tttgagtcga tggggccgtg gaaatgatgc tcagaatgct

tctcgaaggc ggtgtcctgt gtacctttta tgcaagggcc cacttgcgga aggccactaa cctaggtcgg attggcgcct acttgtcgcc cagtaagaat tgagtgcagc agttaacctc 900 cagactettt tgacttaaag agattttte ttaatacgaa gcaaagetag ggettgagea 960 tatcatcaga ttcacatacc gtgcctggag tgctggtcaa gttcagcttc tcgactttag 1020 gcacagtatt gttcacactt cattatgtcg acaaaagaca attcaagtcc ggtgcggcct 1080 acgaaaagat cacgggcaag tggtgcaggt cttgacaacg taaaatccaa aggcgatcgg 1140 gtaaaacgac gtcgaacctc cacagacaac gaaacaggga aaaccctgaa agattcgaat 1200 gccttggaaa tttcacaaca attcattgat gcaaccgaag ctccctcaga ggctccaact 1260 tggactttgt cccggcccat cgccggccat ttcacaaaca cagatcctgt tcttacgcct 1320 gacgagcagt atgtattccc tcacttctat gactttactg ttgattaatt ctgatataga 1380 tatettttte teggtgtega aaceteggte caegtttatt cagttgetae ttetegtete 1440 ctccgtgtcc tagaagtagg ctccggcgat agcgtggctg gatatagact ttcctccaca 1500 aactatgacc gtcttcatat cattacatta tctgggtccg tgagcgaatg ggattggcct 1560 tccaacaaac aagttgctca ttggaacacg gcaccccgga ttatcgcagt tgatattgta 1620 tacgattctt cctccggtac attatttca ctacggaagc gcaaggatgg aaagagagaa 1680 ttagcggtca cgccactgaa taatgagaag ccacagagca ctgtcatact cgagaccaat 1740 gccaaaatcg acaagttcag agtaagcgat gactttctgg tggtgtacgg tggtgccagt 1800 gttttttttg gtacttcttg ctccactcaa ggttctgagt cgcacaagtt cgtgtggaag 1860 gaggtcaaac tagcttccac tgttacctgt gttgatatat ggggtactgg accggagttt 1920 gaccttgcac ttgggggtgc tgacggttct gttttgatat atcatattca aggttccacg 1980 attaagaacc cacccaggcg actacattgg catcgagacc ctgtcacagc cgttcgctgg 2040 tcaaaagatg gttggtcgcc tcttacaatt cacagaatta aaaaaagcta actgaaataa 2100 aggcaattac gtcctatcag gcggtcacga gtcagtcatg gtactttggc aactagatac 2160 cagccgaaag cagttcctcc ctcatttgtc ttctccaatt tgcagcatag ttgtttccga 2220 aagtggtaac tectaegttg ttaggetgge egataategt gttgtggtet tgteggeaag 2280 ggaattgcag cccatttcta caataactag tctgcaagtc gctcgtttag caaacacatg 2340 caagacagtt gcagctgtgc acccgcagca tccagagcaa cttctaatgc ctccaccagc 2400

ttctcgccaa ctcacacaaa gaaaaattac ttcagcaagt gcttctgttc tgcagacaaa 2460)
tgacactcgg tcatgggtcc 2480)
<210> 1986 <211> 1524 <212> DNA <213> Aspergillus nidulans	
<400> 1986	
aagctggcga aaacggccag gtgtgctcaa aaagtaacac acataaccac tacaacatgc 60	Э
ttgcaatcga aaagccggaa ttggccatgc ccaagcccca aagtggggcg gagggttgtc 120	Э
attccctgga taaagcgggc atccggctgg gttctttctt tgggtttgca cagcagttcg 180	0
ccacaagtcg ttgcctagcc gtcggtcttt accagtaatt tgagttcgcc aaagaatcag 240	0
ccagaccggg tcatctagct aacaataagt gatcttcata atcttctaag agacctatat 300	0
taggcactct tctaattggt tagtcccgtg gaaaacttcc cacactccca tgggaagtcc 360	0
catgggacta aaaattccta tccattgttt agtcaatttg atccccctga ggttgtgata 420	0
aaaaaaatat totaottata catagatota tatooaatat ataottttot taaootoooo 48	0
ctacataatt ctactacttc agaaggtaaa aaagagaatt cgataatata tactactcat 54	0
acggttgtca atccgcaccg caacccgcag cggtgcggtg	0
gatgtctgta atacaaacct ataatatcta gacttgttaa acccaaccca	0
cccaactcgg cccgacccgc caagaaatgg gttgggttag accttctaat tatccattgg 72	0
gttttggata tttttggctg ccccaaagcc cggcggagca acccgctggg ttgccaagat 78	0
atctgaatag gtatattact gtatttagat tatatttgct tacttagata gttataatac 84	0
agtatttaaa tacagtattt tattaactat gtaaatcact tettaetaaa gtaatgacat 90	0
gcatagctgg gttattctgg gtcatttggg ttgggttaga attatttgct aaacccatgg 96	0
gcggtttact gttcaggtaa accaccccaa aaaccgcgtg ggcggatcag ctaggcctga 102	0
aattcccgcc ccaacccgtg gtttaaacaa gtctactgtt ggctattgag gtggttgcta 108	0
gcgtcgattt gattatgtga ttgatatctg taatgagcga ctgcattgaa ggtattgatc 114	₁ 0
ttataactat gatetgtata getaatttat acaetteeaa aggetteaaa agaatgttet 120	0
cgatatcagt agataattaa gttaatatat ggttgattgc gatccgtcta tggcggtgtg 126	0

atcgcatatg attggacgag cgaggtgctg gatattgatt aatgaagagg tettetetgg 1320 tegatateta egtatatagt ataaatttag gtatattaaa gcaacgtget getttgegta 1380 ttaatataat etetettt ttataeetgt acageeagea ggageegace tttettete 1440 tgacaatttt ggetttgaet aacgegaate ggggtattgt ggtetgtgga agaagatgae 1500 egegtageat gtaaaaaatg gtgg 1524

<210> 1987 <211> 3597

<212> DNA

<213> Aspergillus nidulans

<400> 1987

gcgccctaat acgcaaaccg aacgtgcttc ttctcgacga ggcgacgagc gcgctggaca 60 120 cggagtccga gaagctggtg cagggtgcgc taactgaggc agcagcggag cagaatagga ttacggttgc ggtggcgcat tggctttcga cggtccgtga tgcggactgt atctttgtct 180 ttcatgcggg tagaattgtg gagtttgggt cgcatagcga gctgcttagc cggggtggaa 240 300 tgtatgctgc gatgtgcgag gccagaagct ggatgtgaat ggcactgtgt cagcatgatt cagcgagagc gggagtcgag gttgctgatg aagttgttgg gtgcgctcaa tgtgtcgcga 360 ccagcgccaa caatgcttga gagattatac aatgtattta tatagagcaa tagactgggt 420 480 tcgatctgtg aggcgagtat tggattggtg ggggcgcatg agaaccataa aaaaagggga aaagactttg tagagagag agaggagaga gtgttcttga aaacattgct tttggtggaa 540 ttgtacattc tacacctgta cgccttctat atgtgaaggc tataaactcg tagggtatca 600 660 ttttgctacc tgcccctgct aataattgga cgttatattt tcctgatggt ttgtggtaaa attttcgatt gaccacgctt gctcgctagc aaggtttaga cactgatatg aaaggctccc 720 tcttcagaag ctgactgtaa gttcccagat ttctgtcgcc tgctactgta ttgccaattc 780 cagatattta gcactacttt gaccctttgc gttgcgttca ttttgcagcc tctctaactc 840 tcggcttgcg aggccatgac ctccaagttc tcttcatagc aaccgaggag agtgagtgca 900 atcgaacttt ctcttcatat catcctcccc attatatata ccatgtaaat caacttgatc ctcatccaaa tccgtcatct ctcctcctgc ggagtggacg agtggcaaaa gttgcgagtg 1020 ttttaggtca gatgctgaac aagaaagttg agtctttggt acatggtgct taacagtata 1080 tactgcacta caagctactc ctcctctata taccaatagg agcacacgga acccttagcc 1140 cagtcgttgc tataagctac ttgaccgtgt acttatacgt agtagaagtc acgtgtcatc 1200 cttatcagtg caaggtggac cgcagacact tccctttcta ttctcattcc ctttccctcc 1260 gcacgtcgac gctaccttat cataaaatcg gtgttccttc gtcaggacat aaagctaccc 1320 aaacgtatcc aaaatggccg acaagctgcg cacccttcaa aatctcgaag cgcaacaagc 1380 gcgctacatt ggcactggac atgccgacac aaccaagcac gagtttctga acaacatcgt 1440 gcgcgatagc tatgccagct atatcgggca cccaccgctg ctagggtaca tggcgctggg 1500 aatgggcgag agccgcgaaa aggtgcgtgc tatgatggtc gagaagatgg tcaggggggt 1560 tggggctccg ccggaggtta gtatttcctt tttcttctcc tcttcctctt ttgttcggga 1620 ggattcgcgg atcttgatgg ggctgacgct gtgaactgta gacgcaagag tagcgctctg 1680 cgacgtgaaa cgaagggttt tgatatccgg caggacactt tcccgcccga tgagaagcga 1740 tatggtcggt tcaatcaatg agactaaacg aggtgttaac gcggttgaat gcgcgtatga 1800 tttgccataa gagagaggcg aagactcggc cgacttgatg cccctggtct gaaatcggcg 1860 cgggcagggt ttggagcgac tgcttcgatt cgattacagt gatagtcgct atgatccacg 1920 gtacaattgt gtgagacgtc ggatatgcta caacacgtgg aacggacagt atctggggcc 1980 gtaaggggtc tattgtggta agagatgata tgaggcatgc acgttacgcg gcgtctatgg 2040 cgttattcta cgggcatatt ttggacggac aaaatatcgg tagataaacc tcccagaggt 2100 tctgagttcg ttcctatcat tataataata tacagcatgt atgctcaatt caaccctgac 2160 catatacata ttttgcgcat ttcattactt tgtattccca tctatcgctg ccgcatttcc 2220 ctgcctcgcc aatttcgtgt tctccgcctg caacgccttg ataaggctaa gccactgctt 2280 ccgctcaccc ttcaatctct cgcactcttt cttcaggtgc tcaacctccc tcttcaaaac 2340 ttctgtctcg tcgcgcgatc gtgccttatc ctccttctcc gcttctttcc gatgcctcgc 2400 ctcaatctta gccgcctctt tgatctggtg ccgctcaatc ttggaaaggc gacggacgag 2460 cttggcttct tcccggaaga ggccggacga cgtttatgca tctgtggcgt atcggatgcg 2520 ggggccggcg tgccagagcg gctacggttt ttggtggcgc tgctgcttga tgtgctgtcg 2580 gaggtgagtt tgttggtgct gctgttggga cttattggac tgccaggctt gtctactgag 2640 gcccgcgcag atgttgtctc tttcttgact tcttgctcat ctggggcacg caggccgaga 2700 gcgtggatgt ctgatcggac gagctggatc tgggcctcga cgctgcgttt ctcctgggcc 2760 agtttggcga gttgccgctc atgcgaggag agcttgccct tgcgatttcc ttgacgcatt 2820 tegtetgetg ageattetea ettteeetet tateaeteet ateeatetet eettaeteaa 2880 tetetaaace cettetteac acteatacae atetecatgt acteaatace atactactte 2940 ctttccttcc tcacacctct ctatcctccc tctctcctct ttctccatta acttccattt 3000 atcattccca ttacacttct attcttccaa catacttcat tccactcttc cctccctacc 3060 ttctcttcta aattattata acaatcctcc acctcaactc cctcaatcac actctcctct 3120 accaccette teteataact actatacece etetteaett ateaettta eeteetteea 3180 ttctacttct tccccatccc atcatacccc tttcctttcc tccctactct cctccactaa 3240 tctaccttct tccactcttc tatctctacc tcacttattt acatatcctc ctatcattaa 3300 tacttatctt tcaattcaat tttatacaca taatttcata tcctctttat cctcatatac 3360 tcatctttc ttcatctttc ccaccccatc cctttcctca caccctcttt tatcctattc 3420 ctctctatca cactccttac ctcatacact ctacttttct cactaccccc tcttcttact 3540 catccatccc actctatttt cactatttcc ctctttcaaa cctcctacct ctctttc 3597

<210> 1988 <211> 3040 <212> DNA

<213> Aspergillus nidulans

<400> 1988

cagcttataa aaaaaacaca gggctggcat agcgaaattg atgtcgctca gtggatgaaa 60
tccaatccgg acgttaatca gctgctttac gagtgatagg gtacctaccc acaggaagtc 120
ataatgataa taggccgatg gagagtcgta gcgataggat gatctgatcg agtgaactca 180
tacatacgac cgcgaggtgg tcattccagc taagccaccc agtgaaaagc aaagaggcac 240
caggagacta tcacgacggc tgattaatgt cgcagtctag atagagtatg ctcatcttcg 300
aggctcaagg gattgactga ctcggctccc ttcataatca tcacggagtt gtctacagac 360
agttagtaaa ccagtagtac ttcaatgatc cacattatct atattgtacg gagtagatga 420
tgggtccctt cgcttaagat taatcctaaa cctggcatcg acacctacct gcatactatc 480

acttcatage ggcgtaateg acactgatee egettgetet geaagegage tagegggetg gcgggtaatc tatttgcctg ggccccatag aagcacgcag cggtaccgtt gctgtactcg 600 ttaacactat taaccgtcaa gccttatttg tatccataac cgatggaata ttgctgtggg 660 cgggtcgagt catgactcta ccgacatgac aggccaagac tatgaaattc ggaagcgata 720 ttagtcgcga ctcagggagg acggggaaga tgcctatcgg ggtaggaatg tactttattc 780 840 gggacgactg caccgacccc cttctccaat attctgatat ccagccgaca gaaaatggca ttctggcatc tgccgagtat gaagtcgata cggctatttc caagttccaa acgatagtgg 900 gagatgcggc cagggcatgg cgtaccgtat ggctacgcct atacatagat gatcgacaaa gtcaaggttt attcgtatcg agattacaca cgtactgtgt acagtgtcat gcctcgttag 1020 gccggtttaa ttgcgcgtga atttggcgat ggctaagtgt atgcgttgat agaagctaca 1080 ccgtaagtga gatggatgct ttggatgtct tgatgatctt ttgcattttg cattctgcat 1140 ttgaatttga ggacagtacg tatagtactt cgtcgtcgta gcaggaatga accgtaccgg 1200 aaattaccag aaataccaat accagcctgc attagtgcgt cggctttcgt gccaaacccg 1260 ggaagggccg aaggatgcct gcgacggggg cgacaatctt gccacgtgaa gtcaccaggg 1320 tccagactcc agcggcgacg ctaggaggcc ggcgctatgc caaagaggaa tggtaagggc 1380 gcttgctcca gcagttcgat gctccggacg cgtggttggt cgtgacctgg tgtttcaggg 1440 gcggcagagc gttggaactt tctgggcgag ggactaagcc ggtttggtgc ttgcgcaatc 1500 ctttgactct tggcttcttg actcttggac gcttgtctct tcattccgat tccgagcccc 1560 tggctgcctg ggtgcctgta tgcctgtatg cctgacctgc tccccacaaa cccaccggag 1620 cctgcactga gtcgcaaagt cacagaccga gccgctggcc ccgattccag ttcctccccg 1680 agcagcgcca ggaaaggctt cctgacgtac gacgatcgac cgtgatggta tgtgagtgcc 1740 taggcctgtg tttcgacatg atagctcaga tattattttt tatgagtagc atagtgatca 1800 ctatcaccag attcactccc aactggtatc ttacagccga tcacatagga gtaacggagt 1860 atacttaccg aaatcgcagc ctggcaaggt tgtacgatca cagaaaccgg aatactacgc 1920 aacataggtc gcaacagctg ccggaaataa taatgcataa tgctgaagct gaagtgttgc 1980 acagtctgtg ccacatttgc caatctgcag agtgaggaac agcgtggtta tccgcagcat 2040 acagcctcgc tcccccatgt gtttgtcatc gagtcctcac tgcgtaacat cggttacagt 2100

caqactegga caeggeggtg etgaagetgt teaceaegga atgtgattgg atatgeaggg 2160 gqaaaagggg ggaggagacg tcgatcccgt attacggacg cgcgtggcag gagatgtgat 2220 gatctcctca tcacgcgtgg ctgtacaggc ttagccaaga cagccctgtc tcctgaccag 2280 ctcctqaaac actqaaaact tqqacaqqqa tqqctqctct ttqcttttcq cactqatcqa 2340 cgcttatcat aaacttcacc gctcgcctat ctcggacaga cagacgacca gccctggaat 2400 cgcttgacat ggttcccttt acttcgcggt tcctgggtcg tgcgaggcct aacctgatac 2460 ggcgcaccca agcgagcact gatcagattc gattatgaga ttgttcttgg catgttgttc 2520 tgcgatgctt tttcctctgc tccccaagaa ctcgcattcc caaaagtaat catgagttat 2580 ccttgagctt tgaccattat ccctgataag gcacttcccg taatggaagc atcaccgtgg 2640 gggaataccg agaccgttac tgtttcgcat agcggcaaga actatgcgtt acaggtccat 2700 agtctcggag atagatccca gtaacgcctg gaggctgatt atcatatcag acagaggcta 2760 gagcctgact aggctggctt gattcaaggc cgccaggggg ctggagtcct tggagaaagg 2820 ccaagcccaa agggagaact tgcagggcaa gatgattgat taccggcccg ctaagcgagt 2880 tgcagtagtt catccgagca ctaatccggc ggtcggcggt cagtgctctg gacgttgagc 2940 gttggaatga tcgtcgcgca tcataatcat ctagtgctag tagttcatct cgggattgct 3000 3040 tttctagttt taccggtgtc cggccggatc attgatacgt

<210> 1989 <211> 2569 <212> DNA

<213> Aspergillus nidulans

<400> 1989

ctactcccga tcagttcatc cggatatgtg gaacgcgact ctcgtgcatt gcgtcgcgat 60
taggcaagcc cctgccgcca tctgcagttc gcattacagg aggctgaacg cagaaggtgg 120
cggagacaag agtgatcagc aagaaaaaat cacagcggtc gtcaacgtgc cgcagtctaa 180
gtacaactac gtggcaatcg agccaccagt gatagagacg ccgcagctgc gtgacatggg 240
cgaggctacg ccaccgctag agtggattgg ccttcagcgg gacaagetce ccaatgtcac 300
gcatcagatc ataattgtta ccttgctgga ggtggccaag gaggtagagg acgcttacgc 360
caagatactg tggtcttctt gaaaagccct caactagatg ttgccgttca tgtatttatt 420

480 gtatactatt gtcagtgtta tacccagttt cgaattacat tcatgcaccg ttgttgagcg aaaatgtcga ccaacctatg ctatatccct tgcagtaaaa gcagcaccgt gcctagctcg 540 agcggaaatc ttgaatgtgg gcttgagagc tcaagctaag cttcttcagg actgtaaatc 600 ctgattcaaa gatattgccc aatcagacgc tgcggctttg cagagctttc agagctatgt 660 caattagtaa gcaattaccc cactagtgcc cctcaccagg gctatgattt gaaacctgta 720 acttgccagt cagcagaagg tggcagcaca tctttctcgt cgttgtgaag tggcaacaag 780 cgattcatga tttcattttg gagatattat tggctggagt tcctataatt acgaggcggt 840 gtgccggaga gtgaggtcta ccaagctgat taccaaccat atttggatag ccgattccat 900 ggaaagagag gatatcgcgg gagatgactc ctcttgatgc ttctcgtgtt gtagtcaaat 960 gatgctgatg atcgttttaa gtcagaattg agtcagtgat gtgagacgaa gttcgtgatg 1020 actacttgtc caatctcatg gtgtagattc attccatcgg cgaccttgaa accgtcaaca 1080 ggtctctgat agatattcgc tcaggtggca tccagtcata cgttttgttt tagaaagaag 1140 agttatatgt tgactaaata ctgtaccttt gtactttgta atctccaaga tgacaccggg 1200 ggtaaggggc atcagagggc cacaagcggg aaatgggtgc ccagtggaaa aaacgcacat 1260 cccagattgg gactcgggaa aaaaccaacc accgccggcc ccacgaccac taaactcgct 1320 tgetteetet etteeaette eceteetet ecteeteete tetetteeea accetettet 1380 cctccctcag tctctccctc tggagcagcg cacataggcc ttttttccta tcccaggtca 1440 tettcaggte gagetagete teggteetga tetettgtgt gtegttttet getttettt 1500 ttctttttct tcccctcttc cacacaaccc cgcctttgag gctttaacag aaaaaaaccg 1560 ccaaaatggt caagtaagtc catcccgaat catctagacg atgattgtga tggaaatggt 1620 tttgataaat atgctaacgc ggttctttac agcttcacta tcgaggaggt atgccgttcc 1680 attgaaaacg ccagcgaccc ggagctataa aaatttttct cagcgacggg gagattgatg 1740 tagtactaac aagcactagc teegeteect catggacege aaggeeaaca teegtaacat 1800 gteggteatt geteaeggtt egtaetegae aatteettea eeggegtgat tigtaigetg 1860 aatgtttcat agtcgatcac ggaaagtcca ctctcagtga ctctctcgtc tcgcgtgccg 1920 gtatcattgc tggtgccaag gctggtgatg cccgtttcat ggacacccgt cctgatgaac 1980 aggagcgtgg tatcaccatc aagtctactg ccatctctct ttacgccaag ttcgccgatg 2040 aggaggatat caaggaaatc ccccaggccg tcgacggtaa cgagttettg atcaacttga 2100 tcgattcccc cggtcacgtt gatttetett ctgaagtcac tgctgccctc cgtgtcactg 2160 acggtgccct tgtcgtcgtc gactgtgtet ctggtgtttg cgtccagact gagactgtgc 2220 tccgtcaggc cctgactgag cgtatcaagc ccgtccttat catcaacaag gtcgaccgct 2280 ctctgctcga actccaggtc gagaaggagg acctctacca gtctttcctc cgtaccgttg 2340 agtccgtcaa cgtcatcatc gctacctatg aggacaaggc cctcggcaac gtccaggtct 2400 accccgaaaa gggtaccgtt gctttcggtt ccggtcttca cggctgggct ttcaccgtcc 2460 gccagttcgc cgtcaagttc gccaagaag tcggtgttga ccgcaagaag atgcttgagc 2520 gtctgtgggg tgacaactac ttcaacccaa gaccaagaag tggacaaga

<210> 1990 <211> 3095 <212> DNA

<213> Aspergillus nidulans

<400> 1990

aacttgttgc caacctcgaa tcgctagctg atgctttgcc cgatgctgag accgacacga 60 acagetetgg geaagteaac ateateaaac agaaaacttt gaaacacega eetggtgete 120 180 agaagcgcaa ggaaaaatc gagaaactgg agcgagaacg gtttgtgaaa aatatggcgc 240 agatgtcgag tatctctgca atgactacat cgaactcgca gccggtggct gcggagtcag 300 tatcaagtcg atgggccgcg ttacggggct ttatatctca gactatggaa cagcagcctg cgttcaagac gaataagtga aacctaccgc tgcaagggca gtctatgatg aaccgatcct 360 cqttttcqqc qacaqtcatg ttataacaag aagtgtqcta tcccqcgacc atgatataag 420 480 tgtgcggcgg actgtgtgca ctaggaactc ggtactacat tgtcttcgca actttgcgtg cagtgataat acctcgatga acttggatta gctaaggtgt tagtactcct cgggagcagt 540 600 gtgccccttg aggcgaaaca gaaggctcaa atacaattca gaaaatggtg ctggctttca 660 gggcagtgtt gcgctgattt ggaggcagcc agcgagcttt gacaacgacc atggcctatt accattcaca acttctaaag ccttgtgaga cttgtcctga tcggcggacc aggcattgat 720 gaaggagtta tttgatgaat gttgatcata gatgacaggt agtgaagtgc aatgcaattt 780 840 ctgttgtagt cgcgtggtat aagttgagag gcgagggccg atcgcggttt aaagcgggga

tcaggaatga cggggcgggt cgatggggca tcttatctga caaccttact tcctcacctc ccaccagete eccateteat teteccatet ceteaacttg tggteetett ettetteet cctcttgtcg cttatgcacc accttcacgt ttggataaca tttgctagag aattcagtta 1020 tttagcaacc coggegeeeg teatgetaeg getgeegtgt eggeeactgt eagtgeaceg 1080 caccgccctc cgttaccggc cgcttgcgat tcatccttcc catttacgtc gcggtttctc 1140 gagetegtea gtgteettee etacatttae geagtttgat agateegaet teaegagtea 1200 gccattctct ggcgtatatg aaactggatt acctacggct ggtccgctag gatccacacc 1260 tgcattcgga gttcgcatca caccgaaatc attgaagcaa tatctggatc aattcgttgt 1320 tggacaggag cgtgcaaaga agatcctgag tgtcgcagtg tataaccatt atcagcgagt 1380 gcaagagctc cagagacgtc aggaagaagc cgagcaactg cttgccaagc gtttgcgccg 1440 agaggatatt cagaggcgcc aggaagaacg tgaggagctt ctcggcaaac atgcgagcac 1500 ggattccgtc gagcatcacc cggtcgaagg tatgtttctt tactttcagc catacatggc 1560 ctggattett tgtccgaget gatgcaattt atagacgagt acccaggeca acagegeacg 1620 atctatccaa acaacccacc tacccagcct tcctatgcta cagataatgc agaaatcgac 1680 gaatcgtcac aactacagat tgagaaatcc aatgtccttc tttttgggtcc ctccggagta 1740 ggcaagacte teatgtgeeg eteattagee egagtettat eggtteettt eageatetea 1800 gactgtactc cgttcacaca ggccggttat atcggggacg atgcagaagt atgcgtacac 1860 cggcttctag cggccgcgaa ctacgacgtc gagcaagcag agcgcggaat aatcgtcctg 1920 gatgaaatag acaaaatcgc agccgccaag gtcagccatg gccgtgacgt gggaggatct 1980 ggtgttcagg aaagcctttt gaagctcctc gagggtacga ccgtacaggt gcaggcgaag 2040 caggaacgca gtgcgccacg tctcagcggg acaaccagtt cttcatatcc tccgaatggc 2100 ctattaggaa acaccccctt tactcccccg ggtggaggta atgtacctca taaaggtgag 2160 gtttataatg teegtacega taatateeag eteatatgtt eeggegegtt tgeeggaett 2220 caccaagttt ttattgcccc ataattccgt gccttattgg ggttcggaca gccgtttcta 2280 ttccctctat ctatcttctc ctcctgtcaa ctattattac tttcacactc tttatccacc 2340 tegtteteet taettaeeeg titeetaate tigeateete tatteettet teeetittee 2400 ttcttttctc cacctccact ctctatcctt cttctgatcc tctctctcct cctccttata 2460

cecegitetty eccetactet acceaettee titacetete titateetate aacetactit 2520
ceteceatte teteetitet ectecatete eactetette tecaitatat actacecee 2580
teetiteace etaeteetee tatteetat attiatetet titatitetet etiteeceat 2640
ateteetit etaetatata teteaitete etetaitate eateteeett aatetitate 2700
ceaetigiat etiteteta teegiteteee eeteetatea tatatetiet etiteetett 2760
acticacait teacacetaa atteteette gietititet titeetetet eetiteate 2820
cteatecete eetaacteit eecattetit tatataacet eeteetete 2880
cticeateet eetitetite tetaiatet eeattietat attiegitae tetaetitet 2940
teeteetett ataceteet etattetate eattaacet etiteetat tetiteacat 3000
cticeetete etiteatitit eaattitaae teaceeet eticeatate etigiteteegt 3060
titeeeetet teacetet tetetetta ateac

<210> 1991 <211> 7737 <212> DNA <213> Aspergillus nidulans

<400> 1991

tgttgatgac ggtattgcat tggtttctcc tttctgatgt aacgatccac tggaaagacc 60 120 tttgatcgtt tgtacataac tatacgctag tatttttcaa tgagttagcg gcgcttcaac gaggctaatc tgttgttgca gtcgccaagg gcgaatctgt attctttgta taagattatt 180 gtataagtac aagccgccca gacagagggc ttgtctcttc caagcattca cacggtcccg 240 tctttcacta ctcttactct tggaactttt aattttcttt tttttattct ttttcatgct 300 tcattgttga tgttgctaga ccqttgagat accectcttg ttcttctacc cgtttccccc 360 ttacaagcat catcatcacc atcattatgc ctggcgctat agaatcctcc ccatcggagt 420 ggctacagct tgagctccgg aggatatgtg ccaatgtgct ccagcttgac accaaagatg 480 tegateegea aeggteettt eteteettgg geggegaete tetgetggee ateaagatat 540 600 tggcccaatg tcgggctcag ggtattacca tcaacattgc cgatatcatg gcagcaacta cactggagte getgtatteg atggeeeagg geeeggetga gettgeeteg teeteeacea 660 720 gcgataatgc cagcgacaag gacagctcac tggatgactc agagactggc gccctcaccc

ctaccaccga cgctggctcg agcttggccg acacactctc gcccgagatg aaggccaaat 780 tgtctgcgct ctccgtatcc caggataccg ctattcaagc ggttgtccct tgttccgcaa tccaggacag aatgctcgtc agccaactac agaatcctca cctatactcg tgctgctttg tgctcagatt aacccactca cacccaggcc tccccgtcga tgccaaacga ctgggtacgg 960 cttggggtga agttgtcaag cgtcactcca gcctacggac ggtcctggtt gagagcacac 1020 agcgaccagg gcactacaac caagtcattc tggctgggat cattccggca gttgaacact 1080 atgaaggagc cgaccactta ggctcagtca agttcaacgt gaataaccca atcgtctttc 1140 agccgcactc gatcccacac cgactacagc tggtccaggt ctctccctcg gaggtttatc 1200 taaaattcga catctcacat ctcctcattg atggacagtc ggctgaagtc ttgttaaagg 1260 acttgagcga cgcctaccgt gatggcgggc tggcggcggc acccctgtca tacgctgatt 1320 atgtctcctc ctacctcctc gaacctgctc agctaaacac atccagaaag gagtccggca 1380 tggagatgag ccctctaaca gttccaatgg acagaccaaa cgaagggcta tttgactttc 1440 agacggtcag cgcaaacgta cctctcgatt ctcgactcgt ccaatccgtc tgcgcgagat 1500 actctgtgac acttgcgaca gtgtgccagc tagcctgggg gcttgtcctg cgctgctacg 1560 ccggcacaga cagtgtctgc ttttcgtacg tcaactctgg tcgctccatg tccattcctg 1620 gtgtgcagga ggtcatcggc ccgatcgtgc agacctcgat gtgctccatt cagctcggtc 1680 cagctgatga gttacccaag atcctgcagc gcatccatag ggatgcatta caggccatgt 1740 cccagttatc gcctctggag gcgaatagca catccaagtc agcgcggcag ctgagtaata 1800 cgaccatgtc atttcaacga gccctagatg atgctgctgc gcagagagct ggtctcttag 1860 ttaaaattga gggcaaagct aatcctactg atgtgagctg tgtttaacct atcctgttac 1920 tgacctctga cgtcttgcag tacgacatct ctctgggcat tgcgcaggtc cgatggcctc 1980 tccgttgatc tggatttctg gggctccagg ctcgacgagg aaagcgccag aacgatgctg 2040 ggtgcattcg aggccgcaat cagagggatc attgactccc cggacagcac tgtttctaat 2100 atcagtcttc tctctccggg cgaggtctcc cagctagcgc aatggaacgc aagcatcccg 2160 aagccggaac gagtgtgcgt gcatgacaag attatggaaa tctccaagct tcagccaggt 2220 gctgcagccg tcaactcgtg ggatgggaac ctgacatacc atgacctcac tgttcaggca 2280 tcgaccctgg cccatcattt gcgggatcag cttggggtag ggcccgaacg gtttgttggt 2340 atctgcatgg acaagtcgaa gtgggcgatt gtctccatgc tggcagttct catggccggt 2400 ggcatcgtcg ttccgctggg agtttcccac cctcgagcac gcataaggga acttctgaat 2460 gatacagete gtgtegeect gettgttgae ggtaageatg gagacegget tgeaggtett 2520 gaggtggaaa atgctgccat gctcacggtg gatcagcagc ttctagactc tctgccaaca 2580 atccctaagc ccccagtctc cggggtgacg cccgacaatg ctgcctgggt catctacact 2640 tcaggctcaa caggtgtccc aaagggggtt gtactgctgc atcagaacat ttccacaagt 2700 gttatcgccc acggagcggt atttggcgtc aactgtgtta cccgtacagc acagtttgct 2760 tcatacactt tcgatgtcag tctctctgat atcgtcatga ccctcttcca cgggggatgt 2820 gtctgtatct tctccgagga aagccgcatg aacagtctca ccgaagctct gcaggggctc 2880 gctgtcaact acgtcaattt gactccgacc gtgcttggct tgttaaaccc tgctgatctc 2940 ccagtgatcg cactgtcgtc gctggaggag aggctatgga ccctgggatc atagagaaat 3000 ggtcgccaca tgctcgagtc ttcaattccg ttggaccctc agaatgtacc atcattgctg 3060 tcgcagctgg tcctgtcacg gaccctgctc aagctgccaa tgtcggctac cccactggga 3120 ctcgactttg ggtggcattg cctacagacc caaaccagtt gtgccctgtc ggcgagcccg 3180 gcgagcttct gatcgaaggt cccatgctct cccgtggcta tctgaacgac ccagagaaga 3240 cagegggege atteattacg aateeggett tegteaaaca tetegagget getaeteeeg 3300 catggaaggt tctgttccaa aaaagtgagc gtcgcttcta tcgctcaggc gaccttgttc 3360 gccagaagag agatgggtcc cttgttcata tgggcagacg agacacgcag gtcaagatcc 3420 gcgggcaaag agtcgaaatc ggtgagatcg aatactggat catgcagcgg ctcaaggagg 3480 tccggcgcgt agcagtcctc gtaatcgaac gcggacaagg gaaggagcag aaatctcttg 3540 ttgcggctgt cgaattcaaa gaggattacg aggacgtcag gcatagcgac gatgatatct 3600 ctcccgtcac gaagattgga gaatccacag ttctgcccca gttgctaccc ctgaccgagc 3660 cactgtctaa ggcattgcat cagctgcgca atgacctgtt agagcatctt cccccgtaca 3720 tgtcgccaac aatgtacgcg cccgtctcac agctaccgct gaacctatcc ggcaagatcg 3780 accgccgggc agtgacccag ttcatcaacg aactagacga cgtgcagcta cagcagtatc 3840 tcgccgtcag tggatcacac caggagcctt ccactgagac cgaattcaaa ctgcagaagc 3900 tgtgggccaa gactctcggt gttgatgtct cgcagatcag cgcagatagc catttcttcc 3960 atattggggg cgactcagta gcagctatgc gcgttgtcgc cgctgcacgg gatgtgggag 4020 ttggtcctgc gcgtcgctga tctcttcgag tacccccgtc tccctgacct tgctcgcgcg 4080 gtagagagcc gcgtcgtaga tgaagccgat gaggaagatc cagccccgtt cagcgtgtgg 4140 cgggaaagtc gcggctcgga gcccagcgaa gagccagttg agttggataa gatcgctgct 4200 atgtgtaatt tatcgaagga gcaaatcgaa gacgttcttc cgtgcaccgc tctacaagaa 4260 gggcttatcg ctctcacggc gcagcagcca acagcctaca ttgaccgcag agtttttgct 4320 ctctcacagg aggtcgatct atctcattac cgtgctgcct ggcagattgt catccaccga 4380 acctcggctc tacgcacacg gattgtgtct gggcctcaga caggttcact gcaggtcgtg 4440 gttgttcccc gtcatattga ttggaacaag tcgtcatctt tagatgagta cctcgagacc 4500 gacaggcaga cggggatgat gatgggtcag cccttaaacc gtttcgcctt tgtggatcag 4560 cctgatggcc agcggttctt tgtatggacc actcatcata gcacgtacga tggatggagt 4620 cgagccttgg ttcttcagca ggtcgccgat gcctacgcga gtcgagacct gccacccatt 4680 gestetttet eceggittat teaatacate casteteage egeaagaege ageggesteg 4740 tactggaagg cccaactcgg tggggatacg agcgctgact ttcctgcgct tccaattgcc 4800 aattaccgac ctcgtccgca gcagcgccat cagcatacag ttaatctagc ttccagctct 4860 acaaaggtaa tgttgccaga ccttcttcga ggcgcttggg cgctggttgt gcatcagtat 4920 gttggcaaaa ctgatccggt atttgccatt gctctctccg ggcgaaatgc tccagtacgc 4980 aatgtgccca acatcgccgg accgaccttg acgaccgtcc ctgtgcgcat cttcatagat 5040 ccagagcagc tcgtcaacga gttcctgcag agtgtgagac agcaagccgt cgatatgata 5100 ccttacgagc atacaggtct tcagcgcatc aagaagatgg tccccgagct ggcagcagca 5160 gtcgacctca aacatctttt cgttgtacag ccggcaagtg atggcgagag caagttcaaa 5220 atccccggag tgactgagca tcttgttgcc gtggacgaat tcgacagcta cggcctcaac 5280 gtggagtgca tgctttctgg tcagtccata gaagtcgatg tgcgtttcga tgagaagatg 5340 ttatcgtcgt cacaggtaat tcgtctgatg agccagtttg aagctgttgt gcatcagctt 5400 catctccatg gcgagggaag cctgaagatc aaggacattg acctcctcag ccctgaagat 5460 gtcaaccagc ttcggcaatg gaacgccctt ccccttgcac agcctctcga tgtctgtcta 5520 cacgacctca tcgctgaggt cgctcgatcc cggcctgggg cagcagcaat cgaagcgtgg 5580

gatggaacat tgacgcatgc acagctgcaa tcctacgctt cgacgctcgc cggctacctt 5640 attgagettg gegteggtee egagateteg gteecegttt geatggacaa atecgtetgg 5700 gccgtggttt gtttcctggc tgtcctacaa gctggtggtg tggttgttcc cctcgggact 5760 ggccatccca tacctcacat tgccagcatc atcgaggata ccggcgcgaa gcttgttctt 5820 gttgatgcac agcaattcga gcgtctgttg gagctcaccc cttcacgggg tttgactcta 5880 gtgcccatcg atacgcaact gctcaacagc ctaccgactg ctgcgccaca aacatccgtc 5940 acgccggcca acgcagcctg gatagtcttc accagcggca gtaccggcaa agccaaaggc 6000 gtcgtcctca ctcactccaa tttatcaacg gcaatcaaga cccatggcgc ccgctttggt 6060 cttgggaccc atacacgcac gattcagttc gcggcacaca ccttcgacgc cgtgctgcag 6120 gattatttca ccacgcttgc cagtggaggc accgtctgtg tcccgtcaga ggctgacagg 6180 atgaacgatc ttgccggcgt catgaggggc atgaatgtca acttcgcaaa tctgacttca 6240 actgtggctc ggctcctcac gcctgaccaa gttcccagcc tgaaggtttt aatcttagct 6300 ggcgagcaga tccaggattc tgttgtggaa acttggtaca agcatgctga agtactgaac 6360 gtctacggac caacagagtg ctccatcaac tcaacctgca atggccccat ctctgaccta 6420 tcgaatgctc agagcatcgg gtttggtatg gggtctcgta cctggatcgc tgaccctaca 6480 gaccccaacc gcctgtgtcc tgttggcacg cctggagagc tcctaatcga gggtcctggt 6540 ctggctaggg gatatctagg cgatccagcc aaaacggagg ctgccattat ccagaaccct 6600 teetttgeet eeegettege teteteggae tgeegegtet ategaactgg tgatttggea 6660 aagcaaaccg aagacggcca gatcctatac ctcggtcgca ttgacacgca gatcaagatc 6720 cgcgggcagc gggtcgagct gggcgagatc gaacattgga ttggacgcca tctaccccat 6780 gtcaagcaca cggctgttgt ggcaatatcg cgtggagaga agcagatgcg tcttgcagcc 6840 gttattgagc gcgagaacgg acataaacca gacccggtga tctttacgca gctcaagaag 6900 accetgteet cattgetace gtegtacatg gteeceagte tgtatateee ggteactgaa 6960 attcccctga ctgtctctgg caaactcgac agacgcgcca tcaaacaaac agttgaaagc 7020 atgcccactg aagaactgga gcagtacttc gcgggtgagt ctagcggaac ccgcgttccc 7080 ccgtcaaccg agatggagaa agccctgcaa cgaatctggg ccaattcctt gggcatagag 7140 gttgacgcca tcggcgccga cgacaacttc ttccagctcg gtggtgattc agtggttgcg 7200 atgcacatet etgeeteeag tegteaagae eagteegtea agggaetege agtaggtgat 7260
atatteatge atcegeggtt ggeegaettg geggtettge teggagaagag accegegggaa 7320
ggtgagggtg getgggaega ggaaatgaga gacgatgaga gteeatttge attgetgeag 7380
gaggtgttgg actteggattt gaaagacata taggetatgt tatacatete tegacaegegg 7440
ttttattett gettttgea getttetagg eggatatggt agagaetteg atcacttgea 7500
tttacatgaa teaatetgaa aggagaaaag eacaeaatea ageeegeegt etetteaeea 7560
acaecetaae geegettggg ggaaataetg eetetgeeae eeaeeggtte geeggtetet 7620
teeeetggta eteeteggga aaceggatat egtagttett tageaegtat gegataatea 7680
tetteaaete aaagteeaee agaaaeegge eggggeagge atgettgeea tgaetga 7737

<210> 1992 <211> 2182

<212> DNA

<213> Aspergillus nidulans

<400> 1992

ttccgatttc aggactagag acgtcatcgt cgtcctcgct ctctatgccc ttactcgttt 60 120 cgtagtcatc ttggtaggcg tcctcatact cgtccatatc cctgtccgtc tttccagctt 180 cactctccgg cttaagcaga gaaagctctt tcccagtacc ggcatgctga ggaaccgagg 240 gagcccagtc cgagtcttcc tcatcataag cactgccatt tccccagagt gcaagagcag 300 360 tgcgtctttt ctttctaggc ggtatcgcta tagcaggcct tgacgacgtc aatctttca agaatggctt cccaaaagga accccgtcaa taagatgcct tccgtcagcc gatatctggt 420 480 gccggccgga tatctgcctt gccttgaggt cgaagatctg tagggcacgt attaggactt categocate cetaaggatt cettetattt ecatgaaatg caaacattee gageeeccaa 540 600 cttcaaccac gtagtcttcc aagccccact gtccgcttgt ttcatcttca aacagccgcg gctctgtctc cagcggaatg acctcgttaa cgtcctccag caactgtgcg attgtgtatc 660 ccccgttgcc gtataacgca ttgggcatac gcgacgacgt cacagcggaa gaggaggcag 720 gtgatatgga cgaggggttg ggatgattgt gtccgaagag cgatggcggt gaagtagtcc 780 agagaatgcg cgttacaggc aaaccgtgcc gctgaatggt aaggtggagc cgcatgcttg 840 gaatgtcaaa gtttcctggt tcccaaacca ggaaagaaga taccggttaa gaaggcagct gcagtcaaag gcgcaacact acccacggta tggcgcgtgc agattgagat tttactatca gtgtcaatcg cggcaaagtt gcaggatagt caaactgaag agcaccaaga acgacaaaat 1020 gaattgaagg aaatcgctaa ggacttgagg ttgtaatcat ggtggtggaa atgtggttga 1080 gcccaagatt taagtaggag ctggagagcg cagctctcac ttgttgctca tctcctcacc 1140 gctcgcgctg ttttgatcgg cgcgcctgac aagggcatcc ccactacgca actatacttt 1200 ttctagactt ctttgtcttc tgttggggat attatcacca tttcttcttt gttgctgagg 1260 taactcataa ggaaacatgg tttatacaga atagtgtcac ggccagcgaa tttggtggac 1320 agatattatt cttcctacga agcaacctat gtatctcgac cggatgggaa attgacatac 1380 aataagcaaa atacgaatga agaaaactgc acactccacc gtcttccagc tcaatgatag 1440 agccagtgaa gggcagatgt tattgatatt ccactgcaac catgttcacg ataccggcag 1500 gcaacatgcc agcagcaccc tgaatgttgc gaaagcgcca acaggaggta ttctgggtaa 1560 ccaactaaaa ttaggacgga atggaacggt attagcgtgt gtggtgtcca ggtaatggta 1620 agagttataa ctcatatgga aggcatgcga cgtacatact ccgtaaagat agtattatat 1680 gttatctctg aggggctaaa aataaaactg ataggttttg cgaaacgcgt gggataattg 1740 ataatgctag aaatcccaga ctcctgtcat atgcatttga acgaattcga atccctcaaa 1800 gaatgataat gcccctgcgg agcggaacag gtagttttca aagggcagta cagcggctca 1860 gggtttcgcc tgcgtattag cttgcgtgtt agctcggctc ggacttggta ctggtttcct 1920 gctgggtact ccaaggttca ttcgtcgcga ttgtctttgt gaatcctgtc cttgggccgg 1980 ttgcgggttt tcagctacca gccggtactg aggagggctg tcttccaccg gaagtggcgc 2040 cttgtggatc ttgagtacac tctgctgccg ggcaacgggg ggccccagag gtgaccctga 2100 ccgagactct ggaggtgatg aagggagcat atcgaatgat tcggaagacg agttcgctcc 2160 2182 tgggttgcca tagattccgc gg

<210> 1993 <211> 1133

<212> DNA

<213> Aspergillus nidulans

<400> 1993

60 gatgtcttgc gaagaaatgt cctcggaact cctctgccaa aatcatgctg aacaatccca ttactgacca ctatatcccc aagaataatc tccgtctgcc ctttcgtata tggaacccct 120 cacaaatgcc caccaccagg gcgagttgat gttcgggtag gttgatcgta tagaagaggc 180 240 agctcggctt gtggcgctct agttggagca gcttctggag ggctgccgcc gggagaatgg 300 cctggaaaga tcatccagcg gcccttacaa tgtgaatcaa gcaccgctca cagattcacc atgtcaaagc cacatgggct aagcatgctc tcgatccaga tatgttcatt gaatgatcgg 360 gtttgcgtaa acttttgtat gcacgtcgga gacttatgcc gcattctggg cacctcatct 420 gccaaacccc tttccggctg tgccccttta agaccttatc atggcaggaa atccgctctg 480 tttcctttct cagtcagcca aatgtgcgat acagacgcaa tgcagaaacc tacgtcttct 540 gtcgcagggg ccgtgcaaga tcctgccacg gacgacacca gaaaccttcc ctccaagatc 600 caggaaacta cgagatgcat taatggatgg atcaacctac tcatactctg cggattcagt 660 agaagagtgt ctttgacgga attatttacc cgcttgagct ttacatagac gtcttattcc 720 aacaatcctc gcgcaacatc tggatttctt cgcgcaaacg gggatatact ccggattcgc 780 840 acagagttcc agtagcacct ctgtcactag tcggccacta gtcaaaccct gaagataacg 900 acactagtaa aatcagtgga acctgtagat agcttatttt ggcgtgggat ggatttcaga gttatcgatg gggatgccca agctgtgact cgtctctagg gaaaagcact ctgactgggg 960 attgtctaga cacgcctaca cctgaccctt ggagatatat gtgtgaaagc cagtatccta 1020 gtaagagcgt agtcttgtaa gcacaattag ccatttctgg ctgagtgaag ttcaatactt 1080 1133 agccaattta gaccatttga cgtatactat aagtcatgtg gccaatctaa tga

<210> 1994

<211> 6256

<212> DNA

<213> Aspergillus nidulans

<400> 1994

gtcgagacag acccaagaac tgattccggg ttctacgcgg gcaccaagga ggaaacgttg 60 gacgggaata caacgctcct ctgctctgcc gcaagccagc tggcgtctgc agtatgcacg 120 gctgccagtc tcgcaagaat aaacgagact tccggggact gggtgtaccc agtggcacca 180 atgaaggcac tggcaacgct gccctcgagt acagcagcat tcttcacgta atcttctccg 240

ctagttgcat tcgggatcga gtagtcacat cttgggttcg agaagccggg gatttgagag ccgacttgct gtaaagcgcg gacgcccaaa cggttctgtc tctggatgcc gaggaggttc 420 tggtagtact ccactctcga gccattggtg gcatccctca ggaaggtctg gttgatcggc 480 tgggatgtat agtatetete gageagteet tgeaatgegt aegegtatte aatgaetteg gcgtcagagg acttgggaga acagcttgtg ttttgggcga tcgcagcccc ggcaagcagg 540 600 agaccgccga atagagaaga gaaacgcatg ctggcttgag aagatagttt acacgtatat 660 ggatattgag taaagtagaa accaattgag tccaggaatt tgatagtgtt atgtgagagt 720 agatactcat ataagtacac gaatactaat ggccgtcaga acgacgtgag actaactgta tgatgcaata tgaactgtat gttctcgtct tagactcgtg gaaacgcgcg gatgcttaac ccgacctttg catcacgata tcgccgagag aagagctcat aggtggacag agcagccctc 840 900 gtagtgctgc ccatgggtta ccggatatgc ggatctctca cccgccattg atgacgagca gcgcgaactg aagaccgggt caaactctga tatcatgaca ttgggaattg tggtaaggct qaatqcqqtc aaatatgttg tcactgtcaa gtgtgggtgt aagagggccc tgcagcttcg 1020 qtccqtcctc tatcttctgg tgcgaatccc cccttcagcg agtcctagat gcgacagtag 1080 atctagatta aaatccaaga ttgactcatt tttccccctt caaccagttg gcggatgagt 1140 gcggaaagca taaccacagt accgcactgg actatgtttg ggtcaacaat aggcacgtga 1200 ctaggaattt acccctactt gatgccaact cggcaacata ctactttgta ttgatgtggg 1260 ttttcatcca gtgtcattgc aaaacgatct atgccatgta ccatcaagtg gccaaagata 1320 qcactcacta cccgagtgtc ggttacgcaa tcaatcaagt taagtcaagc caaaccaacg 1380 caqaatette agaaaacgag caacacagat gcacteegga gtgetttaca tggeetggge 1440 gaggatacct ccagccttga aaggagtgga gtcgacatga gagccgctct tgtagccacc 1500 cttggcaatg atatcagagt agttggtgga gccaccaccg ttccaagcaa ggagctaaat 1560 cacaagttag ttaagaccag taaaaattcc aacgcgcaac ttacgttggg ggtgtccgca 1620 ggaatgtcag taaggacacc ttcagtggca atggatatga tatccttctt gagcttctca 1680 ggagtgaaat cgactgcgaa agcagagtcc ttggacggtt gaagggaaac aaagtacgcc 1740 aagagaccgg caatgtgagg cgaagccatg gaggttcccg agatggtgtt gaccgccgac 1800 ttgctgccaa tccaagttga cagaatgttg aggccaggag caaagatatc tgtgcacttg 1860 ccataattgg agaagtaagc gcgctcgtca gcaagggtcg aagctcctac agtcactgcc 1920 ttctcagcgg ctgcgggaga gtagctgcac gcatcggcgt tgtcgttacc agcagcgaca 1980 gcaaagtgaa caccggcttc aacgccagca ttgacagcat cctcaagggt cttcgacttg 2040 ccaccgccaa ggctcatgtt agcaacgctg cccttgaagc cgttgccacc cttcttggct 2100 ttcttgagat gagactcgac agcccactcg acaccctgga caacgtcggc catggtgcca 2160 gagccactgg acctgagaac cttaacagca tagatgttgg ccttcttaga aacaccgtac 2220 ttctttccgg caatggtgcc cgagcagtga gtgccgtgac cgttaccatc ttcatccgcg 2280 tagatgttag ggatagtett geeccagaaa geaeggeeet caaagteete atgttegata 2340 ttgataccag tatcaatagt gtaaacatca actccctcac ctccctcgga agcgtagagg 2400 tacttgttga atgtaccgaa agtgagtctg tcccgatgcg agatacgagc caaaccccaa 2460 ggggcgttct tctcaacgtc cgtgtcctcc aatgtatgga cttcggagtt tcgctcaatg 2520 tactcgatct atgaaaagat gaccgtcagt ttgggcagag cgtattccgg cggtgtactt 2580 acgtcaggat gtttgcggat ttcctcgatc gtatcctcgt ggaaatgtcc cgagtacccc 2640 atgagggatc ctgcgatatt gaaggtggcc tttagaccgt catagatctc ttcgccgaat 2700 ccgaattcca agccgaggaa acgcttcttc aggtctgccc ttccaccact cttctgcccg 2760 tggatgtcct gcacccaact gtgatgaaca gaggcggcaa cagggtctac gtgtttcttg 2820 aagacaacaa tataagagtc cgggacctcc ttagcgtttg tagatgaaag gatgggagcg 2880 gctccgttgt gaatcgagtc gacaacaaca ggcgaggctg caacaagcag cggaacgaat 2940 gaaaggccga agatgccttt catgatggcg gctataaaaa tgtaaacgaa cttgacagac 3000 caacgaaatg aaagaaacca ggacttcaca aagatgaaga gtacgatgat ttagataaga 3060 gatgatgaag atgaagatga agagagaggg atggggagat gaggagtgag gaggaggttg 3120 gatggggaga gccgagctta tcagtcagct gcaccaagga agggtgatgt aagatgcaat 3180 gcctctgtcc tggtgtaata gtgtaaatta cctatcaatt acagatggcg gcagtacgcg 3300 gcctggtcac gctatgataa ggacccatgc tgagcaacca gccagtggtg gaggctgcgg 3360 agatcaagca gatcaacagt cagaagggtg cagttgtgat agctagtatg ctacaaagta 3420 ctactgagta cacgtttgtg gcgtagagat gcctttacta ctattattgg caatacaatg 3480 aaaatcgccc ttgccgtaaa ttacaatcgg acggaggacg cccgtccagc ggtgactcag 3540 gtcctcagca gaccccagac ccaagttcca ggcaccaggc gcttgaggaa ctcgtgaggg 3600 gtcaccctaa ccaagaacaa cagcagggtg gaacaatggc gaatttgtca gttggctaac 3660 ttcctgtttc aaccccagcc tgggccgagc tacaagctgc tgatcgctga tcccgcctca 3720 ttcctgactc cggaatcctg ccaacagatt atgggtacta taggtggcat ccatgactct 3780 gcacaagctg ttttaagcgc taggtaaccc aagccgtgac gtacacaaat ttgacaacct 3840 gacctttgta aataactcgg ttcaatcttt accgccctcc tggctaagac gatttgctct 3900 acggatgagg cagcagcttc aataagccgc tgaattagca tgctggaggg aatacaaatc 3960 taaacagttg ccaagggttg caatatatat aaggttgttc ggtgactcct cagctatgct 4020 acggatatcg cgctgcaggt ttccattctg tttctaacac aatataaagt acttacggcc 4080 atccattctt ttgaaaccat ggggccctaa acgggaatgc actactccga actcggaagt 4140 gcctctttcg aagccggaca ttcacagtcc caccaacaag gaaatcgagc ctacagctaa 4200 tcccgctcaa tggagtatcg tatcgctgcc gttattagcc tacagtactc taagcacgtc 4260 ctttcgcggt actttgcgac ttcgctgaat gctgctgagg tagtaatata ttctttataa 4320 cattgtagcg ataagtgcgg gaacaaaacc ttttgactag gatttggcac atgcttcttg 4380 aagatgctca cgagcatttt atggtctttg tatgattcca acctagtcat cctagtcaag 4440 tatgatactg cagctacaaa cgctgaaaca gggcgtcccc aacagctatc cagatgccta 4500 gtatgatgct caggtaatag caatcgagat atcctcgcga agataagctc ttatcgataa 4560 cacatcaatg atacctgcaa gtggctgagg tgggtcacat gagtgatctc tcgaaacgga 4620 tcgttgcttc atcctcttgg tccagcgaca ctgcctgttt gtcggcggcc gagaaatttg 4680 cagettaget actacegttg atetettaat aaaaggaaae taataaatea taggtetteg 4740 attcgtggcg tccctctcca aagcgcaatt gctgatccta ctttgaagca ggccttcggt 4800 cccacccttc cgcctctgcc gacgacgcag cttcctcgcc ctgccaatga gggcagttgt 4860 gacaccaagt cgaagtgatt gttcatgtct gatggtctct agccgtcagg taggtagccg 4920 gggtgttttc gcggcgcaat gaaccaggcc gtttccctgt cgccgcactc ctcgcttacc 4980 caaagccctt ttgtcgagtt cgcgccggtt atcgatgagc tgaaatctat ttgcgatgat 5040 tatatcgaca taagccttac aggtacggtt accgagtgtc tgctccggct gcgccacacg 5100 ttgatcgata atccgcgtcc tacggaggcg aaggagttat tccggcaact cagcggcttc 5160 cagacqctac tgaqtcttat cagaaagctt tcggagattt ataccccaag tgtgcacact 5220 aaqqaaqaqa qqcqqaqctt qctqqcqqtc tacaaaqact gcttgacaat tcttgctgaa 5280 tgcctcagag atcatctagg aaataaaagg cattttgcta atcgaatccc tggcggaggg 5340 caactagttc tcgaaqagc qttctccaca ctgatactaa agctagatgc tgcacaaggc 5400 gatgtggaat atttctgcgg tagtgttctc gcagcgtcac tgtgtcaaga gaccgtagtg 5460 gatgttttca cagcactctc aacaaagctc cagaaaacag accagtcaga catagctccc 5520 gatgctgaag agaaggaagt ctgtcgctct ataggagcgt cagagattat tgaagcaccg 5580 gagettgege gegeattact acgagaatgg etgacageat teggtetgat agaageeeeg 5640 ccagacggtt ctgcggctag ctgtaccatg gtgcataaac cgactggcca cacagtctca 5700 acggcatggc atgatatttg cattatacag gcgcattaag cctgacattt tcgcttttac 5760 teggtgagaa eetaetgage aeggagaage agttttatea aaaaettget eaacagatat 5820 gcaccccaag aaccaagaat atggaccacg cggggtaagt ttaaaaaacgg ataaccaatg 5880 teteaaggeg gttacagtte taetgeaggt teetaaeege teeaggggge tteetegtaa 5940 cgatacatta tecetgeagg gatttecaae eggaagtgaa caaaagtatg tetggeetet 6000 qctataccaa aggtttcaaa ggggcgtgct tgtatatcat taacacagca cctttcagcc 6060 ttacqccatc cttctqtcaa cccttaaaaq qqatatqqca cacactqqct cctttqqact 6120 aatatggttc tcaacgcttt aagccgggta gccaaagggc cattctcttc caaatactac 6180 cgtataattt cttttcttaa aatatgtggc aaaaaactcc gtcatcctta caccccggag 6240 aatctctctg ggacac 6256

<210> 1995 <211> 2497 <212> DNA

<213> Aspergillus nidulans

<400> 1995

ccgataatac gactactata ggctcgctct ttctccatct tcacagccat ctcatccagt 60
tcccgctcaa tgtcaatatg aatcctcagt tccttctcaa caagaacgtt atatacgtgg 120
cgcagttcgt ggaagctcat ccctttgccg ctttcacctt ctctggtggc agtgtcttcg 180

cgcagctggc tgaacgcgag catgaggata tctttggacc aggggcacgc gcgcatggcg cggtagaaga cactctttgc gcggattagc tcactgcgag agagttcgaa aaggatatag 300 agtttccaga ggcttatgct accgcggcct gtggatgtac gggatgaagg tgatgaattc 360 420 tggtctccga cagccttctc gaacgcagcg cgaacagagt gcagtgtcga accagcgtat gttgggcggt ttaattctgt gtagatgaaa aaaaaatgta tggttatggg aatgcgttaa tattgttaat ggattgggat gatgttgtgg tggttgtggt agtgatgtct cgcataatct 540 cgcggacacg ctcctcaatc ggaagcgaga ttcgttccaa gcaaagagag agagcgttat 600 660 tgtgttttga gggaaagacg cgatgctttc gtttaatatt gagcggatcg cggatggttt 720 gtagagggtg cttgtgcgga ggtggtagta gagtagtttt gcgcgagctt ggtgcaggag 780 ttcggttgca tatgatatga aggtctgcgt ggggcctgag tctggattcg ggagagcgga aagtctgttg atcgtggcgc tgtatgcatc aagggccttg ttgacgtctt gtgcgtcaat 840 gaggtacgtt aagatageet gaetgteggt acaggetttg ataatgeteg gtttteggte 900 tgcaatagcg ctttcttgga tctccgatag atactgcgca ggttagcaat tgaatgaaat gaaaggcgac gatcacgcac gttacgtagc ttcagctgat tagcagggct aaacgatgat 1020 tgctgagacg catcgggaaa tgttttaaga tcgatgttgc tctgcggcat ggaaaccaag 1080 agatgggcgg cgtgggctat atttcgagcc tccaaaagtt cccatatcca ggtatgccac 1140 agaataacgc tgtcaactcg ttgttggctt ggaaacgatt tactcataga gatagccgtg 1200 gcccaaacat gatcagcagc tgcgtggttg ccatctcgac gctccataat tgcatatgcg 1260 ttatacagtc ggaggctttg aggcctcttt ttgagtagtg actttgcata ccttttggct 1320 tctttggaat tgcaggcgaa ttcgactgcg acagtgtact cagccaatag ctcatccgac 1380 gagtatgcat caaccaacag cctcagagtt cttcgagtcc agtcacgaac aacactgcat 1440 gctgggtcag aggtagcctt gagccaagca ttgaaagaag agaaccaatt ctccggatct 1500 gcaaaatagg tgtcataatc gtggataaaa tattgatgag gaaagattgt tggcgagatg 1560 ccggattctc ccttagttgt cgttggaagc cagtcatcga ggttcgcgat cgaggcagct 1620 gataactcgt ttcgcagaaa gctgtcaccc atccaacaac cggttgtcct atagttgttg 1680 acggttatta taggcggaag atgagagaaa tatataaaac cctcaatgag ctcagatatc 1740 gaatcaggta acgatgcgag agagagaatt tctaagaggt cactggcaag gaccacgcgg 1800 tatggatcat cttctggctc atccaagctt egggccggga gttgagcaat gagcatacgt 1860
tctctttcac aggctgtcca tgatgcaaac atggactttg agttgagatg gtgctgcggc 1920
tggaaagttt taggctcaaa taaggccaca ttgctattt tccaaccctt ggccccaggc 1980
tcaccaatcc gagctacttc tgagtcccag aaatccgtga atgcagacag cacttcgtct 2040
gtaaccatgt ggacatcgac gccttgcggt cggaaaaaag ccagctccag aattccttgc 2100
cagaggccag ttgcttgctc cgtgtatccc gcttcacgta agaaaagcgt tagtcggaga 2160
aatagatata tttgcacaca ggctttctcc ggcccatccg gggacatctt attcagacgt 2220
aggcattcga tgaacgttgc aaggcactga ccatgggtga aattaagaaa ctctgtctgg 2280
cggaaatcga gatattcac ccagaggttg ataaccgcg agttggctt cagagtggac 2340
tgccactgct ccaatacctt ttttgtgtcc cacagcttcg ttcctcctc cagaagtccg 2400
ataagaaggc gatctcgacc aggaccctga ccaatcttct tcaacgcctt ttcgtacaaa 2460
gagaccttga tatcagccaa acctttatgc tcggcag

<210> 1996 <211> 3596 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 1996

qqqaacqqaq qqaqqcttqq qctctqtqqa caqacqctcc atqaqctqcc tcaacttttc 60 tegetegege tettegtggt eggaegttee ggetgeettt teaegttega tetgeeceaa 120 aagttgggca ccctcagatc tgcgattgtt gatgaaagtg tcgacgttct tcttgaggct gtcaacagtt tcagtcatct cagcgtagaa agtttgagcc tgcttgattc cagagccaag gttgttgaag gagtcgtata tcttcttata tctggccatg acggagttgc gttgtcgggt 300 360 tatcqactca tatttqqatt gttcagctct cactcgctta tcctgtaata gatctccata agttttcgtg agctccttca tcaacgctgt ttgcttatga ttggcctgaa ctattcgcat 420 480 ttgatgaggg tggaatttet ccaactcege ttcgaagagt tgacteteet ggeeegtaat 540 cgacttcttg ttaagtatca agacgttcga tatatcatcg ttgcgcacct agaacgcccg ttaggagett tgaaacaata tetatatgea etggtggeat teacetttte etttaagtee 600 ttcaagacct gggttcgctc ccgtttaacc aggtttagtt tcttcaaaat ggattccacc 660 ctggcaatct gctctgccac agagggaacg ccatcatcat agacatcgtc tagtagactt ccctccgtag ccgaataagg gctcgtcaca ccatttttag ttttgccttg ctttgagcct 780 gccttgatca ttgctcgctg gaaaagcaca tccgcctcgt ctgtttctcc tgccgatcgc 840 atctcatcaa agtcagattc gtattgccga agagttgcag agagctgagc gtcactagca 900 ctggcttcat gcaccgtgtc tcggtatgtc cgaatatcat tgcggagagt catgttcaat cgactactgg gctgctggct ccaatcagcc ccatattttg agcgcatttt ctcgcaaacg 1020 ctttcttcca agtctaactg cttggcgcat tggtcaaggg tagctagcac ttctgacttg 1080 cgatcttgaa gggtatcgaa agccttcgca aaagaatcat gtcctgctag ttcctgacac 1140 caacgttgga attcttcgtc gaccatcact tcctgatcca ttccaccttt caaaatgttc 1200 aaactaccgg gaagcttgaa atagtctaag cttgctgcca tctagccatc ggcggtttca 1260 accttctctg tatctgcccg gatcagtttc gccttttcct catcataaag acttgctgtc 1320 tccgtaaccg acatgggaac gagtttctgg aagatatctg gaccgataat ccgttgaata 1380 tcttggccct gatacaactc gctaactgga attgccttgg ctgcagggag cttagatacc 1440 gcagacagtc ctgcctcgct cggaacaggc tgatgataaa taaaatcgtt atccttgacg 1500 aaggtagcaa gctgtgactg cacgtttgcg agatggaact tcacgatatc tactagactg 1560 ggcccagcct ccgatgtaag gtttgtgttc ggtgatattg acgaagggag cgacttagcc 1620 caactcaacg cactcgttga atgcttctct gctagctgga gcctagcaac agctactccg 1680 tgcgaacctg attcgccgtc ggctagagcc tgataatacg aggccacgga gcccatatgc 1740 gccgacttca cttgcagaag cgtaacccat gatttgtcga atatgccttt agcatgttcc 1800 tgtgtccctt caatggcctg tgcgtataga tatgaagcct ggctggcgag tttcgccagg 1860 aacccggcct ttttgtggtc catgatctgc ttctcgagga aaacttcctg accttgagca 1920 agcgtgatgt tgatgagagt ctttacagtt tcgcggttga gatcagtcga gggggcgtgg 1980 aggaagtttt cgttgatgta ggtgaacatg ccggcggatg cctggaagtt gtggtaggca 2040 gtcttcaagc caatatcatc tgcgcggttc tggttcgctg catgacaaga aaggaccgca 2100 gatatattga agataatcga ggccttttcg aacgcgagag aatactgcga ggtcggcttg 2160 tgggtgaatg catcatacct ataggcagca ttacatggtt agcggaggtg aggtaatgat 2220 aattcgtagg tccattacca ggtaaatgat atttttatat gattctcatc cacagggaac 2280 ctgagateca gaagetetag ttgeccatag tageggtaga gtaggteteg teetgtegeg 2340 ctqtccttqc cggcacccct catatcctga cgcaaccggt tgagtgtagc acactcctga 2400 ctgtagcgct cagggtcttc gccataactt tgccgaatat aatccttgag aggttggatc 2460 cagtcgattt cgttggtctg tttgagggga catgatatca taggcgactg aaccatcttg 2520 ccgtcgtgga gcggggagct cccatctacc taaaaggaga gcggggagat gttgtttgga 2580 acgaagagta atatggatta tacgttgtgg gagatgaaac tggaaatgaa atcaaagatt 2640 gagaagggaa agaaagcagg actgaaaagg agagcgatga ctgtggggtt gagaggagaa 2700 tgtgactgat gatatctagc gacggaaatt gcagtggttg gagttgggct gattcgatcg 2760 cgccgatgcg atggatggat taacagccaa cgcggggacc aatgatccag cgcctaagca 2820 ccctgcacat tcttgaatat tgatgactga tctattatta acttctaatt taaacaccgg 2880 cctggagagt atgtataccc ggagaagtag agatgttgtg gctcccaata atgtacatgc 2940 agagatagec tetatggege geaateeetg taateaaata atggatgata caattaaaga 3000 atcccaacat gcagaatatg caaaatcacc taaatcagaa accagatccc tccataatct 3060 cgccggcgct atgatataca caaagaatag aaggtaaatt cgttcgaacg acgtcaaccg 3120 accgctccgc tcaaggcgaa ccgcacttct tgttttattc gctcttctta ctgtcgccgg 3180 aggaattgga atcettattg ctggaactat cacttgaatt ctccgagccg gcaggtttct 3240 tgtggttcat aagcttgtgc catgcggatt tgaggaatcc ttcgctcttg gattcatttc 3300 cggacatcgc tatcagcaag aagagcagta ctaaggctgt tagttattat tcatcaataa 3360 taggattcaa cggaagtgca atacataccc gtcccttgga atgtccatga ttcqtctgqc 3420 agtettgtee eccattteat eggegagaae etcaaaaata gtaegetggt tactegteag 3480 atacttgggc atcgcaacct tgaactcgac cttcaggtcg ccaaagaaaa tgaagccacg 3540 ggatcggccg ccaaatttca tcatgcccag tcccggaagt gaatccagcn ccqqtt

<210> 1997 <211> 1924 <212> DNA

<213> Aspergillus nidulans

<400> 1997

ctttaatcag agatcagata cagtccaacc aacttcgcgg aggacgtatc tagtttttct

60

ttccctgcct tatctgttgg cgctgcattg gcgccatcac cattctgctc ttttcgagcg agccctttct ccagctcacg atcagggttc gccccagtgt agacaaaagg ctcaataatg 180 240 tttgacacaa tcatttcaac cacctcgtcg gccccggcac ctgcgtgttt aatggcgaat 300 gcggtgactc gtgccacatc acctttgcgt agctttgcat gagtggtagg aagtcgtgcc aggaggtgag ccaacttcgc cttcttcaaa ggattcatat ggcctaagcc ttcatttcct 360 gttccaatgc cgtcggtggg aggcggccca ccatgttgcc gtcggtcgtc ctctccatcg gatatgtcct catccgacga gtcgtagtct tcgtcagaca cgagttcatc tagtcgagta 480 540 gtatactcga atgtaagett gtcctgagga atccacattg cgccgccttc aaagatcggg aaaggatttt gtgagtgtcc tcgttggtct ttggagcggc tatttgtgat aatatcccat 600 aatttccatc gatagtatac tccgccgggg cttcttgcat cccatagcca cgcccatttc 660 tecteettet ggaettetgg teggeteatg agaagggeet egaacteggg geegtagttt 720 agcaaattct ccaaggtttt gtggataagt ctaagctgct tcaaatcaga gggtgctttc 780 acttccactt gcagagtaga gctgctgcca ccataagatg gcccatagga gctcggagga 840 900 gcgaagccac cccgatgcag accaggcggt ggtgcacggt taagtcgacc ccccagctcc ggggctaccg gctttgctcc aaatggaagg gagcctgtgg aggagggccc gatggcaact 960 gtcgaaccaa tcgcagcgga tgatagatgc cttgaaatag acaaatagta gccccacccg 1020 agataccggt tctgcaatgc actgacactg ctatcaatat cagatgcagc ggattcactt 1080 gcaagggtca caatggctga gaccgacttg cgttcggtgg cggtctggcc cgagggccgt 1140 aggaatttga cattgtcgac ggtcaacacc gtaggtatta gagccttgac cacagattga 1200 gaggtcccaq qqqqaaqaqa cqcaaqatac aatqtcqqct taqccqcaqc cctctcaqcc 1260 teettegegt cegeactace etcateetea tegteegatg egegaaaage ggaettagee 1320 gcaccggctg cattatcaaa tcccagcgtc ccctgcgcag attcccaatt cctatgtaat 1380 ggttgaaagc cttcgtggtt gcgttttcga gagagtgatg ttggaggcgg tcccagcgtc 1440 ccaggaccac tcatgcgcgg accggagctc gtgaaatgtc gttttgcagg ccctccaaag 1500 ccagtgttcc tgttcgcaaa tctattctgc tttccctcaa atgtcgagcg ctcaggggcc 1560 ggggaatcat cttcgaaaga tttgacaaag tcctcgtaca ccgcagctgt ctcggcgcgt 1620 tegegggeae gtttggette ggettegget ttetggegtt caaagagega ettettggee 1680

ggggcagaca gcttcgacga gacgtctggg aaagccttgt gtttggagtt gtctgccatg 1740
ttgacgaagc tgcaggagca gcagaccaat cgtcaaggat gtcgcaaaat cgaactcgga 1800
tgtcaaatgt caagtctcaa cttgtatgcg gcgacagttc gtgaatggaa agctgtttgg 1860
ggcctactcg gggcggaggc ggaagggctg ctgctgcctt ggggctcagg ccaaaatttg 1920
gtgc

<210> 1998 <211> 3239

<212> DNA

<213> Aspergillus nidulans

<400> 1998

60 cgacagccaa tcttctgatc catcaatgac cacagcgtgg agcacgtggt cttcgatgtc 120 gacggcgcat gtgtttctac cgacgcctgt cgcaacgcca tcagaccgag tcctaggtga ccgcctgcgc gccaacaaca tcacgcctca attctttggc tatagttgga tgacggccgc 180 tgagctggag ttcacatttc tgtccatatc agagcgacat cggccctaca agcacatcct 240 cgaggcggtc ttctatcgaa ctcttcatat ggcaggggtc aaagaccccc gagcgctagc 300 taccgagacc gagcgcgacg agtgtatcca ggggtactgg agtctgcagc tccgacctgg 360 gatcagcgag tgctttgcga aattaaggga gtcggggttc gccatctggt gtctcacgac 420 480 aggcgacatc gcacgagtga aggggtattt tgagcgagga ggcgtggact tgccagcaga 540 600 agtqttcqaq cagtttgcgc ctcgcgacga gaagtggttc gctgcagcgc atatgtggga tgtctcggca gcagtcaaag ttggatttcg aggggcttat tgtacagtct acgagcagga tccgtgtctg gtgatctttg atactaagat ggatgttatt gcagatagtc tggtggatat 720 780 qqcqqaaqaa attgtcaagg cctctgcgtc atgatatttg tatactgtct gctagatccg aaatattcaa tgatcatctt gaccccgaaa aggaagagcc agttctttct aaaccgtcaa 840 ggctgtcgtc gacaccaaag tcagtgtcaa acctgtatcc gggcattgcg agaaactcct 900 gcaagaatcg aagctcaggt tgaatgggca ggctgccgtt gtcaaagggc agtgcgtcaa aggagcacgg ggagtgtagg ttgggcatat cctcggtatg cttcattgaa gaggagactc 1020 cggtttcgag cgactggggt atgtgctcat ccaagtgatt ttggctcgca aataatgtca 1080 agccgggggt ccattggctg tgcattttct ctgggtttgt gctgccagta gacttccaca 1140 tggtttccca ctgtttgaaa ccctcatagt cggcaccaga tttgtttctt ggcgtatctc 1200 catgcccggt tccatctgcc tcattcgcgc aatgcagacg tgtcaacgcg cgctcaagcg 1260 actccaggag tgccacttcc gatctcgccg agtccccagc agcagccatc tcgcggatca 1320 tctccaggcc ctggtgcagt tcaccctgaa actggctcga ttggccttga attgagcggg 1380 caatgagtgc caataaagat gcccggcagg aactgtactc agcatacgaa gcgcgagcga 1440 ggccaggccc attattttgc aggatactgc acagcctcag ggcttcctta gcagcttgga 1500 tgcaggaatc aactagctgc tgacggtgct ttgtatggtt gttaatgaca ctagtggcca 1560 ctgcgcgggt gtcactgttt tgtgtttctg gtgaagcggg cgacgagcga gaagcagccc 1620 ggttcagaag gagtggccgt ccaataaaca tagagacaag gcagtattcg agccggagat 1680 gtatacatga ccgataatga ggatgagtct gctggtaggg tacgtccttc tgcgcctgga 1740 cctcatccgg cagcgtattc caccaagctt ccagattatt cttctcgttc acaagcctca 1800 acaatatgga tgagcgctcg tgttttggac aggtgcgtag taaaaacctg tagcattgtt 1860 cagtcgcaag cgagaggacg gataacgagc agacgtacat ctcccggcaa agctcctcta 1920 gcctctgtgt gagctggatg gacgcgacca tataaggtat aatctcgcac tgcagatcgt 1980 ctctatgcgt gggtaaagga gcgtcgacgt cgaatcggtg tgtcgacaat ggccgaccat 2040 gaaagatgga gattttcctg tctttcatca gcactcacgg tattcaaatc tgcagcgtta 2100 tgccttgccc tcgtaccttt caagtgtgta tgctgtccac catacgcggt tcctcatctc 2160 gaccatggcg gcgctcagcc cggtgccagt gtaccttctg tgcaacccgt tctgcatccc 2220 tagtcggttt gtgagagtaa tgtaaatata tccaagacca gaggcgtcaa gggggagcgc 2280 atatatagcg aaaagtaagc atgcctggac gctttcgagg gaggatgctt caattatttc 2340 gggtaagagc cgaattgctt gctgatagaa catcgttcct agtgcatctt cagtgaattc 2400 cgctgacttt cgagtgggcg agtcgaggta tgcgtattgg gtggcaatgg cgaagacagt 2460 gaggactata ctcacgaccg cagcgctctt atttccaaac cgcccgcggt cgttgtatag 2520 agcatccact ttatctgtaa gccactcctt gtctaggacg tagtagtacg tctctgcatg 2580 cttgaagaac acattaatca agaaatcagc aatgtgacgc ggcgggcagc aggatacggc 2640 tgctgcaata ctgtttgcgc ccgagtgcag ctgttcagca cgccaataat tggaaacttg 2700 gagaggatec tgagtttget gegetgecat tagettetga taetgggegt atgtgaagea 2760
tgaaatgtat accatgeggt ceteaatgtg eegettgaca egeategaga aatteeaata 2820
egagaacteg eeagagtagt etaceacagt eattactgge etecattete aagagtagat 2880
tgaettaege gtegtegtat eetegaeegg attgatagtg eagaettegt eeteaattga 2940
atettettet ggegetgetg agetgttatt etgtteatge teatetagtg eeetageeat 3000
teggegtagg etgteaaggt egaggtegat geetteaaae ttgtgettea ggatteete 3060
eatgtaeatt actegeteta acaacteatg gatattgaee teeggegeeg gtgteetagt 3120
eatacagaat tagegtteee etttgeaaeg egatggaet eaceataetg eaceaggaee 3180
ggggaatgat eatgategae ggatgatagg egettgaact egeaagtgeg aeggagatg 3239

<210> 1999 <211> 1288

<212> DNA

<213> Aspergillus nidulans

<400> 1999

aaggcgatga tcgagcttgc actgcacgga agcgtagata gcgagcggat ctacgggaat 60 agccgcatcg ttgagctggg gaggaaatag gctgaactgg actggccagc tgaagcagag 120 aaatatggag ttggcttgga gaaagatgca ggacatttgt acgccacaac tcggacccaa 180 ccggtcaatt tctccccact ctcgaagtac gaataaacaa ttctgaagct tgagccttgc 240 ctttgctgga gacccaagtc aatcgctcac tttgcctcat tgctgcgagg taataaaagc 300 360 agtaacccgt taattcgcaa cagcgcagat taccgcagta aaaaaaaatcc agtgtctata tetteagtet catgttggeg gecaeggttg aatactatgg atatttgggg aaatagttge tacacctgtg catcgcatat ctcggcggct agggagccag tcgaaacgtg ttggacgtat 480 accactttga tetteaacta ttacagaegt cacagagtag agatagteta gattaaaact 540 ttacagcaga aacgagagta tctggcattt gcagttctgg agtctaggta caagcaccaa 600 agcgggcata agcgaagcaa gggaaggcac tacatacgaa ataaccatct acagctgtga 660 taagatcatt tctgctgctt tcaaagacaa ctctcagtca ggctatgatt atgatattcg 720 ttaggcgaga ggatcgagtg gacctcggtg gccggttaaa ttgttgcaca caagttagcc 780 tgatcaaatc gacagacagc gaatccgaag aggctgcttg attctcaggt tgacacgaac 840 tgtctcacaa gcctgacgta agccctgtaa tataatagac ctaacctgag acctgcacat 900
tgcctagacg gaggttactc gaaggattca ataaaccctg ggacagtcc gccttaggta 960
gcaacagtgt ttttctgaat cacccgcgat tgggatcgct atatacgatg taattactcc 1020
tgactctgca acggcgagca tacgcaggtg tatgaataac gcagcgagtc agttgaacgt 1080
ttttcaacgt ctggtaggac ggctcggccg tcaccgtcgg atctgggaat acacacttt 1140
cgcccataca tgtaaatact gtgtcatgcc ggctagtcat aggctatcaa actacatgtc 1200
ttatctagca acagaatcag cgcacgcgc ctcctatcag agtaccaaga acatgctcac 1260
gagcaaaggc cggcaacaaa caattggg 1288

<210> 2000 <211> 1196 <212> DNA

<213> Aspergillus nidulans

<400> 2000

60 caggagccgg cgctggttcc acgtcttaac agatgggatg actctgtaca tacatacatg 120 gactetecaa caaactecae aactteggaa aaaageegeg aeggaeegeg gaagtaegeg tacaaccacg aaggegeeeg tgagegggaa acaeatetgt ageeteeeae teeetgeaat 180 atttccggca aggcctaact ataactgcat agatatctac cctactgggg cttctcagtc 240 teegagaagt atgeecagga gtetgtegge aacaaceeca atgeetegeg tgacaatgte 300 360 ctcaccgtct ttgcccagtt ggctgcagtt cgcatgaatg cccagcgtgc gatgatctcc ttgtttgaca gaaagcagca gtatgtcatt gcagaggcca caccgagatg ttgtctgcgc 420 ggcgagagtg gccgcgatca ggctgatggc ttatggctgg gtgtgggcca gtttccgcgg 480 cacgatcccc atgtgctacc acgcgatgaa gtcgtttatt gacgatgaga gtgattttt 540 tgtcgttaat gatctcacca aggacgaacg gttctgcgac cactcgtgcg taacgggtca 600 tccgcacaat aggttctatg tttccgtgcc catccagtcg ccggacgact atatcatcgg 660 agctgtggcg gttctggaca ataagccgcg tgatggtatt tctggtgagc aggagcgttt 720 cctctcggag ctcgcggcta cagtgatgga tcatctactt tcacaacgcg caatgcggga 780 840 agagtaccga gaagaaaaga tggtccgcgc tcttggactg ttcgtcaaag gcaaatcgca cctaaacgag tggttcgaca gcggagagaa ctcaaactca cgacagcgag accagatggg 900 ccgaatcaac aggaaactgg agcaaatgca ggtttctgaa tatagcagcg gtgagaaggg 960
taatgaacaa gggaagaagg cgagtagacc accgcgagac gaaaaatcca agcacgagtc 1020
gcctgtccag aagtttatta acgacgacaa tgagcggaga gactcgggga ttgggaccca 1080
agacgtacag gcgctgaaga agcggccgaa actgtcgcca accaccagtc acctgcagga 1140
cactctcgct ccaacaaatg ttcgatcagt ggtcaaccgc gcagcatcga tgctgt 1196

- <210> 2001
- <211> 2797
- <212> DNA
- <213> Aspergillus nidulans
- <400> 2001

60 ccccaaaatc ctgtacaggc ttcccgggca caagggcact gtcaatgttg ctcgattcac gccaaataat gagcctatta gtaagcccag ctgttctgaa attccgagtt tcttatgcta 120 actctaacct ccagttgtct ctgcatcgtc tgaccggaat ttgatgttgg gcgaattggg 180 caaatgaaat tggagcattt taaggagagc aacttggcct tggtttgcct ctagaagccc 240 atttctcaaa agacgattga tctatggata ttcacgactc tgagcggact gaccgctacc 300 360 gtgggataaa tgcgctgtga gccaatcaag tcgtccaatg ttgtggcaca ggatttacca 420 480 cgtcttccgg gagactatcc tatcgcgaaa ttaaaaactg gcctattcca cgagctgggc attgatttga tagcgggtaa ggatccgctc atctgaagat gtcttattat cagagctttg 540 600 gactagggat atcctcatgt acactgcatc acatgagcaa ctttgatttt gatagtactt 660 tcccatggat gaagcatcca gatattcctc gacatacata ttccatatgc tggactttaa ccataatcat ctatgatgga ggagttgggc taacatatca cctcagacca aagcccaaat 720 780 qaqtaccctq ttttctaqct tcgaattcgg tataggggag aaggtttgtt cataggaaat gtcacccgtt caagaattta tgctacaatt tgctctactt tcggacatgg gagatggaaa 840 ggacttggta gtagaggcac cttgaagtca cctagcccct gggccggctt tgaattctgg 900 tcggctttga ggcaaaatta gctatttcaa ctggcgtttt gagtgcctac tttaacattt 960 tgtgtattca atgaacgagg aacgtccgaa catcataaac cggccatgga ttagcaagaa 1020 atgcgtctaa tacgtacagt cggacgcacc ttctctaaga gcactatcga ccacctggca 1080 ttacagtttc catttcattt ctatcagcat gtcagtcttc cgagatcaat gcgaccaggg 1140 tcgtgtgcga ggtgactcca cacgcatcca tggctatccg gtctcttccc tttattccga 1200 taccaccgat gccattgcag actaccctca cactcccaac ttctcaaact tttgctccaa 1260 ctggagcctg cagctcgcat catgagggta gacgcagtgt gataccgggg aggaaaccct 1320 ctgtgcgggc ttgtacctca ataatccgag atccaaccat tcattggaaa ctttttaatt 1380 tagttctctc cacggtcctt ttccttatca accttgctat ctgtatgtct tgatttgcat 1440 gtctgctctt ttggtcctac taacatcctt agttatcacg ttcgtcgttc ttcgcgctat 1500 tcaagggccc tggatttaca ttatcttgac cttcatactt ctgacgattg gagtagtatg 1560 gtgtcacgct ttgtgccgtc tagttgccgc agtttatcag tttccgaatt atgctgccga 1620 ttgcacactt cctatcgaga tgacagagac tgctagctat gtgcggccaa accatcctat 1680 tagtgtcact ttagctgggg acgaggagcg ctccaccgga agtcatagta ctggccatgc 1740 tgtgaaagtg acgacaccac cgccggcgta cggtctatgg agagacagtg tggtaagtga 1800 cgacactctg tattttgaaa ccgcacagct attgatctac atccagagac tcgatccttg 1860 cctacttcac tggcagtgcc ttgagaacca gccggctgca ctgcaacaca cggaaaggag 1920 gaatgagaat ccaaatcgcg agccgcaagg acaccggccc ccaagctaca tgtccgacaa 1980 cagcgtcgag ggttgaagcc caaccacatc gttcaacgag catttgcggc ggtgttagct 2040 ggtcgctgac ctgggtgcaa ttcctgtacc gattcagaag ccgccacgtc ctctacatga 2100 cgcttttctt taggagctat gggtcaagaa cattggctga ataagtgtgt ttgggcgtcc 2160 acttaaaatc tgtcctctca tccccttttc cgtacttatt aagcctaaac agttagtagc 2220 ataattaaaa aactgagaaa ccgctacgac aagacaatgt agagcaccaa caatcagatg 2280 taatagggcc aatgtcaata atgtaagctg gggtggtgga gagtcgcgat aagataggag 2340 cggagatctg gtctctggat ccttgaaagc tcacgtgcag tctcgactct agccaacaat 2400 tgtattggca ttgtcagccg caacctaagg atttttgagc aggacacctg tgaccatcgg 2460 cgcaaccggc taccttccga aatagtccct gccacgctcc catgccgtct gcggccggtt 2520 cgtttctgcg gttatgcgct taggatgttg gaggctgcag atgtccgtct gttcggtggg 2580 gatgacgggc ttggtcttgc ttctgtcact atgggtgtct acagcgcagg gcatgaggtc 2640 tggccagatc agacacctaa ggtaggctta tgcgcctagg ccagattata tgaatcgtgg 2700 aggtaacctt tcactggaaa ttagggccgt ataaaagcag atgattacca cgggtataga 2760 gctacctcga gcaggccgtc cctgagacga actaggc 2797

- <210> 2002 <211> 2904 <212> DNA <213> Aspergillus nidulans
- <400> 2002

taaaagagat cttgccatcg ggcttaggat actcgatctt ctcgcattca gatgccagct 60 tagtggctgc cgcatctgtg ccgtggtgtt tgagcgtcca cggggtgtgg ccgcggaaaa 120 tgtaagcctc aaggccggaa tacaaaatac ctccgtagat accgaggggt gtgctgaaag 180 acggtcgcat gtttcggacc tcgtacagct ccttccaaat cgaagactta cggagtgagt 240 cctcgtagtc gaataggaac acagtgccac ccgcgtcatt tctcagggcg gcgaacgtag 300 actetgetge caagategee gaceteateg cegtatgegt gecettgate ttggggaeat 360 tgaggaaacc tgcgctatca ccaatcaagg cacctccggg gaacgcacac ttagggattg 420 actggtaacc accttcgttc aatgctcgag caccgtagga aatgcacttt ccaccctcca 480 agacctcgcg atacagagga tgatgcttga gcttctggaa ctctccatag ggcgacaacc 540 600 acgggttcgg ataatcaaga ccgactacta aaccaatgct gaccatgttt tcaccaaagt gatacatcca agcaccgccc gtagtatcct ttggcagcgg gtatcccatg gaatgtgtaa 660 tctcgcccga cttgaacttc tccggctgaa tttcccacac ctccttaata ccgattccat 720 atgtttgcgg ctggctgtcc cgtctgagat cgtacctctt ggtaacttgc ttggtcaagc 780 taccgtgaca gccttctcca agaagcgtga cacgagcatg gaactccatt ccccgttcaa 840 acgtatettt ggettgacca tecegageaa eacegagate gttggttgee acaeeettta 900 ctgaaccgtc cgagttgtaa acgatttcac tggcagcaaa tccggcgtat acttccactc 960 ccagctcctc agcccgctcg ccgagccact ttgtcaactc gttcagactg atgatataat 1020 teccatgatt gtteatttgt ggtggegeag gaategggat egaegaattt ttegteaaga 1080 accgcatctt atcctccttg gccggggtgg cgccttcaaa acgggaaggg ttatcctccg 1140 acagccagtc cggaaataac tcttccagag ctgaaggttc gagcacattg ccggataaaa 1200 catgagegee aateteacea geetteteta ggaegataae gegaaattet tegttteegg 1260

cttcattqqc aaqttqtttt aatcqaattq caqcqctaag accaqcaqga cctaagaggg 1320 aagccaattg tcagtcacat gtgtgctttg caagcaaatg tgcaaagcgc aaccacaaga 1380 cacaggttgc ataccaccgc cgacaatgca gacgtctacc tcgtccgact cccgctcaac 1440 ctgccgggga tcaaagtgac cgttctcatc ggtgagattc cttgagatcg actgcgaaaa 1500 tgcgcgaacc tggatcggcc tggagtgtgc tgagcagcgg acactcgccc gtctacctga 1560 tgttgcgatt gagccgcgag aactgatgca taacgatgac gatggtcttg aaagcctaga 1620 ggggctaggc cgagtctcac gcctcaatag gcgcagcacg actcctcttg aagccatgaa 1680 gaatcgcggc gaaggggcgt ctggctctcg agggtcgaat ggcggaactt gctgagtcta 1740 cagagcacag tgagacataa ctcttgctgg agcaggtact aggttgtaag taggcgaatg 1800 atcactttgg gctaatgggg ttcaactggc gagagacccg tcgagaaaaa accatagccg 1860 cccgccgacc tcggttacct gggtatacga ccaataagag cagcggtaat gacattcgct 1920 aacggaqtaa ccqccaattt ccgaccgagc agctggagtc aggcgttggg ctcactctct 1980 gtacttgccg cacccgccga tagctaggaa actacagacg cttacgatcg gctcacctgg 2040 tgctgcccca gtcgtatgta cgatcaaagt acggggtagt cgagaagacc tctacgggcg 2100 egggtgatea gaggetaett cetetttgga gageggagta eaagtatgga ttteaagget 2160 ccaattette atageagtte etcataggte taaagatete aatattettg etettggttg 2220 cttaatgcaa gcgaatccat tttgcccagc cgccactaag cacagaaaat ccagtccatc 2280 gtcatagtct atgaggctct tcgcgatcgg atctagttaa tatggttcgc tcgcaagttt 2340 gatgtcagcg accaggatta cgtatacata taataataat ggcgtatatc atccatgcgc 2400 tgcggccaaa atttccttag ttgaaaaaagg aaaaaaataa aactaaaact aaaaaatatt 2460 tcagatatat aacgtgcctg tctgacaatc cccaaggaag atttattgtt tactatgtct 2520 ctacaggtaa agggatccac ctgctcgctc ggtcaaggga gggtgcaagt atggctgaga 2580 teggtatggg gtatgeagga tacetgaaaa ggeeaeggtg geatgtgteg aaegaeagat 2640 cacggacaac taatccggat agccgcggtg atgagcgtcg ctttctcgaa aattctcttt 2700 aatttggata tgacctatgc aacactctaa atgttgttgc aatgctagga aaaagtcacc 2760 ggtcgttggt atgataagaa gcgcgagagc ggtccaatca gcattatatt gctagggagc 2820 gcccaggagt gaggcttgca tttgcagaga gcgaaagcga tagccgccat ggtctttgct 2880

tgaaagacga	ttaaaaacac	gatt				2904
<210> <211> <212> <213>	2003 1110 DNA Aspergillu	s nidulans				
<400>	2003					
acagacatcg	gccaccggta	cttggtcatg	gtgaggttct	ggcaatgaag	atcctcccag	60
acaatggtcc	cggcctgttg	cgggtctccc	aagccgattt	tgcaatgtcg	cgagaagtga	120
aggaacttgc	atacacctgc	tactggcgcg	ttgctgtctt	cgccggtatg	gaccgtgaga	180
tccgccttgt	gcggcgtcag	ttgcgagttg	tagacatggt	agaggtggtt	cttatcggca	240
tccgagacgc	ggtaatcata	ccggatgggc	gtatgataga	tgtgatataa	tcgtgagtgg	300
gcgagatcaa	ctccctgcca	gcccgcggaa	teegageeee	ttgacggtgg	gtcttgggat	360
ataacggtgc	tgccgcccaa	tgatttggtt	tccgaagaag	tcatgtttgc	caccatttat	420
tgactgtaga	agctgtgttt	tgatcaggag	gcaggctgcg	ccctccttat	atgctctctc	480
gccatcctag	aggtaccatc	cctcgatcac	ccgaaactgg	aaatacgagc	ttggcatgga	540
ggctgagccg	tcaatcttat	tattggtgtt	tgtatatcca	tggataagac	gattctttcc	600
caaagacgat	tcgtcatagg	gatgatcgtc	tatgagacga	agacgggcga	ttaagatcca	660
gcgagttcaa	gccttcaacg	gtgctggcca	gccggccgtt	tctgttgacc	aatcagagag	720
atccgacgaa	tacgatcatc	ctaaagggtt	agcgtatact	tccagccgga	caccgggcag	780
accgaggtct	cttggcacag	cttacggccc	gcaagggttg	tatccccgaa	ttggcctggt	840
catgcaagat	atacaagatg	aattctgaat	gggcattgta	cgcagttaca	atccatagaa	900
ataggtacta	catgtgcaac	actgtatgcc	tattctgcct	gagatttgat	tatctctttc	960
cccttgtgca	tagtggtcgc	cctacgccca	tccgtaaata	ccaagtatcg	cacaacagtt	1020
acggtggatc	ctcctttatt	agagtctgct	aagcagcaca	tagcccacct	gggcagggtc	1080
acgtgtcgat	attctctaga	cagatcaggc				1110
<211> <212>	2004 2622 DNA Aspergillus	nidulans				

tacggtcatg gcaaggcatt ctcaccaata gtatcaatcc aggaaactac tctgttcaag 60 gactggagat aagatggtgc cccgtgcagc aacaaagcat acggggcgac gttagagcgc ttgcttacct tgctcaggac tcccaaccaa acaccgaatg caactagcag tgctccccac 180 ttaagtaata ggatategta aataetgggt egeaagaaac eatettetta ttgetageet 240 tactttcggg ctttacgtat ggggctttga actatgcagt atggaggaac gtggcatgac 300 atggacctat acagcattcg ggcttcctct gcatgaagat cggaggagag cttggtctct 360 ttcgacggaa aggaagatct tgctgctttc ctcttgattc agaatcgttt aacctggaca 420 tcatatcgca tctgcatgca ataacccagg cacctgaacc cccacatctt accacgccga 480 ggcattcata caaccttcca gcagtgagcc cctccctcct ggactacacc aacagtgata 540 tagacacggc gttaagtttc agcatgacct ggttttggct tgatcggcaa atcgtagcag 600 ggcgtcaaag aaaacaaatc ggatggtaac tggggccttg ctgttgttgc tattggggga 660 cgtcttgccc gccaacacac cacccacacc tgctgcacca catggattct tgcagactgt 720 toggtgtoca ctatgotoca otgocagacg cagtatgotg agootgtoca gtoagagoac 780 caagggtaag ctgcgtaggt cgtaaccgtg catgtgcagg ctgcaatatc ggcggttgta 840 ggcgtgggcg tgggcgtggg cgtgggtgaa agaaggctgc catactgagg tgaagtcagt 900 gtcagatgta acaggcgtac tcttagtgag gggaactagt gtaaggtagc aatcctagtc 960 caggatagec aggaagaaga gatatataag gageetegte eecaaggtte tettetette 1020 cctatccatc tgcatcctat cgcgacttcc tcatccaatc aatcaaccaa ccaaccaacc 1080 atcttccacc ggtttatcta ccaacaaca ccatcaacat gtctccctgc acctgcaact 1140 gctgctccgg cgagtgcaac tcctgctctt gcagctcttg caaggtctgt ccacctgtct 1200 teccaeetga eetaageett aeetgetaae gteaeeteae ageaetaaat tegeeaaeea 1260 gttcgggtcc gagcgagcat ctctcccgtc aataaatacc tcgaggtcaa cactgaatgc 1320 ccggcgatga caaccgacat aacaaggggc attcatggtt tctgtctggt ccggtagagg 1380 ttgaggatgt ttgttttgga cgctggggct tctgattttc aggcaccttc tgtgcctcgt 1440 ttgtttatga gtagattatt gaaatgagga atgagatacg tgcacctgca ttagcttctt 1500 ctgggaagta ttgtcttcgt agttttcgag tgggttgtga acggggtgta gcccgtacct 1560

gaacacggcg tctagttggt cagctgccta gtcgcttgag atgaattgtt ttcaagagag 1620 ctcgaatcaa cgctgtatgc aattaaataa agcagtagtg tcatgtttgt gtattctaga 1680 tctatgttat cacagetegt cetttgeeet aggageeaca ttgeeegget cetegeegee 1740 agcacaaaca gccggtgttg tgacaagcat cgaataaaca cacttttcat cctcagcgac 1800 cttcaggatc tcgttatcct cgccacagtc taagataaca gttgttgagc gtgcaggtcc 1860 gttccagcac ccctggccat tcttatactc caacgaggtc ttctgcacct ggatgatttc 1920 acctgcttca ttgacctcat caacgctgac ggacccgatg cgctcgaacc tgcccatccg 1980 cgaagatgag ccgcctttct tggggatctg cttcgtttgg tcgaggaaac agtgctcgta 2040 ggtatactcg ccagcgtcct tctggataca aaccccttta agggcgcgga agatggaagc 2100 agtgccgtag tcagtttcaa ggtcggcctc ttctttcttg agcttgttct ttgcgtcgtt 2160 gaggtccttt tcagctgatt tgacggcgtc gcgggccatt gtgacggcct tggactcaga 2220 cgctgagtct ttatccttgg gaggtaagat gccgctgctt tcgaggaagc ttgtgaacga 2280 gttgaacttg tcttctagga atgtaacaag agacggagga agataggccg caagtttgta 2340 aactgatacc gtcagcaatc gtccaggaaa aaaaaatgtc aacataccta tatcaggttc 2400 ategtegeee tegtteteee attgeteeea gtttataeet gatteetege tgtegggetg 2460 ggaaataget teccagtege gateaegege actgttgaaa acagtgteeg caagtecaeg 2520 agetgegtaa teeteecage tgegeacage gegettgaet eeeteateat tgaagttegg 2580 gttatactcg actttgaagt tggacaaaat ctcctcaagt tc 2622

<210> 2005 <211> 711

<212> DNA

<213> Aspergillus nidulans

<400> 2005

atccggatat ctagggccgc ccgtttcatc agcggcgccg gagacgcgat gtacctccag 60 acgccgtgtc catgaacgag atccacttgt ccgttgcaag cacaagctcg gtcagcggtt 120 gctctttaac cttccccgcc gcaacatccc gtcggcgctc gcggcgctcg acgaccagtt 180 cctcgacgat ttggcgacac gagtgcgacg agaaattgcg cttgatctgc cgtttgaggc 240 tcgtcgcgac gcagtaccag aaccgctgtg gattatcatt gtacaagctc tgatattcca 300

agcagcagtt	gaccaagato	g agcgtctcgt	tctcctgcag	g cttcctcccg	cgacgtttgg	360		
tcatgggcgg	g cgacccttgo	gcgggggaat	cgaggctctg	g cggtgtgtgc	gcgaatgcat	420		
tttccttgtt	atcttgtggt	gtggactgcg	gctgcggacc	gggctgcgaa	gccggtgata	480		
cggtatgggg	, aatattgaag	ı ggaggagggt	gaggagggta	cggcggttgg	tagtgggagg	540		
tatgtgcctg	actgcccttg	r ttgacgaatt	ggggactggc	gctcggctgg	ggcgccggag	600		
ccggcggagg	gaccgttttg	ctgaggcgat	agatcggagt	gcggccagac	aagtcggggg	660		
gcttggtgaa	. cttgacgggg	gccatcgcca	. tggtccagga	. gctggctgga	g	711		
<210> <211> <212> <213> <400>	2006 207 DNA Aspergillu 2006	s nidulans						
gtgcgcgcgg	tccactcgtc	agcacaagct	cgcgccagtt	tegeegeege	aaagttgatt	60		
tccgccgaca	gggattccat	ctggtaatcc	gccatcgcaa	tggtcgtgga	gttgaatgtg	120		
ttggtttcga	tgatatccgc	gcccgcttga	aagtaggcgt	tgtggagagc	ggcgatcact	180		
tgcggacgac	tgagtactag	cagatca				207		
<210> <211> <212> <213> <400>	2007 2562 DNA Aspergillus nidulans							
tcagcgttag	cctcttcgag	taggtaaacg	gcgttcatca	tactgagctc	cacttacaat	60		
				ttggttctgg		120		
				tcaactcctc		180		
cgtctcccta	ttttttctag	acatgtgaat	gtcgcatcgg	cagatgggac	ctgacctacg	240		
ctacatgaat	tgggagactg	gagtgactcc	ataatcaatt	gattattgat	ttcgaagaat	300		
cttcaggctc	aggctcgtcc	atgactcgaa	gttggataac	cgttgagaca	tcacggccgc	360		
gtcgtcccac	tcgcatacag	cctgtctcac	tcgagattgc	gactgtcccc	atcatgatag	420		
gatacgagga	ctacatgtcc	tggcctgtgc	gccttgctcg	ccttgcttga	caggaccacg	480		

ccgaatagcg cacactcgag ggacctcgtg cgaggagcag acaatgggtc ggatacgtag ccgtttggat atcgagcact ggcaactgca gggagagcgc cgttgaaata aacttgccct 600 agctgaacga tgcacggcca cttgtcctga tctcgactcg agtcggtcgc ccgcggtcgg 660 aagtggagcg atcaaggcac agatgtcctg cttcggcagc aaggtgagta taacggctgg 720 ctcgctggga cggtgtcggc ggctggatgg acgatcctgt tcgttgtcct tcacqqaqac 780 ggcagaagac gagaccggac tagctcaatt gactcgactg agtccactga gcctagtggt 840 cttcttgaag ggatgacccg aacatggatt tcttgcctca gccccagacg cctgacttgg 900 taggetetgg cegtegegeg atttgegaaa tggagteagt acaettgaga cetaceagea atgaattgcc ggagcgcgtt cgcctataga catctgggct tgccgtcagc cagccgcagg 1020 cgtcgccagg attgccgtcc tacttgctga gtgtcgagtt gatttttacc tcgtttctgc 1080 tcggagcaat gcgagtgtct tgggagcgaa tatatggata gattggactc gaatgtcgct 1140 gcacaaatca atctcagcct gctcaggtct gactgacgag cgatttcaag cgtctaaccc 1200 ttegetagea atgegtetae gtgteeegae gaeagtaeae aaeggetege aegatteeae 1260 catccaggta gtctaccaca tttcgcatcg gacagccttc agctcttgag aaccacaaac 1320 cggccgtcgt catcagctct gtcctcctgg tacggttggc ggtggccatt taacagatac 1380 tttggccttc cgaacgagat gttccatgta tacagaacag ataccgatgc gagacggcca 1440 gaggcccctc tgctggtcat agacgaacag atcagaggag aaccgggaca cagcataagg 1500 aagggtgctt gggaatgaga agatgattga gtaaggtctg cttcacagct ccgctgctta 1560 tgtggctgtc agagacgact ccaagtgact agtctacacc tgctggacac tccatcccgt 1620 aaccgtatga atgtttggtc cgcggttctg gggacgggta tgatgccatt acagggtact 1680 ctaagcgctg caagctccct accgcgcagt gcagttgcac cggtcatcat taagacggag 1740 attctggggt gtcaactgac gcatcgtcag aattgtctcc gtattcacta actctccaat 1800 cgaccactct aaagtttgag tcaagtctcc catctaggcc tggttgtata aagacattta 1860 accacgtgag tattgtgaga agttgcagca ccctcacgtt cacctgccat actatcagga 1920 ttaatattta aagegaggat tgagcaatet ageagaaetg gtgteatate tgeaegeaae 1980 gccccccgtt ggcaaggcct cgagctgcta agatagattc tccagtaaaa gggacgctac 2040 gcgtctgata gcataccata gccttggatg tgcgtttatg acgcacgaca tatagtccac 2100

ccccttcctg ttcaatcagg aataatcgtc ctcccttgtg cctgcgacgt aatgtctgta 2160
gacacccgtg acagcgatct caaacggacc tgcaatcggc agtgttccga gcccggttgt 2220
gacacataag accaggtact tgtcatactc atgtaggggg caaggcacca ggcgggacta 2280
gacggagagc agagccagga gtgagggaat agtaggttgt tcgcacgtcg cttcccccta 2340
tgataccata ctccacagcg aactctcgac ttagaaaacc agctcacctc gtcctcgtac 2400
aaatacaaca accttccaac cgagcctcaa cggctacgta tgtgcatgtg catctgcata 2460
tgcatggcat gaacgtctgt ccatgacttc agtccaacga acacatgcag ggccgccggc 2520
gtgttgtggc actcagggct gacccgcct tgccctatct cg

<210> 2008 <211> 2966 <212> DNA

<213> Aspergillus nidulans

<400> 2008

cctgccactt aggctaccac agcactatca ttggcaactt gtgacgtgtg ttgttgtacc 60 ggggtaaaaa agggtcaggt ctcgacataa atatcggggc cgcgcttttt tctgcccgtg ttcagcacat acggcttaga ggcgtcacct tcaccacgcc tccaactacg agaaagcgca 180 aggeggeect ggeggegtet eccaetteta etacegeeae ecaatettge ageegeteae 240 gagccgccac cacaaccacc gcggattcat ttttggacat tcctgatagc ggaagcgctc 300 gcaagaggca gaaaaagact aggaaacagt gccctgattc tgctgccgag ttgacttcaa 360 cgaactcatt caacttcgag agggaggtgt cggaatctcc ggcgaaggtc gaagcgtctg 420 aatttgttac ctcaacgtca acaactatgg agtctgatga tgatttcatg agtgttgcat 480 cgagtgcgga tgatttcctg ggcactcagg gtagcgatga tgaaagctta ggagatggta 540 agatgtccgt gggtttttgc ggaacttggt tgctgacttg ggctttgtcg cttcaatcag 600 atttcggcga cgacttcgac ggtggttttc caaagacaaa gatatatttt cgaatacgcg 660 gaaaccatat gaggtggact tcaaagtcct tagcccggaa gatatcgaac gtgaacagaa 720 tttgcagatc aacgaagtct catcaatact cgggctgccc ccagagtcgt cggcaatttt 780 gttgcgattt ggccgttgga atcgggaaaa actgatcgag tcgtacatgg accacccgga 840 attaacactg gaggaagcag gcctcggaac caatttcgag tcaacaccga agactgaagt 900

ggtaccgggt ttcacatgtg atatctgttg cgaggatggt gatgatcttg agacctatgc 960 gatgcgctgt gggcatcgat tctgtgttga ctgttaccga cactatctcg cgcagaagat 1020 ccgggaagaa ggagaggccg cgaggataca gtgtccgggt aatgactgcc acatgattgt 1080 cgattcaaag tcgttaagct tactggttac ggacgatctc aaggacaggt tagtcttcct 1140 tattacttga ctgcctatat gttcgctggc atatcaacta atttcggggc cagatatcaa 1200 acgttattaa cgcgaactta cgttgatgac aaggagaatc tgaagtggtg cccggctcca 1260 aattgcgagt atgcagtcga ttgccacgtc aagcagcgtg agttacatcg cattgtaccc 1320 acagtgcaat gtggttgtaa gcactacttt tgcttcgggt gcactctgaa cgaccaccag 1380 ccttccccat gtagactagt caaaatgtgg cttcaaaagt gcgaggatga ttcggagaca 1440 gccaactgga tttcagcaaa cactaaggaa tgccctaagt gccattcaac aatagagaaa 1500 aacggcgggt gcaaccacat gacgtgccgc aaatgcaagc acgagttctg ctggatgtgt 1560 atgggcctat ggtcggagca tggcacgagc tggtataatt gcaataggtt tgaggaaaag 1620 tcaggcgccg aggctcggac tgaacaggct cgttcccgag cgtctttgga gcgctaccta 1680 cactactaca accgatacgc caaccatgag cagtccgcca aactggacaa ggacttgtat 1740 ctgaaaacgg agaagaagat gacgagtctg cagtctcagt caggcctctc ctggattgaa 1800 gtgcagttcc tcgatacggc gtcgcaggca ctgcagcaat gccgacaaac actgaaatgg 1860 acgtacgcct ttgcgtacta cctggcccga aacaacctga cggagatttt cgaggataac 1920 cagaaggatt tggagatggc ggtggagagc ctcagcgagc atgtttgaga agccggtggg 1980 agtcatcctg ctgagcgaca cagcagagaa tctgaagaac ggtatgttcg gcgcattgtc 2100 ttccttagat tcttccaact aacagacctg gctaggggtt tggcaattca atgttgaatg 2160 gtagacctag agtcgtatag atttagcgag catgcttgat tatctgttga aggcaaggac 2220 agatgggagt ctgcggttaa ttatggatat cttggccgat ccaggtcggt aaatgggtac 2280 tagggaactg gatcgggacg ggaggggatg ggatttaaca ctttttttt tttaacgacg 2340 tacatgacga gcagcacatt acagcgagat ctggatctgg tttgcatttc atcgcagggc 2400 gttgcctact attccccaca ttatgaagct tatctatact ggaaggagag tgcatatcct 2460 ttcacgggtg tatcaatatg catctttatg tcatccatct ttccgtctcg cctcagcact 2520

tacggaataa gaaagtggct gcctgcctat cgtgggtagc gaagtacgag tagttgccac 2580
tagttctatg cttgggctta cgtagcacta ctggattagt atgctggggg cattgtgttc 2640
ccatcagata aggccaagag ctgttagtcg gctccgcggc gtaacctgta cctccgcggt 2700
tcggaggtta cgagcatacc ggaatggcag gtagattaga actgcagctc cgtcatcgga 2760
cggacctcgg tgtaaaatca gttcccatcg gttgttagtc atgggtcatt caggcttggg 2820
ctgattcagc ttgaaatctc gagttttatc tttttgaagt atattttcat tatgaggtct 2880
atggatttaa atttaataag cggaattgag attgtagctg tatgtagagc gtagatgaaa 2940
gtaacccata gtcataatct tttgac 2966

<210> 2009 <211> 1581 <212> DNA

<213> Aspergillus nidulans

<400> 2009

aataaatggc ttgccccagc acttcaaagg acatgctctc gtgagttagc cgaacgagct 60 tcgtttgcta aacgtcatca agaggcaacg cctcataact gtgctttgct taccgatgac 120 teggeeeta eeggagaatg teagetaggg tteetgateg aggataaaga teteeeagag 180 gaggattacc aatgccatta ttgcaaggcc tacatcttct tgactcaatt taaatgccac 240 aagtccggga aaacactatg cctggtacac ctggatgcac atgattgctg tggggaaccg 300 ctgtcgaaaa agttgctggg cccggaccac acactacgct acagagtcag cgacacggaa 360 ttgaagagca tggtcttgaa ggtccaggag cgttccagga tcccggaagc ctggggacag 420 aaacttgaca atattctgga agatgatccg aagccccagt tgaaggtcct tcataaccta 480 cttaatgaag gtgagaaaat cccataccat ttacctggtc tccaagagct tgcggccttc 540 gttcagcgct gcgataagtg ggttgaggaa gcaaccaact acattacgcg gaagcagcag 600 aaccgaagga agaacgagaa agcttggcgc aagactactt ccaaggcctc gcagctggaa 660 gaacgtgacc gtgaagttcg cagggtagaa aacatctacg cccttcttgc agaggctgat 720 aaactgtcat tcgactgtcc acagatggcg gctctggaag agaaaacccg cgagatcgag 780 aaattccgcc tggacgttag cgctgcgctc gcgaatccgc atacccggtc aatacaggaa 840 gtcgaagagc tcgtggaaaa ctcccggaat ttcaacgtgg atctaccgga agtggaggac 900

cttggaacaca ttgtcagaca aatgaagtg aacgaggatg caggtcgcag acgtggccaa 960
tatctgactc tcaaggactg ccaggagctt atcttagctg gtgaacagct gggactctcg 1020
gaagcgaatg aacaccttgc gcattcaaa gacctgtgtc gtcatggtga ggcttgggaa 1080
gcgaaagcta aggaattaat gtcggtcgag gcggtccact accaacagct ggaagccttg 1140
tcggcgcagg caaaccgagt tcctgtctcc ccagagacac tcgcagctgt agatgcaata 1200
ttgaccaaac aacgtgaagc tcagaaacgg atccaaagtt tgtatgagag gagcaaggac 1260
ccggattaca agaaacggcc tctttacaag gaagtacgag aattaatgga gtcgctggaa 1320
gagctaaata gtcggccaac tggcgcaatt gacctgagc gtgaacagaa acggcatgaa 1380
gactggatga ggaaggggaa aaagctgttt gggaaggcta atgctcctct gcatatccta 1440
aaatcgcaca tggagtatgt tgagaagaga aatttctact gtttcgacct cgaagatcgt 1500
tttcggcctc ctgtcgagcc agcgtcaagg gacaatagcc ctgacggcca gggaggggat 1560
gtgcagcagt actacgggca g

<210> 2010 <211> 3492 <212> DNA <213> Aspergillus nidulans

<400> 2010

tagtaacggc cgccagattg tgcatgtgaa ggttgcccat acaggacgat ggtcggaaag 60 tcgcatgtct gaagcaccat agccgctttg tcgcagatct ggtcctttcc acagaatcct gtcgcaccat gcgggaatac gtgatttatc actggaaatc agcatcaaat atggcatttg 180 gttgagttac ttacgaagtg tcataggtgt cactgcccac gtcatatttg taagttgggg 240 ggaacgtgac aagaccctca ctgtagaatt ggaaagccct gcccgcgagc atttgcagat 300 tcagctaacc aaggtcagtg aagtacggat gccatgggaa gacatagctt acttgatcat 360 tgtcatagag cttctgataa ttgctctgtc ttaccaagtc cctaaccgtc tgattgggaa 420 ggccaatcct ataattgaag tctcccagcc atataacagc gtcatgatcc tcaataaatc 480 tattcctctg aaagcgaagt ccctggcaaa tagtttcgta gtcattgttc cgttcatcat 540 aattcgcaaa gccagcagct aaatgagcgg ttacgaagca aagcctggta ttcgaatatt 600 cgaagcggat ggcacagcct cctttgttac cagctattcc agaaagcccg gtctgcaggg 660

accgaattag tgagttttat aagaggatag caagttccgc tcaccttctt tacacttcct 720 tccacgttct ttatgtctct gagaatatcc tcgcgcacgt agatcatcag agctgtccca 780 accaattgac ctgatcgcag aagtacatac ttcggtgatc cccgcgcagc tgcgcgtgag 840 tttaaacaat ccatgacggc aagctcccag gatttacggg ttgtagggtc tgttgacatg 900 atctgctgag ggctcagggt aacaatctcc tggaatccaa cagcgaatat agtcggacac 960 ttgcgctggt cattgtcctc gggaaataac caaggactca agtcagtacc gggtccttgg 1020 acacgtccat tcacgttgaa cgttccggtc cagatatcgg ctaatttctt ggaagtgaat 1080 tctgatgata ttcgatccag cttagcagag accatgtcat tgattggatc gtagagatgc 1140 actggcagct gatctggcag gagacccaac ataagatcga ttgtcctctg tcgagctttg 1200 tctgagaagt tgttgatgta caatctggcg gcagttttac gcgcatcggc caaggcacct 1260 gcaatggaca tetteccatg tegtgtatae gagettttga gageaceagt geeegegtag 1320 atctttgata aagcatctcc attatcagcc cagagtatgg agtgccgatg gtgaacttca 1380 gagtatagca cactgttttc ttgcgacagg aacgattcaa gggccagtaa gctaatgatg 1440 gtctgcacaa gatttgtccg gtcaaggcaa tccaggcaat tggtgcggaa gactccttct 1500 tgttgtagaa caacggatgt tccaggtatc tcagacggac ggttttgctt agagagaaag 1560 tacgcaaagc cattgagaga ttgtgtaagc tcgtgcttta tttgatttcc ggccccatat 1620 cctagggggc cccgagcttc tgcatggaaa tcaaactctg tagtacgtaa cagagcatga 1680 tctgaaggca gatttgattt tttgctgctg agattcctcc ttatatgttc gcgaaacctt 1740 gttgaaagtt caatttcacc cggttttgat tcacatagaa ggttgaccac atggacagcg 1800 ccatattcta gctccaaaaa ctggatatgt ttgtcaaacg cgtgttgagt agcctcaatt 1860 gatcgggtca cttcaatctt ttgttgcccg gggagaaatc ctgtggcttg ctcccagaag 1920 attgggacgg agccacgcac ttgcacataa gagaaggcca ccccggatgt tccgcaaacc 1980 aagattgtct ctgtctcgac gaagttggcc acatttccat cgtcgtcaag accgcgagca 2040 ttaaatcgag tgcctgctcg tcgtgaagac aaacgggaaa tgagggtcag cattgaaggc 2100 aaatgtgcct tgggctcgga atgtaagacg ttagcattag caggaatggc tattgtcccg 2160 cagaatcccc ggataacaca tgtgagaatc tgagaggcat cgagaagttg tttttcatac 2220 ggtggtaggt gggatctaaa catgagaaga ggttggatca tatatgcatt ccacaaaaca 2280

tctttgtcaa gggaatcgat atcaaaagct gtcaacttgt ctgaactatt attagttagt 2340 tatcttgact cttgtcctgg actattagcc taccgatcct gcagtcgatc tgtaagattg 2400 aagtcaagac tgtagtaaaa gctaccatca gtcaggagtt tcttcagggc tagaaaaqqa 2460 tetttegeeg ggagtgtatt agaaatggtg tetteattga cagaagaete egegteataa 2520 tagggagtaa attcatattc ggaacggttc aaacaatctt ttttccttgg ttagatagca 2580 gcgataacag attgattcaa gatggtagat attttacaga gatctacgtt ctcaattctt 2640 aaaactgtct ctccaggcct gactgtggct gccttggaag agcgcgtgac aacacaaaca 2700 aacacatcat ggtctatagt gaccagcccg agggtaccgt acccagatcc taaaqqtcqq 2760 taacttgcca agtctatgga agatagactg gcaaacttca ccaagcagcg ttgcctgtca 2820 tgattgactg atgaatgatt gttggcagac tcccgtaagc tatgttggaa aaccaacgca 2880 tcgtctgaag tggccaaaat aagagtgcga acggggtggt cccgactgaa gactcgaata 2940 ctaggcatta tcaattgaga tcctgaatga tgactttgag catggcgggc agacgaacgc 3000 cggaagtagt tagagtagca ctagcttttt agatttgaag ggccctataa ccattgcgtt 3060 ggggaagctt atgaaccgtg cgagatagac atggtggggg aaaatccaag aactatttag 3120 gaggttcgac gactacaatt gttgaattgc tacactggaa ctgatcaccg ttaaagcggg 3180 gtttcaatat cacgggtgat tacgaactgt cttcctatat tatggtgatt aagtccccc 3240 atgaateeta aattggeeet tgaacacaca ettateacaa agtttettgg teteaateet 3300 tcagaaataa agggctcagg tgtctgattt aatacaaatg gtataaagag gactccttaa 3360 acactetget tggtttattt teegtactae tttatttaet tteetaatea tettattatt 3420 ttcccacaat ctcctcacta tattttaact ttatctatat tatcatcgtg acttctctaa 3480 aatttcttct tt 3492

<210> 2011 <211> 1567 <212> DNA <213> Aspergillus nidulans

<400> 2011

gggagtgaaa agctgtttag aagatctgga gacggcagtt ggcctttaaa taatttccga 60 gaatttcgtc atagcgatga taacatgcgg ggttccctta tctccgcatc agagcttttg 120

eggtegettg egegaetgtt tteaccegge acaatatetg eteacttagg getaetteea gtategtaag egtagattaa acagetatte acgegeaact aaatteagaa tatgtageeg 240 tgccggatac ctgagcatga aggtaagatt tgcagcgaaa gataatgcgt cttaccgact 300 gctgtatcaa ccatgacacc aaaagagccc ctgcttatat gaacctcgca tcagaaacca 360 ataaacttcc taatttcttg gttcaagcgc acggtagcaa ccgcctaggg cttgactttg 420 acttgccaag attcccggcg gttcgcatca agccctaact gccagcccag ccgcaacagc 480 taaaagcggg ctttgaacag cacggctagc ttgacatata cgacagtcag tcatgtactc 540 tctgtgatat tccaagagct agatgggctt gctgtttgag tgggatattt gcgcacagaa 600 acgtactcgg ggttcggatt ctctctggtc aattggcagg ctctgcggca tcgcgcagca 660 tttcaaatgg acatactaca ctgctcgcac tgaatttggt tttatcagcg ctcgaggtag 720 acctgatata catcaagcgg ccatcagatg ggcgttaagt gcttgtagac tatcaggacg 780 gcgctaagta cgcagaaacg gaagcagccg ggtagttagt aggtttaaaa gggcaaaaagg ctgtttcgat taactgaatg gttgcaagac ccggccgact cgacgttqcg qaaatctqct 900 aggtgaatag aaataatcaa cgagacaaga ataaaaaaat aaaattatgc cgcgaaagca 960 gtatcttata ttgtgcatgc tttgtccgga ccttcgtctt gtcttgtcct ccagttaatt 1020 atttttccaa ggcaagagaa gagcttctcg ctggagacat ggatgtcatt tacggtgtat 1080 ccatgattaa tatttcgacg aagcacgaga atttgttaga tctagatgtt tgtgaagatt 1140 ctagctgttg atagccagtg tatggacatg aggcaaagat aataccaata ctgaattgcc 1200 tttgtgtgca tatgaaacta ttcacaagcc tgttactcac acagcagcag atttgtctgg 1260 agggaatata tactatcccg cttctattga cttcaaagtg cttagtttgt aggtgttaaa 1320 gacaagtaac atgataagga cctgttcaca gcttaacacg cacactatag gatcgtcaac 1380 ttggcccggc ttggagctcg atgatattga tacgacagca ctaccttgaa agtagaaaac 1440 gacaactgag ttgagaaact catcttgtag ccctgaacct tcctgattcc atacgtgggg 1500 ggtaatcaat ccttaggcta gctgacaaaa gggaccaact gctggaaaaa agggcgcacc 1560 ttttcca 1567

<210> 2012 <211> 1553 <212> DNA
<213> Aspergillus nidulans
<223> unsure at all n locations
<400> 2012

ttagcaggtg tacgaagaaa gaaatcattc caaa

ttagcaggtg tacgaagaaa gaaatcattc caaaaaggtg aaattttcgc tcaccagaaa 60 qcaqcaccaa tttggttacc ctgtcacgca tccaagttta gtattctgtt ttcagagaca 120 accaattccc ctqtttctqc cacttacaca ctggccggtc tgaaggttaa cctatttggg 180 240 gaaacacatg gtcagcatat ctgagatcgt ggtatgtaga accggtgggg tccccggtat ccttaatggg aaggggaccc ctcaagacgc gtcaaacagg gagtgtcaac atacgatctc acgcattgtg aagggtgtgg acgggtatag aggattaaaa aaaggattat ttgcagaaac cgtaaaaaga atcgaagtcg gatgaagata gactggggaa cagccggaat tgaggggagg 420 480 agggaagagg acaggagcga gatcaggaga aggaaagttg ggttgggggga atttgagcgg 540 tqaaqccqcc agcaaagagc gaggccagcc aactaagtgg atcgcccgta gtaaaggaga 600 aaaaqatcaa caacaacata tgtcacgtgg caaaagggga accgccaggt ccggattagc 660 gcctggatta gtcatagacc tcaggaacga accactcttt ggtctttgct gcgcgaacca 720 cgccaggtat acttcagtac agctgtatat gacccgtggt ccaagcacga tcataccttt ctaggtgctt gaaaatgact ctccatactg gtagcatttt gtccctctct tgagatcagt 780 ttgacqqtca ggttgatgag gacaatggtt gaggacccaa aaaagggaca ctaccatgga 840 atctcagggc gctgtgaata gcgcatcatc tatcagttta tcgtaacagt aagacttgtt 900 catcatttgg atatgtgcag gtaggaccta ctcgtaaaat gccgtgctga cagttggggt 960 tatctgttgc agettgtcgg gcaggcccaa taccagcact aacatgccac taaggcatac 1020 cttgtttggc aaaaagccct tataaactgt gtaactgcgt tatcggtagt gcgctcctta 1080 gacggccqcc atgaggcaat atcctgctct acaacacagg ctccattgaa tatgtctttc 1140 tctgagcata attggtgctg tatcagtcag atcagagcgc tgaatcattc taaacagcat 1200 acaaacaggt cttgatgtgc ctcaatatag ttcgaggcga gccttctttc aagtccgtag 1260 gccgatggta actcacatat gttgaggcat atcacccaca gtccgtaaca ctccaacgtc 1320 ttcaagatcc gtcagattta ctcccatcgg cattggcaga cctgcaaaca caatgacccc 1380 atcacgcaga ccccagaccg atcatcctgg ttgatgactt aggccctgac atactcacgg 1440 gcctgcttac gttgtgagag attgagcgtg ttacacctaa gcgaacggca ttcgagatca 1500 tacgatcgct ntacacgtng ccgcagaaga ttactgaaag ccatgaagac ggc 1553

<210> 2013 <211> 2331 <212> DNA

<213> Aspergillus nidulans

<400> 2013

60 cagcagagtc tgacccgtgg tcaactttca gtattagaac agaacaattt aacagctagc tatacctatg tagcaatgtc aacttcccag ttcattaccc ctatactcta cgtacattgc 120 acattggggt cgttctccac tgtcgaccca cgcgaccgat cagaaccgtc ctgcgtggat 180 tggtccgtca tatgccgccc gcgtccaggt gtcatcggtc tcatgcacta gataggaggt 240 300 taacctactg gggtggcaaa catactagag acttggcaac tgcacgttct gacgtgaatg taacgctggg gacagctggg cctgggcgtg gtgctagagg cccgtagcgg ctcggctctt 360 tgaattaggg tccgtcttgg gatttgcctt tgtgaccctg tgctagcctc cgcccctggc 420 aaacaggctc gtacatatta gtgttaaccc ccttccctgc ttctctgctg tgaaaatttt 480 tatcagagca gctgcaatca tgcgctacca agggacctgg ctccttacaa ttgggacttt 540 gggagcgacc ctagccacct cgtcttcctc ctctactgag aaaaacatcc tcgaagtaga 600 cctcqtcttc ccccaqaaca aaacgtacaa gcccacagaa tqgttcccca ttgtctttqq 660 tttccagaat ccgcaacgcg cccagtacct caatattgac ctcacctatt ccttccaccc 720 ccacgagacc aatacgcaga acgacactat caccctcttc cacgacctcc gctgggaaaa 780 ctgqtcctcq cacqacccqt acttcqcqca caatttcctc gacaacttta acaqccccqq acgctggaac ctcgcgtgga cggtggcatg gcaatcgtgc gacgaagagg gctttgagaa 900 ccggctcatg acgtctgaca tgcttacaaa tcagacggac ttttcaatct ggtttactat tgccgccaag gacgctgaaa acaagggtat tgatgcggat cttgtatctg ctacgtcagg 1020 agagacetee tgeecagace tgggatttga gacegecatt gecateaacg ttacggaaaa 1080 gaccatgtcc gtgcccgact tcgtagactg gtctgccgcc gactggacaa accatacttg 1140 ttctgttgtt gctcctacat tagtaattcc ggatccttgc agggtcaagt tggaccagac 1200 tgttgttgag agcatccagg cttcgttgac ggcacggcga tgtcaagggc tcaacccgcc 1260

agatgattgc cctgagaagg aggataatga gagtgctggc gtcgcgctcc ctggttcggg 1320 attattgatg ttggctttgt caggtgctct agggctcttt gcttcaatgt gattgaatca 1380 tgccatatat ctttggttct acttctgtta gagagactat tagacttgtt aaaccacggg 1440 ttgggtcggg ttttcagcat acactgatcc gcccggcggg tttttggagc ggatcagtaa 1500 accccgccaa gcataacgct aaccatatat ggttagattg ggtcagtgga gctataacct 1620 acccaaaaac ccatagccca gagcataaaa aatctaactt ggttaaattc taccagtatc 1680 gagatettga eagagatata gtagataate ttgttetgta aatateatat attttttatt 1740 ttagactaaa agatggtgca cagctaggaa tataagatct aagattatag actatggata 1800 taatatatat gtaactttga gaagataata taaactaacc aagttagttt ttcttcttga 1860 agtatttttt ctctttcttt ccatgggcct gctcctccag agtatgcttg tacttacaag 1920 taacattatt tttttcatag accttattcc tattactacc atcatcatca actgcaatta 1980 agegteacet tecagaceet gaceettaat ggteteetta ggegegtttt tetgacagtg 2040 agaatcctct tccacctaga cttgttaaac cacgggttgg ggcgggtttt caggcctagc 2100 tgatccgccc acgcgggttt tggggtgggt taccttcaca gtaaaccgcc catgggtttg 2160 gcagataatt ctaacccaac ctaaataacc caaaataacc cagttatgca tatcattatt 2220 ctaataagca gtgatctata tagttaataa aatactgtat ttaaatactg tattataact 2280 atctaagtaa gcaaatataa tctaaataca gtaatatacc tattcagatc t 2331

<210> 2014 <211> 3439 <212> DNA

<213> Aspergillus nidulans

<400> 2014

tetactegtt tteatgttat tatectecte gtegetatea ceagactege tgaegeteee 60
aatactgete gtgetgeee cattgegaga egaacaagag caagcatgea gggecaagat 120
ggeatatate ttetttete ttgegaetet etgegaaata tatettgeaa tegtttgegg 180
cagattgagt ategegtete egtggeeggg atatecaaeg gaacaettga geeetgeeat 240
caggeggagg etggeagtgt aggttteeag gteeteagea acaetgtage catggeetag 300

cacattgtcg ccggtgaaca gtgcgttctc ttcctccagc aagaagcaca tgtggtcgac 360 agcatqccca qqcqtcaqqa ccqctcttag aqtgqcacct tgtgttttga aagtctggcc 420 attegeaatg geetgetgge eegggteggg egeatgettg tacactatta tgetggggte 480 atgcgcaaga aggtcggcta ctccgccggt atggtccttg tgccaatgcg tgagaaggac 540 qtqqqaqatq qagatqtcqt ggtcttcqag ataacgggtc acactgactg cccattgcgg 600 agctccctgt gaaatagttc aatattgatc ctcaagaagt ggtttttacg cagatggttt 660 attotoagaa aaccgaaagt agtatoacat cacccataaa cacatgaaca togaagaaca 720 ctcaagggtg atttgggtta aggtcttacc tctccagtgt cgatgagtat cctggtgctt 780 ccagtaccga ctaggtatgt gttggtgccc tgcagctgca tgctaccagg gttgtatcca 840 aqaaaqcgca cqacacagtg agacaagcca tcgtcgattt ctgggagcac aggtagcctg 900 ctccgctgag tctctagata gccagcccag aagggcgacg agtaaaatcc cccagacata 960 gcgatgagag ttgaaagtat cgataggggc attcgatgat gaagaagtta gattccccat 1020 tagtgatatg tgaccaaaat ctagccacga cagagttggg gcctcctggg gcgtaatctg 1080 ggctgtgctg cttacgccct acgaactctc tgcggctgtt tgggggcaat aagcactccc 1140 ctcgtattgt ccaccaaaaa gccccgaag tattcctccg tccggggtcc gaacacatga 1200 atagcaatgc ccgatcatgt ttggtatgta ggaacctatt acctctttgc cgcaaatact 1260 ggtcgtagat ctatatatgc ccttcacttc gtccactcca taccacagaa accacagaaa 1320 tccagtatac acttgctatt atttccagct tctaactgtg ctcatcctcc tatcctctac 1380 aacattccaa gatcacaaac ttcaattcca tttcaacatg atgaacgtcc cggaaaagtg 1440 taaggtgctg gtcgtcggtg gcgggccagc tggctcctat gcggcctcgg cgcttgcacg 1500 agagggaatc gacgtggtcc tccttgaagc agaaaagttt cctaggtgcg cttccaggaa 1560 tttgagagtg atggetttca ttattegtga tgtteecata ttettacaeg tgeaceagat 1620 accatattgg tgaaagcatg cttccgtcca tgcgacactt cctgaagttt atcgacgcct 1680 acgacaagtg ggatgcccat ggtttcaata tcaaggtaag aaaaaagacg acaaccctcc 1740 agctttaaaa gaacaccact gctaatgctc agagcagaaa ggcggcgcct tccgcctcaa 1800 ctggtccaga cctgaaacct gtaagcctca gctgatctaa tggccacggc agagattcca 1860 actaaccatc aacgtcgtct attagacacg gatttcattg ctgccggtgg gcccgggggc 1920 tacgcctggc atgtgatccg gtctgaggca gacgagctgc tgttcaagca cgccgccgaa 1980 tgcgcgtgcc agacctttga tgagaccaag gtggcatcca ttgagttttc ctctcccgat 2040 ctctcgtctg gaggcacgca cccctttggt cgccccgtct ctgcgacgtg gactcgcaag 2100 gacgggactt caggaacgat ctcgatggac tacattgtgg atgcgtctgg tagaaacggt 2160 ctcatcagta ccaagtacct gaagaatcgg tcctacaaca agggcttgaa gaacgtggcc 2220 agctggggct actggagggg aggggggtc catggtgtcg gcacacacaa agagggtgct 2280 ccctatttcg aagccctcaa aggtacgtcc tcgcccggct gtatcttcca ccttacccat 2340 gtgaagggaa acagtgctaa ctgattgttt ggctcaacag atgccagtgg atgggtatgg 2400 tttatccctc tgcacaacgg tacccactcc gtaggtgtgg tgcagaacca agagatggcg 2460 acggagaaga agcgaaaaat ggccgagcct tcctccaagg gcttctatct ggagtccctg 2520 gagtttgttc ccggcataaa agagctgctt gctaacgcgg agctcatctc agaggtcaag 2580 teggeetetg aetggteata eagegeetea agetatgeet teeegggtgt aegeattgee 2640 ggagatgctg gatccttcat tgacccgttc ttctcttccg gcgttcactt ggctctttct 2700 ggagggctgt cggcagcaac gaccattgcg gcggccattc gtggcgactg cgatgaaaat 2760 gttgcggcgt catggcacga taaaaagaca tccgaaagtt acacacgctt tctcttggtg 2820 gtctctagtg ccttgaagca gatccgttct caagatgagc ccgtgatcag tgactttgat 2880 gagggtagct ttgaaagagc ctttgaccta ttcagaccca gtacgtccat tctctqtqat 2940 cateccaegg cagaagcaat aattetaaeg gegtaaegte tagttateca ggggeaggee 3000 gatgccgatg caaaqqqcaa qctcactcaa qctqaaatct caaaqacqqt cqaqttctqt 3060 ttcagagcat ttgcgcacgt ctcgttcgag cagaaagagg ctctcgtgca gaagctcaaq 3120 tctctagggc acgacggaga tgcgtacgac gagaacaacc gcaaggctct cgaggaaatc 3180 gagaagcagc tgacaccaga qqaqcaqaca atcttgaaqa cactaaaggg acgccgcatg 3240 gtgcgccccg aggattcgct caacattgac aatttcactc tcgactccat cgatggcctc 3300 gcccccgtt tggagaaggg gaaactcgga ttgtccgcag cgaagaaagc agagcttaaa 3360 ttcaccgctc atgatccgct ttctttcctt aacggcgaag caatgggctg ccagaagacc 3420 agtccaaatg gcaatctcg 3439

<210> 2015

<211> 4384

<212> DNA

<213> Aspergillus nidulans

<400> 2015

60 cagcttcggt ttcaactccc aggacgcctg cccctccag caaaacaaga tgtctcgcct ctccggtctc atacctgatc cccagctcca aagcctttct cagcataagc tctagcgccc 120 tccccgcatc agcccaccca gcagaccgat tgaaatagta cgatccaaat ggcgcataat 180 240 cogtectete cagaacacet coccaegece ttegaacete atcetectee atateaacaa tcacgctgtc atgcttgcca gcgaggaaat tctctctgat acggtgcgcc acattgctcc 300 cttcctcgtc catagcgatc cagccggact ggtggtaaac acctgcatct ggatctgcgt cgggattttg agactggaag aacggaagcg tctgccaagc ttcaatcgcc tcgaagccta 420 480 attccatata tagtggactg gaatagtcgg cgcggatgat cttgttgatg tcggcggatg 540 ctgcaagcgt attggacgga gggtcccggg cagctcggtc caaaaggatg atacgagagg 600 ggtcgggaac tcgctggctg agatggtaag ccgtgctgac gccgaaaatg cctgcgccga 660 ctatgaggat tgttctttca tccatggctt gctgaatcga agcgttagat gtagttgtga tggatgaggg ggagtggtga tcggtgtcct atcaatggcg tagttggagt acaatagcgt 720 cagatacgta acaatagagc gcgcaacgca atgacaaagt aatacatagc ctacattgca 780 atagatccag aactcataag gtaattttat tgccagccgt agaacaacga agttaaatgc 840 agaggcaatg agcacatgac acccaaacat tatttgactt gctgcccctc ctgttcttcc 900 aacttcccag cttcaacccc tagccttcca agtcgagcga tatctcgtgg ccccagtcta 960 ccatggcgac ctcagaccaa gagtatttct ggaccagcaa tattctcctt cacgcccttg 1020 cateceaaga aegeeegae teeageagea acaaeeeaae eegaetgeaa aegeaaacae 1080 aacagccaat ctcagactca gacagagacg cgatatgcct actattccac gattacttcc 1140 cttcaagatt accgcttcca tatgcgggat tcgacaaccg aattgctgct ttgcgtgctg 1200 acgtccacaa acgatgctat ccaaggaact tgacgatagt cgaggaggtg catcagtttt 1260 tcctggagtt gaggtccttg ctttctgttt cgtggcattc gcaaggagct gcgagctacc 1320 ttagggacat ggatttgcat tcacaggcgc aggctacggc gcaggctacg gtgcaggttg 1380 acgaggtgga teteaatage gacagtgaga actggeeaga aagteggate gatgaegaag 1440 aaacgtacca tacatcgata tgggaagctc gtcggtcgaa tgaatcaccc agccccgata 1500 aaaaggtttc taggagacca gtaaagggtg actgtacgat ctgctttgct ccgttgaaaa 1560 acgatcaaac ttctccgcca ctaaaagaac accaaagcga accgaaagac gttgcctttg 1620 tcaataacga gccaggcagt cgtggtcctg atcctgatat ctatgaggat catggtgacg 1680 agggaaacaa ccaatatggt gatagttctg acgaggacga aggagacgac gacggcaacg 1740 acagcagcag tetegtttgg tgtagagatt tttgcggaac caactaccac teccaatget 1800 ttgctcagtg gattccgcag ttcaagaagc ggcaagatgt cagctgtcct acatgccgga 1860 gacgctggaa atactgggga gggaggaatt attgatcgat tgggctgttc cttggtttcc 1920 tggttccagt gccggaatca tggcttcatg atttgcctga cacatgtacc gtacatgaag 1980 gacttctgcg tcaatgggga tgtgatttgt gggctctggg tctgatgata atgctataac 2040 cgagcctttt gcttttccat ccgctgtaac cacgtagcaa tggtctcaag gaggccgtcg 2100 acctcctcca ccgtgtttcc cgcgtgcaag catacgcgta cacgttcttt ccctgctgga 2160 acagttggcg gcatgattgc acggacggta tatccctgct cctggcatac gctggcgagc 2220 acacggggca cactgctgcg aagggaaaat atgggtgagt tcgtaaaatg ttcaacttca 2280 aaggtcgacg agtccttgtg gttgagattg tccaaccccg tccggaagtg agcaatcagt 2340 tgtccgagtt tgtgctggag ctggatattt gttagctttc ccataggcct gtaatgaaac 2400 gttgcttcct caagcgaagg accgtacctg ctcagttttt ccctcaacga gtagttcata 2460 ggcagcacgt attgaagcaa gaaagggaaa tcccagggca gtggtataga tcaggctgcg 2520 agcgtaattg atcaggtagt ctctagtatc cgcacaacac aatacgattg ctagcaggac 2580 agtcaatatc gacacccaaa gacaacgcgc gagacttacc tccatgacta gcgagtgctt 2640 taccgaacgt atgtacccgg acgaacatac gatcctccag tcccaactct tggactaccc 2700 cagaaccgcg tggtccaaag acgccggtcg catgcgcctc atccacaagg aagtatccgt 2760 taccgtaagg gagaagctgg tccacgatct ctacgaactc acgaataggc gcaacatcgc 2820 cgtccatact gtagacggat tcaaaggcga tgaaaacgtt ccggcggccc tgaagaagtc 2880 ggggatctgc agttatttct gcttgcagta ctgctctcag gccatcggga gagctatgag 2940 ggaacttgat acgcttccct gctcgtgaga gccgcatgcc ctcatgcgcg ctggcatgga 3000 tgagttcatc gtatactatc agatctccgg gttgcgggat actcgagaaa acgccaacat 3060 tggcatcata tccggaattg aacagtaggc cactcggggc attgtggaac gcggcaatga 3120 agttctccag ctcttcggca taggctgaat tgccgtctag gaggcgggac cctccgctgg 3180 caaacgggtg caacggcggc gcttgttgca aaatatccaa aaaccgcgct cgataggctg 3240 gcgatgtgga tagtgacaaa aagtcgtttg atgagaaatc aaccgaagac gaaggtagaa 3300 tegteagttt tegaeggeae agettgtett ceettegaeg taaegeeteg egeagtgagt 3360 cacgaaggca ttttggagaa tcgcccatct ggacgactgt ggttccaagg ccaacgcttg 3420 ccaataggca attcagatag ctggagacaa gattcaagta accgtaaatt caaaggagga 3480 tctatttttt ctctggtgag attttgccag tattaatgct ccagctcaaa tcacgctctc 3540 caatctccac gagtctagaa cgtcttgaag accctgctgt atggacctga gacttggggt 3600 agagcgatca ctgatgaagt agtgcctgag tctcaccaca ttaacacatc atacggagta 3660 gcacaattca attcggcggg acttatttca tctgttggga tcaaccggtg ggggaatgga 3720 tccgacgaac gtggctgggc cgctgcccgg ttgtgccgct gcagtgactc ggtgagcaac 3780 gcagttccct aggcaagaca aaaggcttaa ctcgggggcc tcggcctggt tcctgtctca 3840 ctgtgcctgt tcctgctaga acgactatga acgcctaatg caaagggctc gagagtcgaa 3900 ccacgategg gtttetttee geggtaaage getgeageet tetgeaaceg aatetgtegg 3960 tcatcattcc tgttccggtc gcagacgggt gccgaaaact gcttctaaag ttcagttggt 4020 qtttcqqctc tqtqatqcgt tagcctttca cattagcgac tggtttctgc tgttttgaaa 4080 gtctagattc accatcatgg cacctgttgg tgccgcgctc tggcgctccc tccgcgccca 4140 ccaagtatac ggggcgaaca ctgacgtcgg caagacaatt gtatcagcat ttctttgcaa 4200 tqctqttcat qqtctqaaaa atcaagcaaa gcaggcgtat atgaagccgg tctccacggg 4260 qccattqqat qcatcqcatq accaggtaag actggtactg tgcccataat gtgctcccag 4320 cccqcctqqa ccaqqcaata tgtcattgcc tgcctgcctg gcacttcgcc tgtacgcggg 4380 4384 cgtg

<210> 2016 <211> 364 <212> DNA

<213> Aspergillus nidulans

<400> 2016

<210> 2017 <211> 1625 <212> DNA

<213> Aspergillus nidulans

<400> 2017

ccccttactc agctgcacac ggagactttc gatggtttca ggcacagcct tcccccggtg 60 cggagttttg tgagctcatc cttcagtcga gagacagcgg ttgcgattcc gagttcgagt 120 tgtgaaaggt ctgacggtca tccgaagcaa tagttgcctg gccttttgcg ccagcatctg 180 tttgcttcaa agtgtctcgt tttttacttt tgttcaaggc cggggagcta gtgaagcttc 240 ggcggaaggc ataaccttgg agttctatgc cgcgcacggc tcggattcgg gatgtcttaa 300 gaaattqtqq aagcqcggct atgggacgca ttgtcgtgcg ttggtaggga aaaataccaa 360 420 ccaagagcag ggacagttga gtcttgacag ccttttggtt ttgatgccaa gaacttgcgg agctgaagga aatcgattac cttatacggc cataggttat caataatcgc ttcttcacac 480 aacttctcaa agatttggaa agattacaaa acagcaaagc ggaaagtgaa gaagtttgac 540 600 aaaactcgtc ggaatcatta aacctgcagc tacagtcatg tataaatcta gaggatactt ttgataagaa tcattcccga ggcgtgtcaa gcacttccag cccaacgtcc ctatatgtcc 660 aagtetgaac aaacaactea tgetteteat geateteata atetgttatt tacegegtgg 720 ccatggcctt agtgatgagt ctcttgagag ccagctcctt cttcttgaga tcctcgggag 780 tggaatcctc aatctcgagc tgtgccatgg catcactgag ggcagactcg atcttctccc 840 tgttgccacg cttgagtttc atagacattg tagggtcgga gatgatttcc tcaacgcgag 900 agatgtagga ctcgagctgt tgacgggact caaatcgttt ggtgaaggcc tcatcactgg 960 tettgaactt ggcagcatet gttetgatt agtataggaa gcacaaaact ccaatggggg 1020
tttattaccg tcaatcatet gtteaatete agtggtagaa agettgeega cagegtttga 1080
gatagtgata ttggegetge ggceagaaga ttteteagtg geggtgacet tgaggatace 1140
attgacatea acetegaaga cacacteeag ageageetet ecagetetea taggtgggat 1200
gggagecaaa gtgaactete caagagaagt gttgteggeg cagttggtae geteaceetg 1260
atagacaggg aactgeacag tggtttggtt gteaaceaca gtagtgaagg taegettett 1320
aatagtgggg aeggtetgge egegaggaae gaetggageg aagatgtae etteeatege 1380
gacaceaaga gatagaggaa caacateeag aggaggaga teetgagtet eggetgaagt 1440
tgeetteeeg gagaggatae eggeetgaae ggeggeacea taggegaaea egteateegg 1500
gttgatgete tgeaaaatgt aagetttgaa caaattaaea gtggcacaag aaactgaeet 1560
tetegagett ettgeeateg aaaaagtege tgaggagett etggatgega ggaataeggg 1620
tagaa

<210> 2018 <211> 3877

<212> DNA

<213> Aspergillus nidulans

<400> 2018

cttaccgtcg aacttgaaac accctggaga tgacaatgat tgttttcccc gagaccgcgg 60 cgactcggcc ttcaccgtcc tttccaataa tacagaccgg cccatccgtt cttcgcacgg 120 gatcagcacc ctttcaggta ttccccgtgt gacaagtggt caccgtgcag agccaagtag 180 gctttcactg aaagctcttc gtgtcccctc gtgccaaggg ctgggtagtc ttaatagatt gcgcggagat ggattccgct tgagtctagc cttgactcgt ccagatatct atatttggca 300 360 ccgcctcgtg ctcgctggtg ccattcccaa gcctttctct cgtttgctgg ggtcgagtgg aacqqcqctt gtagaactcc tcccataggg cagcgcctca acaggcctcg caagctgcag 420 caaatcatcg caccgcgagt gcgagagaat gacctgacgc ctctgcaaat atctccagta 480 taccaatcag tgtcttcgct aacatcgtaa atttctccca gccacatggc gggtccgctt 540 gtggttttcc atggatagaa gaacgaccac cgaaggctgc agaagatagc gcacatggcc 600 gtgctctagg atcgcggcca gttgccagta cggtcgcttc gagggaagat catgactcga

totgagttog tggctggttg tgatagcato catogggcat tgtotcatog otgggaggac aggcggaaat caggatcgct tgtcacaaca caatcgtcga ataaggtcag ctgtatcgaa ccatggggca acgcatcgtg ttccggagag gcctggagga tctggagtgg ttcttgaatt 840 900 agcagactga gacccgctgg ttaggagagt tggactggct tgcagagacc gtttactcgc tccgccaata attgagcacg atcgcagtga ccctggtcta ggactgaatg tttagcgcag tgggcgctga gcagttggca ctgagctttg aacactgact gggcgctggt cgctgcttaa 1020 acttcctcag gtgcagaaca gaacctcacg acccgcgcct ttccttttcc ttcccctctc 1080 ctcttcatct tccctctccc ctgcacatct ctaccacatc gtcgggttct ccactaccat 1140 tgaagaccag tatttgatct gcatcgtttt accggccgag aattacttga taacatggtc 1200 cgacaggcgc tcgtccttgt gtcccaactg cccgctattc ctctgcgctg agtgctcaca 1260 atcagtctcg ctgcaatccg atcacgaagc caccacgcta cctttactta attaagaagt 1320 ctcgtcacgg ctcgctattg atagaagtgg aaaggggacc gaaccgtcga attcttgccc 1380 ctcgggcttc tcccttttat ctcagcggca ctacgtccgt cccaactcgc cccgttagat 1440 tgacgacata ccattcacga gtctaggttt cagggctgta taatttatat agtgcgaagt 1500 tttaaagggc atcagtcgtc ctctccttta ccagcaagca tctcgagtcg gatcggcttc 1560 tagegtgeet gtttttetge geeteataee ageaeegtea tegeeggeeg atgateeagt 1620 gcgctgtcaa gatacaccgc gtttccttac cgggtggtag gcttatcgcc atgggccgat 1680 atccgctgaa atcctacttt gctccctcaa agctattctt ctatacttgg ttctggggcg 1740 cgcatattgc tatttttgca tacggatggt tcgtcaacgt gaagcgatag agatagagcg 1800 qaqtactgac tggttcaggt atcaccaagc gaagagcgag ccattgtcgc cactcaatgt 1860 cctttcgtac tcagtctgga tctcgcgagg cgctggcctg gtattgacag tcgatggaac 1920 acttatcttg ttgccgatgt gcaggaatct cgtcaggttt ctacggccca agctacggtg 1980 gctacctctt gatgagaata tatggtttca tcgccaggtg gcgtacgcga ctcttgtgtt 2040 taccattctt catgttgcag cccactatgt taagtaagtc gatctctagg gggatcagga 2100 agcaaggaaa gctaacgttt tacagtttct acaacattga gagaaagcag ttgcgtcccg 2160 agacagcact acaaatacac tatgctcagc ccgcgggagt gaccggtcat gtaatgctgt 2220 tctgcatgat gctcatgtac accacggcac atcaccggat tcgtcaacag tcgtttgaga 2280

cettttggta cactcatcat etettcatce egtteetaet tgggetetae actcatgega 2340 cgggctgttt tgttcgggat agcgcagagc catactcgcc gttcgcgggc gagcggttct 2400 ggaaacattg cattgggtat cagggctggc gatgggagct cgtagcaggg ttcttctacc 2460 tctgcgagcg actatggcgc gagatccggg cgctacgcga aacggagatt gtgaaggtgg 2520 teegteatee atacggtaag teagetgege gatagacaat eetegagggt titaetgaeg 2580 agctagacgc aatggaaatc caattccgca agcccggctt caaatacaaa cccggacaat 2640 ggcttttcat tcaagtcccc gaagtctcca acactcaatg gcaccccttc accatcactt 2700 cctgcccctt tgacgactac gttagcatcc acgttcgcca agttggcgat ttcacccgtg 2760 ccctaggtga cgccctcgga tgcggcccgg cacaagcccg cgacctagaa ggtctcgacc 2820 ccatgggcat gtacgaagtc gcactgcaga acggccagca aatgcccaag cttcgcgttg 2880 acggacceta eggtgeteet geegaggaeg tettegagaa egaaateget gtgeteateg 2940 gtaccggtat cggcgtgacg ccatgggcct ccatcctcaa aaatatctgg cacctacgtg 3000 cctccccaga cccgccccgc cgtctccgcc gagtcgaatt catctgggtc tgcaaggata 3060 ccacctcatt cgagtggttc caagccctcc tttcttcatt ggaagcccag tccgcgtccg 3120 acgccgccta tcagggggtt tcggagttct tgcgaatcca catctacctc acgcagcgcc 3180 tcgatcagga tacaacgact aatatctacc tcaactctgt tggccaagaa ctcgaccccc 3240 tcaccgaact gaagagcagg accaatttcg gtcgtccaga cttcaagcgg ctattcacgg 3300 ctatgcggaa cgggctgcaa gatcagtcat atatgcgcgg attgcacacg cattccagga 3360 cagagattgg tgtctacttc tgtggtccga atgttgccgc aaggcagatt aaagcggcgg 3420 cttcctctgc gtccacgaac gaggttaaat ttaaattctg gaaggaacac ttctaactta 3480 ccagtctcat ctcgtttaac tggaccattt atgccctgta tctgcttcaa gcaccaaagc 3540 tattttatgc gttgacatct gtttctgata tcacgtgatg agttatgact ttccttgttt 3600 tacactettg cagegegtee tgtaatggte teatgeagga egettgeaat atectetgta 3660 ttctacccca cgacccgtat atagccacgt tctctagaat tcaaattaaa ctggataagt 3720 aattgaaatg tatctgcttt cagattccat ctttcacaga ctagatctcg taatgagcat 3780 tgcttaagta ctgctacatt atacgacatt acatctgcac cgcctcattt tcatccccac 3840 3877 tcgcagcatc gtctggcatg gatataggca taccgaa

<210> 2019 <211> 4462 <212> DNA <213> Aspergillus nidulans <223> unsure at all n locations <400> 2019

ccttcttctt gctcttaggc ttcttctcct tggaagcgat ctctcgagca atctgcttgc 60 tcttggcctt gggagactgg gtagccttgg tgacaccggc atccttgacc ttgctcaagg 180 ccttgtcggc aagctttcca gcactctcag cgcccttctt gacaacagac ttggtcttag acattttgac tatagtgagg tagaacggtt agaaaggtgc aacatgagtg gccgacgcca 240 atagcaagac ttacctaatt attttccgaa aagagaaaaa aagaaaagtg cggcaagccc 300 tctagtactc aatcacccga tttgaaaatc ccacagtgtt caatgtccag aagtgactaa 360 gcacgactgg aagtagatct cagaagagat ttacgcggac gcccacaagt aacccacaac 420 ggacaatgtt caagcccaca gaaacggaca ggagatatgc aactgtctat gatatgaaac 480 ccacaagaag atggtaagat cccacaaata gatgaaacag cccacagccc tcagtgtgaa 540 600 agcccacaaa caaggtctct gttgaagtgt atctggtaag atacacgttg cgctcccacg tcagtagaag tatatgaaat agggaagatc aaatcaaagt gatatagcca aagaataagt 660 cgaaactttt ttttccttgg tgagaaattt agggagttga taggtgatga agggaaagga 720 aaaaaaaatt ttgggaactt ttgagaaaca gcttctctga taagtaaaaa aaaaactcga 780 aggctagcag agatatgcat accgcttact ataaccggtc tagcttgaaa gtctatgctg 840 agagaaagtg gagacctcca aaatggttct ttcgaccaac aacagtccgc cctgtcaaaa 900 ctccagtttg ctcacatact ccgttatagg ctgtccctac cctggcctcg tttcttctcc aattgctgtt cctctttata tagcaggttt gcggtcaatg gaagaccact gaatattatc 1020 actcaatatg gcaccctcag tcccctcatc ctatcgcccg cggaagaaga gaaagtctgc 1080 cgcgctcttc gccggctcga acaacccact cacaatagac gcaggggagg ggaaagctgc 1140 gcctgcattt ccattagtat catttctatg gggagctcgc gctggcgtat ctcaatggct 1200 cgttcttcct ctcatattga tgacagtggg cctgtttcgc tgggctgtca gtctgtgggg 1260 ttattcaggt aagcatacca tcgagttgct gtatggattc ttgtatgtat acttgggctc 1320 atcatgcgaa ggctttaata cccctccaat gtatggtgac tttgaagcac agcgtcactg 1380 gatggagata accattcacc tgcccctgtc gaagtggtat acctatgacc tacagtattg 1440 gggacttgat tatccgccat tgacagcgta ccatagctgg ctgctaggaa aaatgtacgt 1500 tggattttgg ccaagttaca gacttaacca gaagtttaac ttataaacag tggctcggtt 1560 ttcgatccca ctttgttcgc cttggatgac tctcgtggaa ttgagggctc tcttctgaaa 1620 gttttcatgc gtgcaacggt ggttgtgtcc gagtacctcg tatatatccc agctattgtc 1680 actttcctgc gacgttacac ccggatgcaa gcggtacccg tatggtcctc gtccatcgca 1740 ctcagcgcca tccttctgca gccagcaacc atacttatcg atcacggcca ctttcagtat 1800 aatactqtca tqctqggatt atttgttgcg tctttggatg ctataatggc aggacgcatg 1860 ctttgggcgt gtattttctt tgtcggggct cttgggttta agcaaatggc tctgtactat 1920 gctccggtta tgttcgcatt tctccttgga atctgcatct ttccgcggat tcggcttgtc 1980 eggettttet geatageest egttaceatt getteettta eegeesteet tetteetetg 2040 ctacttgggg ctactagcac cgaggctggg aaacagccag tccctgagcc acctttgctt 2100 caqqctttcc ccgtcaatct ggaccatgga tcatcattat acctaattct ctttcaattg 2160 acacagatag tecacaggat titteccatte tegegaggte tettegagga caaagtggeg 2220 aatgcgtggt gcgccattca cacattttac aaactccatc atttcgagcc tgaattgttg 2280 aagcgcgtat cactcggcgc taccctagca tcgatcttga taccgtgtgc catcgtcttc 2340 cgtcatccgc gcgcttcaat tctgctcccc gcttttgcta ctgtcggctg gggctttttc 2400 cttttctctt tccaggtgca tgaaaagagc gtgctgttac cgttacttcc catgacacta 2460 cttatcgccg gtgatggagg gctcaataaa gatacccggt catgggttgg ttgggcaaac 2520 atccttggtt cctggactct atatcccctt ctcaagcgag atggcctcca agtgccatat 2580 ttcgtggtga cttgcctctg ggcctatcta ttaggccttc ccccgacgtc gtggcagatc 2640 taccgccacc agaggccggt tggggaggta gaagcggata ctgaacctca tggtcttaca 2700 agactaatac atattttgtt ttatctcgca atggtgggat ggcatgtctt ggaggctttc 2760 attectecte etceaggeaa gecagattta tgggttgtte teaatgttet eattggeget 2820 ggtggctttg ggatttcata cctttggtgt ttgtggaagt tgatcagcct atcccgtcgg 2880 atcgattcta aagtggagga tgctcggaag aagaaccagt gaaacgtggt ccgacatgta 2940 tagaataaac tcagtacgca tttgaaaaat gataccccat ttcctaatat caagaatcgc 3000 ctgaagagca tccttttatt cgtctatttc ccctttttac cgcaaactta gttaacagac 3060 atatgagcgg gagaagatta ttgctaccag atcaatgaga tgcgaagtaa tgtacattta 3120 aaccataata agcccatgaa tcccatgacc gtaacaccaa gctgatgccg ctgaggctca 3180 cctccaatct attgtatgtc gaaggtatcc ccgcaactct aatatacaaa cataattgct 3240 atgaacttcc tcagtcgaag ggtgtcgctt ccctccgtaa aggactcaac ctagaccttg 3300 aagccatacc cagccatgca ggccttgtat tgctcaatca ttgacttgca ctcttgcgtc 3360 gggtcatcgg atttggagaa gagcatgcaa tcatctcgag ctgtcttctc agttttgcat 3420 acacagcacg gctattgcaa tattagtttc ggcgcgatgg ctgtcatgtc gcctcggtga 3480 acgaaccttg ggtttttctg ccggagcttc agttgcaacg ggaatgggag tcttttcagc 3540 cgaacctgag gtcagaccat tagcaagctg aagtgcattg acagacggca aggccgggat 3600 atcgcaggag atcggcttac cgctggatga accaaagagc cacgacattg tgcagaaatt 3660 actgtattat agccaacagc agcgaatagc gagttaagaa tgtcagagag ggttccgatt 3720 gtgttttgaa gcttttctcg aacggaggcg tgcttgctta ttaatattgc gagcagttca 3780 tgctccggtc gaaaacagcg gatgtgggct ttaccggcat ccggagcggc gtcggggttc 3840 teettattea cattagtttt tgatetgatt gttgetgtgg etteggacag tettteeccc 3900 ccatcaacaa gccttctttt tcaaccacac tctcttaaaa actgctcgat ccgcttgcga 3960 ctattgagat tttattattg atagtctaag gatacccgtt tccttctctt ttattcattt 4020 ataattgcga cacatttcta cctctcgaaa tttaccccac catggcccct ccaaagatct 4080 tctcgctcga gggcaagggc ctgaagttgg actcggctgc ggatatcgag gcccatattc 4140 aacctttact cgagagcacc gactacactg aagttcgcct cggaggaaac accttgggtg 4200 ttccagcgtc cgaacgcctc gccgccgtcc tttccacgca aaagagcttc gaggtggctg 4260 agetegeega tatetteace tecegettge teagtgaaat eeetgaegee etcacettee 4320 teettaatge geteettgaa atgeeaacce teeacaccat caacetetee gacaatgett 4380 tcggtgcgaa tacccagaaa ccccttgtcg acttcctttc tcgccacatg cctctncgcc 4440 4462 atctagtcct gaacaacaat gg

<210> 2020 <211> 1845 <212> DNA

<213> Aspergillus nidulans

<400> 2020

60 atcaccgtat tttcggtgca gtgctatatg ggtgagctct gggcgtcgac cgcgcacgtc taagaagcgc catagattcg taaacttggc caagattggg ccatgataac ggtgaaggcc 120 attgtgaaaa tattgttggg caaggtagag taaaatgaag aaaggaagaa tgtagagacc 180 gtagttggat aatggctctg tgtggtcgag aatttctgtc acgagcgcca tctttgatgt 240 tgggcaatgg agagaggct gagcacagtt ggagactete tgcacttata tacagggatg 300 ttacagggta ggcgcctcac tgggtgcctg ggctcctcgt ccgtattgct aagacgcata 360 tegecetgat ggeetecatg cacegateca eggeagttgt geetgeggag aacegatggt 480 tccataatca ctctgcaaga tattcgcaag gttacgcaga tcctccgtta tctggggttg acaggagaaa tgagactgcg agactgtcct agcgtttgtg gactctttcc atgcggggca 540 ttagacattg gatacattgg ttgcagccga cgttgcccgg attgatgaca gttggccgtg 600 660 agattgtgga tgccatcaaa cgcggagaaa ctccccgcaa ccaaggtagg cgggggtggg gccgagcagc atagaggact caagcctggg aatcttagca ggaggccagt aatcaggaca 720 ttccgtctct ggcaatttcg gtaaagggtc gccttcatct accgaaaacc cacatacatc 780 tgctaataca cctggtgtcc ctccaggttc caaccgggcc ccggcgtgcg gctggcttag 840 ttttaaaacc tagtggcagt ggatcgcttg gcacctgtgt ttaaaaggac tatgaaagac 900 catcattgtt ttacacttga gtaacctgcg tatagcatgt tgatatagct atcaagggta 960 ttgcctcaat tcgccctgca atgatgagag taagaatgag gcaaattttt ggatactctt 1020 tgtaccgttg acgtgcactc cggctcacgc tgagttcaaa aagaataaaa gctcatagcc 1080 agcataactt ccagggtatc ataatgatgg taatgtcaaa aatggaataa ccgcactctc 1140 ctcaaacggt aacccagtgt caacgccatg gtcaacggca aattggagac tgtttaccgg 1200 tettegtgag acaccgatae atetagttgg taagattett egeeececa egaetgagee 1260 ctgcggccag acagctgttg ctcttcgtcg tctggaagct tagagaagcc ctctgggacg 1320 aagtcatcct tgctgtatgg agtgtcgcat cggaaagagc gcagaggtgg gaagtagcgc 1380 cggtagcaga agtaggcgac cacggagcct aggatggtgc cggatgtaac gtcatacacg 1440 tcgtgccggt aatcatctag gcgggaaatc gcgaccatga gggcacagac gatcggaatc 1500 aggaccaaaa gacagcggca taagtccgtt ctaggcctaa acacgtgcat ctgaccagag 1560
aagaacctga catgaatgat tagtgggtgg ctagctatgg gaattcgcac caagcttaca 1620
atgatagata ccccagtcca gcaaatgaga aactgctgtg accgcttggg aaactcctcc 1680
acccctcctg tagaatatgt tcgttggtct gtgtgcaaac agtccagtag acaagcgtac 1740
tctcaggagt tcctttcta ggcatacagc gtgatattaa atcaggacgg ggtcttccaa 1800
ccgcatttt aatgatgtcc gtgagaagcg aggtgagcat tatag 1845

<210> 2021 <211> 2533 <212> DNA

<213> Aspergillus nidulans

<400> 2021

ccattcattc gtgagcacaa gatcacgtac ctcaagcgca ctgcctccgt cctgcaggaa 60 tacgacttct cctcttgccc atctctaaag cgtttgatct tggtcggtga gaacttgact gaatctcggt atctggcact acgtagacat ttcaagaatt gcatattgaa cgagtatggc ttcacagaat cagcetttgt gacggcgctc aatgttttcg aaccaggete ggcgcgcaat 240 aacacgagtc ttgggaggcc ggtgcgcaac gtcaagtgtt atatcctcaa caagtctctc 300 aagcgagtgc ctattggtgc cactggtgaa ttacacattg gcgggctggg tatatccaag ggctacctta accgtcccga ccttacgccg caacgcttca ttcccaaccc attccaaacg 420 480 gaccatgaga aggagetegg attaaaccag etgatgtaca agacegggga tetegeeegt tggcttccaa acggtgagat cgagtacctc ggccgcgcgg acttccaaat caagctgcga gggatccgta tcgagcccgg cgagatagag tccactctgg cgggttaccc tggggtacga 600 660 accagcctag tegtetetaa aaggttgegg catggegaaa aggagaetae caacgageat ctggtaggct attatgtggg cgataatacc tctgtctctg aaacggctct cttgcaattt 720 780 ctggagctga agctgccccg atacatgatt ccgacacgac ttgtgcgcgt gtctcaaatc ccagtgactg ttaatggaaa ggcagacctc cgtgccctac cttctgtcga ccttattcaa 840 900 cccaaagtgt cctcttgcga gctcacggat gaggtggaaa tagctttggg gaagatatgg gcagatgttc tcggagccca tcacctgtcg atatcccgta aagacaactt ctttcgtctt 960 ggagggcaca gcatcacatg catccagctc atcgcacgta ttcgccagca gcttggtgta 1020

attatttcca ttgaggacgt tttctcatcc cggacactgg agcgtatggc tgagcttctg 1080 cgaacgaaag agtccaacgg aactccggat gagagggcta ggcctcaact aaaaaccgtg 1140 gcgggagaag ttgcaaatgc taatgtctat cttgctaaca gtctccagca aggcttcgtt 1200 tatcagttcc tgaaaaatat gggccgatca gaggcttatg tgatgcaatc cgtgctgcga 1260 tacgatgtca atatcaatcc tgatctattt aaaaaagcct ggaagcaggt acaacacatg 1320 cttccaacac tgaggctccg atttcaatgg ggacaggatg ttttgcaggt gattgacgag 1380 gaccagccgc tgaactggtg gttcttacac cttgccgacg attcagccct gcccgaggag 1440 cagaaactac tagagttaca gcgcagggac ctggctgagc catacgacct agcagccgga 1500 agcctgttcc gcatttatct gatcgagcat agctcaactc ggttttcgtg cttgttcagc 1560 tgtcatcacg caatcettga tggatggage ctgccgcttc ttttcaggaa gactcatgga 1620 acttatctgc atctcctgca cggacattct ctcaggactc tggaagaccc ttacaggcag 1680 tctcagcagt atctccaaga tcatcgcgaa gatcatctca ggtactgggc tggtatcgtg 1740 aatcagattg aagagcgttg tgacatgaac gctttgctga acgaacgcag tcggtacaag 1800 attcaactgg cggactatga caaagtggag gatcaacaac aattaacttt aacagtccct 1860 gatgcttcct ggctaagcaa attgcgccaa acatgctctg cgcaaggcat tacattgcac 1920 tctattctgc agtttgtttg gcacgcggta ttgcatgctt acggtggcgg tactcatact 1980 gtcactggca ctactatctc agggaggaac ctgcctgtga gtgggatcga acgatctgtg 2040 ggtctctaca taaatacgct cccactggta attaatcagt tggcctataa gaataaaacc 2100 gtcttggagg ctatccgtga tgtgcaggcc attgtaaatg gcatgaacag ccggggaaat 2160 gtggaacttg gccgtctaca gaaaaacgag ctgaagcatg ggttatttga ctcgctattt 2220 gtgctggaga attatccaat actggacaag tccgaggaga tgcggcagaa gagtgaattg 2280 aagtatacca tegaaggeaa tattgaaaag etegaetate eeettgetgt tategegege 2340 gaggtcgacc taactggggg attcaccttc accatctgct acgctcgaga gcttttcgat 2400 gagattgtta tatctgagtt gctccaaatg gtccgggaca cgctcctgca agtcgcgaag 2460 catttagatg accccgtccg cagcctagag tatctgtcat cagcgcaaat ggctcaactt 2520 2533 gacgcatgga atg

<210> 2022 <211> 3158 <212> DNA <213> Aspergillus nidulans

2022

<400>

gacattgtaa atatgtagtg actgacatgg ctagacaatt ctcaatggct tgacaggaca 60 agttcgccct ggggagatgg tgagccacca acacccatgc ccatcgcagc ttaggatcta acgatatgtg ctatatagct actggtcctt ggacgtcctg gatcgggctg tacgtctttc 180 ctgcgtgtgc tttccaacga ccgagaatcc ttcgatgaag tcaccggcga gacttggtac 240 ggatccatgg accataccgc tgcaaagaaa taccgccagc aaatcatgtt caacaccgag 300 gacgacgtac atttccccac attgacagta aatcggacga tgaagtttgc gctgcgaaac 360 aaggtgcccc gccaggggga agagggacca ggggagaagg agtttgttct gcgagagcgg 420 gatagtatct tgaattctct gggtatcctt cacaccaaga agacgctggt cgggaatgaa 480 ttcgtccgcg gtgtatcagg aggcgagaga aagcgtgtgt cgctggcaga ggtcatggct 540 ggacaagtat atcagcccac agtcacgcgc atggaagttc atactgactt tgtacgatgt 600 acagagtect gttcagttet gggataacee cacaegeggt etagaetega aaacageege 660 agagtttgcg ggaatgatcc ggagagaggc ttatgaaaac gggaagacga tagtgtgcac 720 aacctaccaa gctggaaatg acatctatga caagttcgac aaggtcctcg tccttgcaga agggctagtt acctactatg gtcctcggag tcaagcccgc agctattttg aggatttggg 840 cttcgtgttt cctaagggcg ccaatgtcgc tgacttcctt acttctgtta ctgttctcac 900 tgagcgtatt gttgctccag ggatggaaga gaaggtccca aatacccctc aagagttcga agctcgctac cgtgcaagcg ctatctacca agaggcggtc gatgtaatca tccctccaga 1020 aaagctggct tctgaggagg aggatcttgc aacagcagtt gctcgcgaga aggggaaggg 1080 ccatattccc cggcctccga gtgtgtacac aactggcttg tgggcccaaa tcatcgcttg 1140 catgatcagg tcagttccct agtcattcca gaagcccttg ctgacaagtc agacaattcc 1200 aaatcatggc aggcgacaag ttctccctta tcatcaaact cgcctcctcc ataatccagg 1260 ccctggtctg cgggagtcta ttctacaatc tccagatgga tagctcgtcc atcttccttc 1320 gacctggcgc tetattette cegtgtetet actaecteet tgaatetatg tetgagaeta 1380 ctagetettt catgggaegt ecaatettet eeegteacaa gegatttgge ttetaeegae 1440 cgacggcctt ttgcatcgcg aatgcaatca ctgatatccc cattactatc ctgcaagtct 1500 cttgcttttc gctgatcctc tactttatga gtgcgctgca gatggaggcc ggaaagttct 1560 tcacgttttg gatcatcatc atcgccaata cgctatgttg catgcaaatg tttcgtgccg 1620 tgggggcgtt gtgtaagaga ttcggcctgg cgtcgcaatt aacaggcctg atttcaacta 1680 tcgggttcgt ttatggaggt aagataccgg agtgatacgc agcctctgtt tagctagggc 1740 taacatgcaa tcaggctatc tcatcccatt ttctaaaatg cacccctggt tccgttggat 1800 tttctactta aacccttgtt catacgcatt cgaagcaatc atggccaacg aattcacagg 1860 cctcgagcta caatgtgtcg agccaaacta catcccttac ggcccgggtt actcggacac 1920 ctcttcgtca aaccgcggct gttccgccca ggaagcaaag gcgacttgat ctcaggagcc 1980 gcgtacatcc gcgaacagta tagctacttg cccggtttta tctggcgtag ctttggtgta 2040 ctcgtcgggc tctgggtatt ctttatcttt ttgaccgccg tcgggtttga gaagctgaat 2100 agccagggtg ggtcgtcggt cctgctgtat aaacggggca gcaaccccag ctgccagaat 2160 gagcggccag cgaccgcggc gaacagggag atggctcttg cacagtctgg aaagcaatcc 2220 atattcacct ggaacaagct cgactatcat gttccgtttc atgggcagaa aaaacagttg 2280 cttgatcagg tgttcgggtt tgtcaagcct gggaatttag tggctcttat gggctgcagc 2340 ggtgcgggaa aaacaacgtg tgtatagaga atacatcatt atttgctagg atactgacca 2400 tttaccaggc tcttggatgt tcttgcccag cgtaaagata ttggtgaggt tcgtggttct 2460 atcctcatcg acggacggcc ccaaggtatc agctttcaaa gattaactgg gtattgcgag 2520 caaatggatg ttcatgaggg gacttcgact gtccgcgaag ctctgatttt ttctgcattc 2580 cttcgacagc catcaagtgt cccagaagag gagaagttgg cttacgttga ccacattatt 2640 gatcttcttg agctatatga tatccgcgat gctcttattg gaagtaagct tttcatggat 2700 tgaaaagctg gaaaaacgtt aacttgtaca gctcctggcg ctgggctcag cattgagcag 2760 cggaaacggg ttacattggg tgtggagttg gttgcgaaac caacgctgct cttcttggat 2820 gaacccacct ctggtctgga cggacagtca gcatataata gttagtacgc ttgataccac 2880 agtctcgtac gtgtgctaac cacggaagtc atccgcttcc tgagaaaact agtagacgga 2940 ggccaggctg tgctctgcac tattcatcag ccgtcagctg tgctctttga cgcatttgac 3000 tcacttctct tgttggctaa agggggaaga ttggcatact ttggcgagag taggatccct 3060 tcccctactt atcgacccaa ggctctaact agactagctg gtaaggactc cgagaaggta 3120 3158 ctagagtact ttgctgggat ttgaccacca tgtccgcc <210> 2023 3004 <211> DNA <212> Aspergillus nidulans <213> 2023 <400> agtgtcggcg atcaacggcg gagaaacact cgcacacttg gggttatgat tctcgcatgc 60 agggettgaa egaagagtgg caatttteag caaaagaaaa gaaattteee eeagtegggg aagcgcatcc agcatctaat caactccatc aaatccctag cttgactgac gtcaagtatg atcagtggtc aagagttact ggacaggctc gtgattgacc atatgctgcg atctggatac 240 tcggagagtg cccagcggct tgccagagca aagaacatag aggagcttgt ggatcttaac 300 gtctttgtac agtgtcagcg gatcgccgag agtctccgca atggtgaaac taaggatgct ctacagtggt gtaacgagaa taaagctgcc ttaaagaaga gtcaagtaag taagagccaa gctctgctct aattcaacca tgacctaata tggtgtatgc agtacaattt ggagttcgag 480 ttacgactgc aacagtacat tgagatgatc agaacgaggg acagggcgaa attcgtggat 540 gcaatggtgc atgcaagaag gtacctggca ccgtatgacg aaactcaatc agcggagatt 600 cgtcgagctg ccggccttct tgcctttccc ccgaacacaa gagccgaacc ctacaaggta 660 ttttagcccg gtccccaaga aaacctaatc taatgtgcaa tagtcaatgt atgcctccga 720 acggtgggtg tacctctctg aactatttat tcgcacgcat catgagctcc tctcattgcc 780 ttctcggcca ttgatgcata ttgcgttatc agccggccta tctgccctaa agacccctgc gtgtcattca gctaacacct cttcgagctc aaactctcat tcgaccgcca catctgtatg 900 tcctatatgc tcaacggagt tgaatgagct tgctcgaaat ctgccgtacg ccaatcatac gaagagttcc gtggaaaacg acccagtagt cttgcctaat ggcagggtat acggtttaca 1020 tcgtttgtta gacatgagca agaagctcag ctccctcgag gcaggcaaag tcagagatcc 1080 cacaaccggt gagatettea atgagagega attgaagaag gtgtacataa tgtaacagee 1140 aacatgacaa cgaacgttgt tctcggatta cctcaaggca ttataggaat attcgggaca 1200

ggacattgcg ggcatcgttc atctgttatg catacatgta tttccataaa ttaatcacta 1260

tctgattcat ccatatctgt tgacctcttc ttcctctttc cggtggctcc gagttggggg 1320 tgatcatccg tcttgacctc aaacacgtac atcctcgcct tattattttt acctcgccat 1380 ccccctcttg cacgggctgg tccttcaatc tccccaagcg tccgcgcatg cgagtagccg 1440 cggtagcacg cccaggggaa tttgaagctc gtcacgaccc ttaatccagc gtgtcgtgcg 1500 aggtccctaa tattccatag ggtgtaaggt tccccttcaa acaacgtaac taatacctgg 1560 cogggetecg tectacgete gtetttegee ttgacaatge egttetette ateataateg 1620 ccatcacttt cctcagattc atcttccaca tctgtctcga actcccaatc gtcatccacc 1680 tcagcatcat cgccgagctc ctcaggccgc tctgccagta acggaacaca cgccttgaag 1740 aatgcaacaa gtagctcctg attcgcccta acttgccgat tcacatctgt cgaaaggcca 1800 cctacatgcg ggaaattgaa acagatcatg tcccacggcc cacccttttc cttgcccgta 1860 cccttgccct tattgctcgc ggtatcttca gtagctttcg cagacctagt acttctctta 1920 ttcccatcgt gtttcttcca gacaggttcc ttccgctctt gcctcgaaaa cccagttcgg 1980 acgteceteg egectecegt egeagaacea agtttettag categaegga gaacageact 2040 tttgggccta ttaaactctg aggattggcg gcatcattgt cctaaccttc ccgatttcag 2100 ctggttctta gtctttaagc taatgatctc ggcaattttc ttctccgctt gtgggtattt 2160 aqcqaaqaqt qtttcttggg agtcatagca tgttgctagt aggtgtttgc agcggtggta 2220 cgtggctagg gagtgcgcga aggagaagtc gcctggacgt ggtttgtgcg ttagtatcac 2280 cgtacttgag acgtcttagg tgggatatag gaacgatata taagggttct tgataaggag 2340 ccgcgtcagg tctaggctgc ttagggacac gaagactaga caagcgtgcg tcggg Neat 2400 gagtatacat caatcttaag cttagggcga atcggccgcg ctggtgtagt ttcgcagaac 2460 tcttaggtgc ttgcttgcgg gctcctgagt ccattcgtgt atacttcttg gactatctca 2520 gacagccaga atcagggaag cgtgaactta ccctctccaa ctaatagaat acgatccttt 2580 ctgcgaaacg gcacaattgg ccttgtgtgt tgcttctgtt ggtgcttttc attcttccgc 2640 ggcggcgcaa tattctttc attattctcc ttggtcacac tgtttttgta gttgttcttc 2700 gtcgagaget tagcaaagga geteatettg egatgettee tgeeegtgee atggetegta 2760 ttcggaccgg agtgcgcatt ctggtgttga tgcagggctc gagctctttt caatctcgcc 2820 atgcgtgcta gttgctctct tccgtatgtg gaaacaaagt gtctggtatg aaatggatag 2880 ggtggacaat accaaggtaa gacggtgtaa ttgttgggag aaaggtggaa tctaatcgtg 2940 gttgatataa aatttaaaca aattggtttt caggacgggc gacaacgcaa atatatttgt 3000 taag

<210> 2024 <211> 2728 <212> DNA <213> Aspergillus nidulans

<400> 2024

cagaagtgga gccagaagat ttctttggca cgatttaggg cagtattagt agaagaatac 60 ggcgattgtg tgcttaatta taatgatacg atcgaaggcc ttaggcaaca gtggtcaggt 120 gcagaagtat atattccggt caaaccaaga gtcattgtgg atatcgcgac tgcagataga 180 gttttatgac ttgatatgtt gaatggagat ggaagcttag caaattcacc gtgctaatta 240 gttcacctta ctaccatcgg atagttcatt ctgttgattc gcaatatttg atggaagtca 300 atatacaaaa tgacataagt tagtaatatt agagataagg tggaattaga tagccttatg aaagtattgc cacccacagg gtgcttggtc gagaccagat cacgggcagc ccaacacgtg 420 atgtccattg aacacacc tcagttgcct cactccagcc tttgcacggc tcactcgcgg 480 caggetecaa gtegetggaa ttgecageea tacaggteta egaggttgtg actgagttaa aattacaata ttcttgtttc ccaagttctt gggtaagtct tgctggtttc gatcgacagg 600 ccacgtttct ggggcgctgg tccactcgtc ttcagacata cacctgctgt ctgctataac 660 cacgcacgag ataatcttgg gttcgcatca gtctcttggg cactgcttcc acgcaccgtt taagtcgaac cctcaagaga ttgatttgtg ccctatcctt atatcacaat cgggtgatgg 780 tecttegatg atgttgacge etgetetage agttetteta caegagaggt egttetgagt 840 900 cgtgtcgcca tggcggaccc caccgatctg aatctcgacg cgcctagcga tcttcaagac atcccggata tgtcaatgca gcttgtgcct ccgccggaag ggacataccc agacaagtaa gtgccttttc ttatttcatc gatgctcata gctagaaaat aatcgctcac atgagtggtg 1020 gtcagaacat cgcttcttgc ctctgtgcaa gcgcatgcaa aagcccatgg atataacgtg 1080 gtggttaaat cgtctagtac accaactgaa aagaagccgg ggcgtacagc caaagtgtgg 1140 ttgcggtgtg accgaggcgg gcactaccgg ccgcgcaatg gccttactga agagacgagg 1200 aaacggcggc gcacgtcccg tctgatggac tgtccgttta tgctggttgc agctggaact 1260 cctggcattt ggacgctgac agtcttgaac ggcacacaca atcatggtcc gattgttgag 1320 aagccacgac aagttcctca tcacaaagtt cgaaaaggcc agatcgctgc ggttccttat 1380 gactggccgc acgatgcaac gctcacgccg tatacaactg cactggttat cattgatatg 1440 caaaaagact gtcagcaact gcccatgcca taacttcctt gatgtgtctg accatctcgc 1500 agtttgtgcg ccaggtggat atatggagtt tcaaggctat gacatatcac ctgcacgaga 1560 actgatacca aagttacagc agctactgaa cacatttagg tcagccgggt ttccagtgta 1620 tcatacccgc gaaggtgatt gatcccagag tttgctcgtg tcccaatctg acctcggcca 1680 ggccaccgac ctgatctgtc aacactttca agccgagaaa catatcgatc acagaataat 1740 tcatccggac ttggaattgg ctcgcccgga ccattaggtc gtcttctgat tcgtggtgaa 1800 ctgggccatg acaccgttga cgaactgtat cctctccccg gcgaaccggt aattgacaaa 1860 cccggccgtg gtgcctttgc gtacacggac tttgagcttc tcctccgaaa caaaggtatc 1920 aagaaccttg tcctcgcggg cgtgacgacg gacgtatgcg tgtccacgac gatgcgcgag 1980 gccaatgacc ggggattcga ttgtgttatc cttgaagatg gtactgcagc cagtgagccg 2040 qcccttcacg taagcacgat agaatcggtg aaaatggagg gtggaatctt cggtgcagtt 2100 gccaagctgg aggatgtaat gcacgcggtg gaaaacttca aggccgtcac tgtgaagaag 2160 ctggctcctc agatgacgtc taattagcat tggctaaata cttcccattc ttcaagcagt 2220 ttagcgttcc tctgctcgag ttatagaatg aacattatta ggagggcaat aaagctgaaa 2280 cagcataaca tagagcaccc aacataacgc ctcgtcagaa gacataacag acaggaaaaa 2340 agaatggttt ataaccactt ccttcccgca gccgatacct tcgacctgaa aaccgggctt 2400 cgaatttcca tcccccttct ataaaacggg ctcatcaccg tcttcacata cgcctcatag 2460 actteegtea taaactgeet accegeetee teegtetgeg gegeegtegg attegeegeg 2520 atagaactgc tcgacgttcg tcctgacgaa cccacccctg accctccgaa gagccctgat 2580 cctcccatcc ccatcgcgga ggaaccaagg ctcattgtac tcgacccgag tcccccactg 2640 ccaccacagg caccacaagg gggtagattt ggctgaggtg gtagaggtaa tggcaggaga 2700 2728 cttgtgccgg aaggcgttag aaaagcgg

<210> 2025 <211> 1758 <212> DNA <213> Aspergillus nidulans

<400> 2025

60 attattacac catgttctcc agaaacaaga agtatgggac agtgccccaa tatattatac agagcaatgt atacatgcgg gtagaaagag cacggggaat ctggatgtat aaaggaagaa aaaaaactcc aaaatgctac cacgtacttc ggttgtactg ctgctcctga tgatagttgc 240 ggagttccct ctcacgctgt gccgccatcc gacgctttgc ttgcatcatc tgttccactt cattggggcg tccctgaaac cgctgcgaag cataaaagcc ctgcatactg ggggtcgggt 300 gcatccttgc gccgtcaaag tcgctaatcg aatgatggcg ctgagccgga ttgaccatgc 360 gcgggtctgc gaattgttgt tcagaattgt gccttgctga agaaggtggt cgagaatccg 420 taccgtactc aggatgggga cggcccacca tcatgggcat cgaatccctc cgcggtgccg 480 cccaaagttt cccactctta acaaggttat caatggcgcg atcgacctct gcgacggaaa 540 gtcagcaatt tgcctcattg tgtttcaagg acaaaataca ccctcgcggc ttcaatcttg 600 660 ggaaactaca atgccacatc tctggcgtac cgcgggtgga aatgaaattg ggtgtcgaaa 720 aaagacaaaa ggaactcgtc gtgtgcgtac cgtcaaactg agaggagaaa gcgggggacat cgtcacgctg ggagacggag ctggatcctg atcacacatg ggtaagtttc tgatcccgta 780 tcgcaaaaag tccaaccgcg gtgtgacaga tcgattcata cctgatcgcg acggaggcac 840 aggctgctcc caggatgcct gacgagaagt cggggcctgc cagccttggg gttcgtagta 900 cgccatttta tcgataggag gctttgaaga ttgtacgcgg aggaacggca agggtaactg attcacttgg gaaaaggtcg aaccctgttc tatgctgcga acgaaactgt aagctttcga 1020 acaagacaat aaacgtggtc aatttcaacc gagagtcaaa agccggtcag atgctagtct 1080 gtcgagtact gcagcgaccg ataacacagg cagttctcgg agtccctgga ctatcccgtt 1140 gagagtatgt gaaactgatt tttcacctcc gctcgggtgc cagccaagag agttcgatgg 1200 cccaagggaa tccgagtata gcccaaaaac aaccgactcc ggtacaaaaa agaaagagaa 1260 tagacttgac ggctcggttt gatcggaccg agaggaaaaa gcactgcggt gaagggggag 1320 gacttttttg gacgggtgga cggcagctta caagaaaagg agtgattgtc cccaagaaaa 1380 ttccaggcgg ctctaccacg agcgaacgag gcagaaggag cgacaaaaag gtagcaaaat 1440 ctcaatccca aggcacgaca gacaaatgag tctgacgtgg aagagcgaaa aagggagaga 1500
aagaggtggg ggaaaagaga ataagacggg ggggtgggga gaggaagagg aaaagagtcg 1560
ggtaggagag gtgcgacggt aaaaggcaag aaaaggatag ggagatcggg tgtgagggga 1620
gccagcaggg agcgaagagc gaagaggggg aacgagaagt ggatattatt ttgattatta 1680
ttacttctga ccggaaataa cgaactggta ataagcgatac ataattatca gactttccca 1740
gttggcgact tgacagct 1758

<210> 2026 <211> 2641 <212> DNA <213> Aspergillus nidulans

<400> 2026

atatctcaga ggtgaatact aagtcaagtt ggtcatgcat gctcaggctt cctgttgatt 60 ctagttcacc aaacaatctt atagacgcat ccgttaccca tccagctaag cacgacacag gtctaaattt cttattactt tttcaaaaaa tgccagcttc aactccaaat cccgttcaag 240 tccatcgcct gtctgaaagt tatctcgaag acatttataa acagcgtcct taaagtgcgt gcccgttcga aatcccaggt tagcaatttc gcgtcgagtc agcctggtac aaaaaaccct 300 gctggtcaaa tgtctgtctt cctgcttcat tttatcgaag tatgaattaa taggtcgcca cgttccaatc tcgaaaagga ccataccaat gctgtaaatg tcgtatagca gcctgtgtcc 420 480 tggcgtatcc tgtccttaat aactaggatg ctggtaaagc tcaaggtcgt cggtgcggga 540 ctgtcggcca gatatgcctt tttcttgagg tcaagaaaaa gcaaagccca tgatatgtgg gtcgctaaca gaccaggaag cgccatccgg gaggaagtat actatgtggc tgctaatgct 600 660 cttgagatgc cagcccaatt ggaagaactg aagaaatccg cgcgcaatta tttgcgcgtg 720 ctcgaatctt tcccccaaag atggtaggaa tcgtttgaac tgttccatcg aggggtaatc gtgcaatgat acaggattat ggtcgccgcc tgaagggctc aacggcaagc tgaaggcgaa 780 gccaatgcga gggggctgaa ggtgtctttg atcaacaagg ccaacacatt caaaaaatca 840 ggtactgcgt tttgtgtttg tgtagtcttt gagtatctgc acaagcctgt tcgcttgttc 900 gtaacgggcc ttgcccatct ctcctgcggc cgcgctattc agaagtactc gccattcgat gagagtttgc ttgccacgtg ctcgactaag cacctgtcag aatctgaagc ccgaataata 1020 tcgtcgggca gggcaaatat gttggtagta gccgggtacg tgttgccagt tacagtcgga 1080 gcgacagttt ccatatcctc ctccaggcgg aggcgggcta atcgtgccgg tacagctata 1140 gactcgtagg agcctaacgt ggcagtctca atagcagtca gtgcctcgcg gcgatggggc 1200 cagcttgttc ccaatatggc gagcttcatt gcggccattt cgccctttgg ttacgcaccg 1260 acaacagaac gaatttcctg cacgcccaaa tattcacagg ctttatgttt atgggcgcag 1320 ccatttccct ctggctcgta agagcttgga agatatcaga gttgcaaaag actggtgcgg 1380 gtaaacctcc cctcgaaagg gaagccgtga tcagggacga tgatgcgtaa gggacaggac 1440 gtttagcgga gattttattg tggcgagcaa ggcatgaact actaagggat tgatcatggt 1500 aaaggtataa acatacaagc aacttgataa gtcatccaat cttaagtctt aataaaggca 1560 tttccggaag tggctagcca gacgctccgg gaaatatata gtgggacttt caaacaatag 1620 gattaaaagt caacagataa atttgttccg gaataaggga ccagaaacgg actaggcaat 1680 gtagatggtg atattctgat ataatagtca aaagcgtcag agtgcagatg tgcggggaag 1740 aatcttacgc agcgtgtaat atattcctta aatcttaccc taacactacc ctcctgcatg 1800 agtgtaaggc agatttagaa ttgtttgctg aagtggcacc acttatttcg ggcaattcca 1860 agccagtact atatttatat attaataaaa tagacctggc tgccttgtta tttaaaaagtg 1920 ataccattct aagtagtggg tgagttcagc taagatttgt aacgattaag caggccccta 1980 tatccgttaa agtctacttt ttcggcagcg ccctcgcttg ttaccaaata aggaagtaag 2040 tttgtcgtga tttttagatt cctgaaggag tatggcgccg ccgccatgta caggaagcca 2100 tcaaaagtac agtcacattg cgatttcacc taccccgctt ggaagtagtg acgtggctgt 2160 agatggcgaa tatcccttga tttctgtaca taatgatgcc gcgatacatt tatctcgttg 2220 ttttaggtac gcctggaggc tcagaacaat agcatcggat ttgtttttga gctctattaa 2280 atcctggggt gaggatcctc caccttgcag gcgtcctgcg agagctattc ttctgtcaaa 2340 ggtcaagttt caccgattta gagtctgact ctcctcgcgt tgctgcggac tccgattgtt 2400 ggtttcttcg atatacgatg tcaccaaaaa actattatgc gatctacaaa ggccgcgtag 2460 accgacctac tatagtgtct tcttggtatg taataccaac ctatgaggca aatgtgttaa 2520 tcatgattcc cagggctcag gcgcacccta gggttaagga atataacggc gcggatcatg 2580 agggttttga tactcttgaa gaagcgcgca actccatgca gataaggggt ttcacgagta 2640

<210>	2027	
<211>	1525	
<212>	DNA	
<213>	Aspergillus	nidulans

<400> 2027

attctgtttg ggttgagcgc ctttggtaca tcccgtccgt ttctaccaat acataagggc 60 aaggctgccc agcttgatca attagtggac tgatcatgct tcgaggtaca agatgctatg 120 cagaggagat gagggacaat tcgattgcat acctactcat cctggcgcac ttatgcagtc tgctggtact tgcaaaagag gcccctgtca caggacggcc ttttcgacca aacaagactg 240 ttcttaggcc ggatcagacc aagcatccgt tagatactca gacgtccaag gtgcagatag 300 gaagtcgatg gattggagat gtcagcagca taacttgaat cttgggggctc ctgcgcgtct 360 atggacgcca ggaacctaag tatacgaaag caatgaatta tccatgtgcc gcatcgcaac 420 cacccacctt tcctcttcga atctgctgat ggaagtcagt cacacctcaa ctgggacggg 480 ctgggttggg gtgtccgctt cacctcttaa ggcccagtgc cgacatgacc agcaacctac 540 cgtctatctc tacgatctac ctacaaagtt atgcaaaccc agaagtatgt ggtaggtcaa 600 ctcgagaagg cctttgtctg acttgtcatc ctttccagcg tgggttatga cactaaggca 660 720 ctagtctatt gctatgtctt ggttaccctg atgatgtcaa gttcgactcg ttggttacag 780 ctgcctcgaa agtggaccgg taggaaagat gccaaatggt gaagtttcag atactaggta gcacaatgca gccatgtccg atcatgtgat atgtggatga cgaggttcac ttcgaagctg 840 aaatgcattg ggactctcga attctacgtg ggatcgtcta tgaaaattgt ggcaaattgg cggggattta gggcttgttc ttggatgaga ggaaagtcaa acaaaagaga gtaggtagga tcatagtccc cgctcacatc tattagcgaa ggcaagttgc aggcgcaaaa aaggaagagg 1020 aatggatgat gactctacat catttgtttc attgagtcag gtcgtacata tcattactcc 1080 gtactacatt aagatettgt agtageaaga eeaaagtett eegataeeag tateegtaee 1140 agtacagatc aaaagccaga gtggaaattc ggaataagaa gaacagagaa agaattaaga 1200 aaagagtgaa gtcacaccta aacagagcag gatatcgctt cacttcactc tattgcactt 1260 gcaccactct gactccaaat cagaaaagaa cgaagggcat agctcaatga attcatttcg 1320 getgggaete etcatgeacg geaacageet eegetetett etceteateg acateaaage 1380 cagtetgete eageategeg geaegaeeee gtteattett egtetteeaa geeggegtte 1440 caatgtaett gateeeagee ggaategtga aaatgeeete tacatetteg agggtettae 1500 etgeegtete ggggaacata egaag 1525

<210> 2028 <211> 2318 <212> DNA <213> Aspergillus nidulans

<400> 2028

gtcgtttgga aactggtgtc tggcaatcgc tgtgccagtg attcaaatgc gacgagtacc 60 caaattatac cgttccattg tgcgagctct ccttcagttg cgggtcaagg cgctaaaaac 120 agacaagtgt taacaaccgt gagtcgctac ccatatatac ctaatttgtc gagccatctg 180 cttacqtcca ctccqcatqt cacqaaqact ctctcatata gtcaccqccc gtgagttcat aatatgtcat gcctgtggac cgagaagttg gggtctgcgg gtcgatcgtc aggtttggac 300 taagggtcag cgtacgagta accgggaaga gtggatcgcg taggaaggga ctgttttcaa 360 gcgagtcgat cttatactca agcggcctcc ctgtgggttc gaaataaatt tggaattcac 420 caaaaagtcg atgataatca agcgtcaatg taagagcatt aacagaacta tcgatatttg 480 540 gtccatcaag acggtggctg agcccagggt caaacatgtc taagatgcga aacacattca tctttgactc gctcttggaa cggttagtaa caattaaagg caattgccaa cgacgtacgc accaattctq attctccctg cgctaacgtt gtcaagctgt gagggagaat gtgcgcaact tegagatget ggaateeace eegtgattea ttgeteagaa ggttteegte gtegtettta 720 quattatece cattetettg gaagegette egggeetega egatategaa tttgegggat 780 atcacacacc ggtggtgatc acgtacaaga caggccttcc gtaagataga gatgcgctgt 840 900 ttcgtgccca cttgtgtagg tgtttgactc aaggacaatg ctgtaggtgt tatttgtggt gttttgacag atgaagccct gactaatggg tcccattagc aaaccaatga ttttgaatgg cagcgggcaa acatacgtgg aagaaggaag ttgtcgacaa tatactcagc aaagttctca 1020 agagegeeet ttatatgeat eettetgett gggteeatae tteggtttee ageaaaggae 1080 tegagataag acaggacega acceatatea gtgtetecag ettetecate agegttgaga 1140 atctcataga tatataagaa aaggaacctt agaaacgtgt ctgtggatgt cactcgttta 1200 gacateteet caatgagett tgetggettg taaceeetet gaacgetttg teegaggeea 1260 taatcctgta tgaagagatg cagaagcgca taggcctttt gtctttgctg tggagttaag 1320 agaaaggctg gagagaaatc caacacagtc tctaaggatg attgatgtcg atgctgcgcc 1380 atggtggtag gttacgataa ggtcagagtc gcaaggggac tgactaatct atgattaaga 1440 gattatcacg tgcggcaggc ccaaaaccgc ttcggaatta gattcatccg gtatgataaa 1500 ccaatccaat cattcctcct gcttacgaat aaaattccaa caagcaccgt gtgcaacttc 1560 ggatagggaa aagcggctgc gcagtgtaat cttccttgca gatcgacatt caacccagtc 1620 tecteageaa tecteaegat gtageeggea agattegaet cateategte ggeggegget 1680 tgactgtttt cacagctgcc gccaagctaa ctgaggaccc aaaagtcaag gtccttatca 1740 ttgagaaggg cttctacgaa tctagtgacg gcccaattat cgaggatcca accaagtata 1800 gcaagatett cagaaccage getgaccaga aettttttae egtgeegett ateaacaace 1860 gcacagagct catcaaatct gagaaaggcc ccggaggatc cacactggtt agtggcaatt 1920 catggacatg ccctgataag gcccaggttg attttgggag aaggtctttg gcatggacgg 1980 gtggaattgg gatagcctgt tccagtatat gaacaagggt gaacgatccc gtcctcccat 2040 tgaggctcag attgccactg gccattcctt taattcctcg tgtcacggat taaatgggac 2100 cattcacaca gggtaccgtg atactggcga gccgtggtct ccgctcatga acgcgttgat 2160 gacaactgtt teegageagg gtatteacae geagategae ttteactgtg ategaeeteg 2220 tggcgtttct atgattcaca acaatgtttt ggaaaaccaa gtgcgcgcgg atgcagcccg 2280 2318 cgaatggctt cttcccaact atcaacgacc caacctaa

<210> 2029 <211> 2819 <212> DNA

<213> Aspergillus nidulans

<400> 2029

agatcagggg ataatgcct gaccaattgg ccagggagaa ttaaatgtca tcagaacacc 60 ggtatcgagt tcgaaacccg attttaccc ttgtggccgg tagatggttg gcattgaaat 120 tcaaagcggt aaaacgtggc cttgacgact ggttactttg aaagttgcga gttcaactgt 180

tcttacgaca aggtagagtc gtggcgttag tgggcttggg catacgaagc atcactgtca ggtttgcaaa gctctagcat ctaaagagtc gaaagcttca ttacgtcggc cggcgagctc ttggcttagt ggactatttt ggattctatc acggatctag ttgagttgca ctcagctttc 360 420 cttcaaagcg tggaaggagg gctgcagcgt tcagcccggc tcttcttgct ctcgaattgc 480 540 tggatgctcc tcgtacctca cgttttctgg acccgacgtc agccgtggcc gcaatcacga 600 aqcacaaagc agaggccatt cggctagcac gagagcaagg tgctgccgtc cgtgagatgt gtcgccgggc gaagacagag acgcccccgt atgagttcga agagctcatt ggtaagggcg 660 720 cctacqqtcq tgtgtacaaa ggccaccagc ttccgtctcg agaagtcgtt gctatcaagg 780 ttcttqatat cgactcatta gattataaat cggtgcgcga tttcaaggat gagtcgatta aggatttcat acatgaaacg aaggtgatga agcaggtcaa ggatgctggg gcgaagaata 840 tcaatgaaat catagaggcg gtgtctattc attcacagct ctggttggtt tgcgagtatt gcccaggtgg tagtgttagg actttggtag gttgctcaaa cttggacttg tgaactgttg ctgaatgttc agatgcgagc aactggtgat cgactcgagg agaggtttgc tatcccggta 1020 gctcgtgagc tggctgctgg attacgtgct atacacgatg cgggcatcat ccatagagat 1080 attaaaggtg taaacgctat gttacatgat ttggtgtaaa ctcttgctaa ctcagatact 1140 agctgccaat gtccttattc atgaggaagg aagactacaa atatgtgact ttggtgttgc 1200 tggtgttctc cagtcacaaa tggataaacg atcgacctgg atcggtacac cccactggat 1260 gcctccagaa atgttcactg ccaagcagga tcatcagtac agtagcgagg tacgtacatt 1320 gatactcgtc atatattgtc actgacaacc tcaggttgac gtttgggcat acggttgtac 1380 actgtttgaa cttgctacag gaaacccgcc aaacgcaaat cttcgagaga gaatgcagat 1440 tggcagacag ttgaacagaa aaacaccaca actagcagat ggcggtgaat accctgaggg 1500 tttgagagat ctagtagcat atgctttgaa ctcagatccg gttacccgac catcaatggc 1560 ggatatttta ttacacccct atattgcgaa ttccgaggaa gagtacccaa catcatccct 1620 gagegagete gteegeatat actaecaatg gteecagege gggggeeaac geatttetet 1680 atttcatcct ggcggagctg cagcagcgga agtgccagat gttgaatcag atattgatga 1740 ggattggaat ttcagcacga cggatgactt tgagagaaga ttctccgtta ttgaccttga 1800

tcaattggcg gcttcactag ctgagctaga gcaggagatc aaggacacga ccggtcagcc 1860 acagcaggaa ccggccgacg agccggcaga gactgagatg acagagcaag acaaagccaa 1920 ttttgacgaa agagtgcgcc gaggtgctgc agccatggaa ggcctctttg acgaagaaaa 1980 gcccagctac aaatacgaga cgaaaaacga ctttgtgcct attgagcaaa aggcccctgt 2040 atctgatctt cctcttcgca ccgacactga ccgctcctcg gtcacatcga cattcatcga 2100 tattgacatt ccctcctttg attcttccca ctatgccgct ggcgccacaa ccgcccagcc 2160 attccagctt gctgatgcag ataccattcg cgctaataga tctagcggac gaaaccgcag 2220 ctttaacgaa ggccggtcac ggtcctcgag tagtgaagtg cgaagcagcg tggatataca 2280 agaaactttt caacctcgca ccgggccgcg gccacccacc atggactgga aattcccatc 2340 cttcatgacg gctcccacgg aagagccaga gtcagagtcc gtttcggagg ttgactcggg 2400 tgcagaggct gggtctgaat ccgagcctga acgtattgcg cgcgactctc taacgcagcc 2460 cctgacattc gccccggccg aaaaacgagc cacaatggag tggacgttcc ctgtgatgac 2520 cacatctaca gacgacgacc acgttagtcc tcgaaacagt tcttccgcag aagaagacgg 2580 ggagcccagc cgccatgaca cgctcaaggc cagcgatgca aggttcacca gtatcggtga 2640 gaccgggcga cagtgatagg gacatetece geccgtegae atatgeateg gttcagtega 2700 atgtttctgc aagctcagat acaggcgacg tcccctttcg cttcgcccgc cctccctcgc 2760 ctccggaggg tagcacacaa tacaagcagc agcaactagt tcctagtcta cgagtaccc 2819

<210> 2030 <211> 587

<212> DNA

<213> Aspergillus nidulans

<400> 2030

ggttctttcg ataaacaaga tgacaccct gtcactatat ccgattttgg ggcgcaaagc 60 ctgatcatcg ctgcaattca tcgtcatttt cctgatgatg atatcgttgg cgaggaagac 120 tcaaagactc tccgtgccga gccggaactg ctcgaacgca cctgggacct tgtctcgtct 180 actcgacttg aggatgatga gagtgagaaa ctcctctcgg caccgagctc gaaggacgag 240 atgcttcacc tgattgatct aggtgcgcag gggagctgca agcccaaagg ccggacgtgg 300 gtccttgacc cggtcgacgg aaccgcaacc tttatgcgtg gtcagcagta tgccgtgtgc 360

ctgggccttg tggaggacgg gaagcagatc attggggtta cggggtgtcc gaacctcaac 420 ctcgagtttg gcggtatcca ggaggacctt gcggacgtgg cagggcgcgg gttgatggtg 480 540 cttcgctgtc gccggtgaag gcgcgtggac aaggccgatg ggaggcgggt ccctcgtgcc 587 tgcgacaaag attcagccgg tcgagcagat tacggaccct aaagata

2031 <210> 3249 <211> <212> DNA Aspergillus nidulans <213>

unsure at all n locations <223>

<400> 2031

gtagggctta ttactataga acgggacagt catagccaaa gcagaatata aaacggccgg 60 120 gtattttcat gaaacgagca cacgagcagg cgagcagacg agcagacaac agaccgctgg agtctggaga aatactgcga gagggccgga gcattgcaat ggcagagtgg cgcgaacact 180 gtgctttgct cgactccacg gtcgcgctca caccacgagc tcccattctg caatgtacgc 240 ccacgccatc cccacccggc cgacctgtcg ctgatactcc tccaccgtca ctccacgtgc 300 atcttccaag tcgccaaact tcgtcaatac cgccagctgc actttctgcc ccggcgcgcc 360 cagcgttcgc gggtccaaga tgtcgacata ccatacatcg cctccgccgc cggacccaga 420 ccctcgccag tgtgtcaacg ggagccggtc gtcttgccta ccgtccaagc catggatcat 480 gagcaagaac aaccccggct tagcacgact gtgtcgttcc agcgaccagt gctcgcagat 540 caggttaaac tggaaacgca tgggtcccgg ctcccgaatc gagatccggg ccgcagccgg 600 ccggaacgac cggtcgccga tactgtgttt ctttgcgtcg ccaaagacca tcggctgcgc 660 ggccccaaga ggtgagttcg ggttccccag aatgtacttt ttctaggtga tctcggtccg 720 gccgacgtgg cggtagaatt gcgagcggtc cttgggggaaa tgtttgagcc cgaactcgtc 780 gttcgtatcg gtgaacattg tgggcgtgaa gctgcggacg tacggcatgt ctggcccttg gacgtgtccg gcaccccagc acgggtcgat cagtttccac tgcccgttgt cgatgcggac tacgttccag gcgtgtccac tgggagagta gggtgggaga ggtgcgccgg gcgccgggnc ggcgtanccg tagcccttgc cgtgacaaga gaccaccttg gcttctaggc ccgcatgagt 1020 agctagcgta gcanatagtt tcgcgtaccc ctcgcatacg gccagtcctg aggcaagagt 1080 gctgtcaggc gtagctggct ttacattatt attgtagaac gacactgtat cgtagtctat 1140 gttatgatgc agccatgtaa agatggcccg agccttgtca gtggccgaaa taaagggcgt 1200 ggtgagttcc ctggctagcc acccaagatc gtgggtcggc agcgactgtc tcggataccg 1260 cgcggcatgt gcgtcaggcg cagagaagtc gcgacatttc aagcacgccg ctgcggccgc 1320 aggeggegee tegtttgata eageaatgeg tggetttgte acetggateg eagagaggte 1380 tggacgagac cccaaaggca ctggcggtgg tgcaccggca ggctctgtgg tagtgcccga 1440 tgtcttcttg ttcagtcctc caagccctgc ccctctgatc ttgtccaatg cagctcccga 1500 tggaggcggt ggagggaccc gtctaccctg agtccgcccg cttgtctcat cagctggggg 1560 actgggagac ttgtcacgcc tctgaggcag tgttggaacc gaccgcggct gaacactgct 1620 ctccgtcgaa acggtcaaca caccctggcc ggaagaccga cgaggcggaa gcgtcggtcg 1680 cggaggcggc aaccgcccat tgctccccga tgtggtaggt ttcggcctcg atggcgatac 1740 aacggactgc gtgctggtgt tcgtgctcgt tcgcttcggc ggcaacgggg gaagctctcc 1800 aacgccccat ggcggcgcct tcacgaccga ccctggtgtt gtagctctag tgctccccgt 1860 tgaccttcct gtgctcgtag atgtcgatcg agacgcatca gacgttaccg agtcgataga 1920 cgctgcagac ggtctcgagg tggacagcga tggggggagt tggctcgagc ttttgcgggc 1980 gggcagcggt gggggctttt tttgctgttg cctagaggtg ggcggcggag tcgcgatgcc 2040 gtccgatgtt gagacgcgct gcgaaacatt ggacaccaga gactctcctc ctaccgatgg 2100 tggcggtcgg atactataag gaggggagg gctgctgaca ccgtttgact gtgaaggagt 2160 tggagetgga eggagageaa aggeggtegg etgegateee gagageggeg ateeegetge 2220 ctcagaggta ceggtttgtg cetgetteag ggeeeggatg eggtettgga tggagagaae 2280 ctgggtttct tcagccatac tgcactcgat tgttgttatc aatttccagt cgggagagac 2340 tgcaatcgat cgatcgtttc cagttcaaga gcgaccaaga tcggacgtgg cctggtgagg 2400 ctcaaaccga atggggcgct tggcgggaga ggggcgctat cagagccttt acggcattca 2460 acgccatacg gaggagagaa ggagagtaag gaaaggaaaa caaaaaaaag aaagataacg 2520 aaagataaac gggcgaggta gggatataag agatgcagtg cagtgttggc cccagctcga 2580 aaagattggc agcctctgta ggaatgcaag aaacaaggct gagacaacga ccgagcctgg 2640 ccctgaaacg aatcgaaatc ggttgcctcg tgatttgtgc ctgggtttta aggtgtcaaa 2700 agtecgtetg teaggeateg acaggegee attteeggag atgettaaag catacteact 2760
actacteett gactgeatee ageecagate acetteeagt gacacateag etttttaaag 2820
aaaacegeeg teeattatga tetaaagege tagttetate gagtteacaa cataatagge 2880
cagtaaaaat geeaceecaa ettgaageta teacgacate gegggeaaat eagtgeaate 2940
agtacagtae eegttgaaaa aagaceetge eacetetaca geeteaatge eageaatage 3000
ateetagtea tettacaatg gegetetgga aagaceagae tteteagata eagaatgaag 3060
tegaegagge gtegeeegge teeaaceatg actaegaea egaeeegtta acegeaeeg 3120
tgaagegaa getacaetet eggeatetge agatgattge tattggaggt atgeteagte 3180
actgataaca tteagteaga aaaaagaeta aagagaatta agaaateate gggeeeggtt 3240
tattggtgt

<210> 2032 <211> 5300 <212> DNA <213> Aspergillus nidulans

<400> 2032

ctctccgtta ttattattgc cgttgttctg gacgttttgc gacaaatcct ctttaaaaat 60 cccaatgatt cttttgtcgt cttccactgg ttcccgttta ttgggagcac cattagctac 120 ggcattgacc cgtacaagtt ttttttcaac tgccgcgcac aggtatgtta tatctccatt 180 cgattgacaa gctctatccc tgactactgt ggctcatatt tagtatggag atattatcac 240 gttcgtcctt ctgggaaaga agactaccgt ttatctcggt actaagggca atgactttat 300 cctgaacgga aagctaaaga tgtgtgtgcc gaggaagtct attctcccct gacaacccct 360 420 gtatttgggc gtcacgtcgt ctatgattgt cccaatgcga aactcatgga gcaaaagaag gtgaatcccc attcgcttgt taggtttccc gtggaatctc tatctgataa atttgcagtt 480 cgtcaagtac ggccttacct cagatgctct ccgttcctac gtccagttga tcactgcaga 540 600 agttgaagac tttgctcaga aatcatcagt cttccagaac gcgaagggtg tcttcgacgt atcgagaacg attgccgaga tcacgattta cactgcttca cgctcgctcc agggaaagga 660 ggtacgtgac aagtttgact cgacatttgc ggagttgtat catgatcttg atatgggctt 720 780 tgctcccatc aacttcatgc tcccttacgc gccccttcct cacaaccgga aacgtgacgc

ggcccagagg aaaatggccg aaacctatat ggagatcatc aaagagcgtc gcaaatctgg cgagaaaaaa gattctgagg acatggtttg gaacctcatg tcttgcgttt acaagaacgg 900 aactcegttg teegacgaag aaattgeeca catgatgate geacttetga tggetggaca 960 acattcatct tectetaece ttteatggat tetgttgeat etegegagge accetgagat 1020 tgtggaggag ttgtatcagg aacaactcaa agttttggga tctgatatqc atatqaccta 1080 cgacgacete cagaagetgg agetteatte caagateatt aaagagacat tgegeataca 1140 tgcacctatt cactcgatca tcagggcagt caaaagtcct atgcccgtac ctggaacctc 1200 atacgttatc ccaacgtcqc acaatqtcct ttcctcqcct gqtqtaactq ctaqqtccqa 1260 tgagtttttt ccgaacccat tgaaatggga tcctcaccgc tgggacagca atcctattgc 1320 caactcgacc gaggatgagg agaagatcga ctatggctat ggtctggtca gcaagggtac 1380 caacageeet tatetteeat ttggegetgg gagacataga tgcattggeg ageaatttge 1440 ttatgtccaa ttgattaccg tcaccgcaqc tcttgtgcgg ctgtttaagt ttgacactgt 1500 gtccgagtcg gacaaatcat ccgtcccgga gacggattac tcggtaagtg gtcgaaaatt 1560 caagtagcga tggtctagtc taacctaaac acagtctctg ttctcaagac ctgctggtaa 1620 atgettggtg caatatgaga agegeaaegt cacaaecaaa geatgaattg ataegeteta 1680 atggatatat gcttttcaag ccacataacc agtttaaagg gggcttaatg ataacagcgt 1740 aatattgaca tccccaacgg acaagactgg ttgcaccaaa cacttcattc attgtacatt 1800 atgetgattt tetaaaette aettataaat eattaattet geetaeattt eatattgaaa 1860 cttattaata tacgacttga acttcacctt tgattccgtg aaaagtcaca gtgtctaagc 1920 ttccccccc aaccccccc aaaaaaggtg cagtttatgc gagcattgat ttctcttggg 1980 ttggttcaga gtgatggtac agtaaacaag ctataataca aagagactat aggagataca 2040 tageeggata titeatgeae gicetiteet tietteaget elettettag eeetgatite 2100 agcccgtctt ctctcaccac catcaacctt atgtcccttt ttatcttccc acatcccttc 2160 ttgaactetg attatagetg egetgeeatt ggtaceeget attggetgta ggtaaggaee 2220 cctgatataa actccattgt ggattttcat gcccttgtac ctcttgagct ccttcgaagg 2280 gtcatgtttg tattcggtgg catccggcgg cagattcacg attactcgct tcattcctgg 2340 agtcagagta gccgaataat tcataagatc cacagagggg gtatctttag taggtgccat 2400

agggacctcc ataacccgta actgtgcagc gccgtccacc acgtgctcga ggtctccgcc 2460 aggtccgtac cagccctttg tgaactttga gcgtttccgg atcaggtagc gtcgttgttc 2520 tgcagattca attcctgcat ctcgagggtc ctcagatgac attgagaata atttgtccca 2580 ggaagggaat ttgctggcat gttttgacat atcgcggccg attagtttga ggaaggtttc 2640 gacatttgga acgaaccggt gtcggtagag gaagaggctt ctggcgcggg gatttaggtt 2700 cagtgtgaat agctcgtaag cattgctgtg tggattgaaa tgacctgaac gtccgaaaaa 2760 tcgagaatgg attgcgtagt gccatggtat ggcgagaacg aaaggaggct gaaatgagat 2820 tacttgaatg atgcgttcga gacaggggca cgaattattg gcaaacgatt tatttttagg 2880 tgccgaagcc cagagcactt atcaagattt gcccgtcagt cttgttatgc ttggatagat 2940 attgttatga tgcgcagcga aatttcggca atgcctgctc ccctggaata atgaaaatcc 3000 ggcgctccgt atctcttcag atcatcccaa ccatttttct gagactgtcg aattgctctt 3060 accttacggg aaagatattt gtatcctgta tatccttcaa gttttcttgg tcgcatcgga 3120 atactcgggg gtgggtgttg actatctatc agttctagct cattcaagct acagagcaat 3180 ggcggtttcg ccgatgatag ctccatcgca ttcaaacaca gctcctcaga agagcgctga 3240 ctctggagcc gcgactcagc tatcacaaga tgttgttgat cgtgagatca cagaacagat 3300 gaacgaggaa gtgaggcata agtacataaa aggcatatta ttacgtccgc tattttgtat 3360 ctggctaact ctgtcaaagc taaaaaacta ggtgaaggta catacgctgt agtctatctc 3420 ggccacgtcc gatccgatcc tacttcattc gtcgccataa aaaagataaa agtcaatacg 3480 gaatacagag atggattatc catggacgca attcgggaag tgaaatatct ccaggagctc 3540 teceatecea atgreattge getecatgae grattetegt caaaggaeca gaateteaae 3600 cttgtcctgg agtacttacc acgcggtgac ttggagatgc ttatcaagga cagcgatatc 3660 cactatggtg ctgccgatgt gaaagcttgg atgggaatgc ttatccgcgg ggtctggttt 3720 tgtcatgaga actttgtcct gcatcgtgat atcaagccaa ataacttgct tattgcctcg 3780 gacggggaag tcaagttagc tgatttcggt ctggccagat cgtttgctga cccttatatg 3840 aacatgacte accaagtgat cacacgatgg taccgaccac ctgaacttet gtatggtgcc 3900 cgccaatatt ctggcgctgt ggatatttgg tcagtgggaa tggtcttcgc agaactcctt 3960 ctgcgagtgc catttgtcgc tggcaattcg gatcttgatc aaatcagcaa aatttgcgaa 4020

gcgttcggca cgccaaccga agaaagttgg cctggtgtgt cgaagctgcc aaattatatt 4080 ccagcagata ataacatacc tttgcaaggc cgagagttct tcctcaggca attcccgaca 4140 gctggtcctg tcggcgcaga tctactcatg tccatgtgta ccttagatcc aagacggcgg 4200 accactgcgc accaagccct tcagcataga tggtggacta cggagcccag accgacaaat 4260 aaacaggacc ttccacaaaa acctggcggc accaaaaaaa tgggagatga tttgacaagg 4320 cgtggcggag agcttgatga ccaattcaaa aatgctgctc ggcaactaga tttcggtgcc 4380 ataaaagggt agcactttgg aactccgaaa cagccttgca ctagaggatt ttgcggcgcg 4440 ttcacacctg ccattgacgg ttctttaaca gaacagaagc tgccctgcat ttcacattgt 4500 ggaggacggg gtggagaatc caagagagtg cactatagtt atcctctggg ctgcagcgat 4560 ttcccatggg tagcaaacta caacttgaag tctggcctga ggaactgatc caccgccaga 4620 caaagccttc cgcgtatgag actatacaaa ggaactccag cgtattccgt atattcacta 4680 tggacctcca cgtccttgat tgtctcccag gcgagctctg agcctgttaa cgctggccga 4740 aattccgcaa cggctacggt gttgtgattg gtcccctttt tcaccttgcg tctcaatatg 4800 teegegeeag gagtgatate gggggettat egaggeaega gtgteeteet attggeecaa 4860 gggcaaagga ctttataatg agatcgacga ccccaagttc gatcaaataa gaagaatagt 4920 attatcgatt tatcaatgat caagtctgtg ctctcgagac tccaggataa aacgggctcg 4980 aacggtccaa cgaatttaag agtgcaccgc cgatgtaaac ctgcacgaga cttcgagctt 5040 cgagcttcga gccaagcgtt gtttcaatgt caaaccctca ctgtagaacc tagcttaaga 5100 ttcaagacaa tgtgagaatt gctgccaact tataatcact gattggcttg tagaaccagc 5160 gtatgaaaat cggtatcgga gcagtataca gagagttgaa ctcggaaaga ctcatctctc 5220 agaaagacca gggaattcga tgccagaata caagactcaa gtatggagta tagcggcgac 5280 ttctgctaat aggcatgtgc 5300

<210> 2033 <211> 1489 <212> DNA

<213> Aspergillus nidulans

<400> 2033

agteceaagt ceaegagage ggegaetete cegtegeete gategaggag titaceacea 60

ctcccttcga ctttatcgtc tgcggcggtg gaacagctgg gctggccatc gccgccgtc 120 tgagcgagat ttcgaatgtc aatgtcggga ttgtagaggc aggaaaatac cgcatcggcg 180 accegeteat egagaegeet gegaegttea tgeagatgtt tgaggaeeea gagtaegatt 240 ggtgtctgtt tacagcgcca caggaagcga acaacggcaa ggtccatcat ataccgcgcg 300 gaaaagtcct cggcggatcc agtgcaatca attacttgat gtatgtacgg ggatcgctgc 360 aggactacga tgactgggcc gcgcttgtcg gtgatgaggg gtggtcagct gcaaacatga 420 aggcgtatat gcgcaaacat caggctcgta atacctttgc aaatccatcc tatgagatat 480 ccctaacact ccccttctta gaccctagaa ccggtcaatc cagagtccaa ggcggcagca 540 teteceateg eccetgagea ecaeggtaeg aceggeecea ttegaaegag etteaatgag 600 tcaaacctgc ccatcgaaac cgactttgtc aaggcttgcg ccgagacggc gaacttgcca 660 aacatgccta ttgacgcttg gagcggagaa ccatatcggt tctaccatac cctgggcgct 720 gtcgcccgta cgggtccgaa ccgctggaaa cgaagctact cctggatcga gtattacgaa 780 gcgaacaggt tgcggccaaa tctcaaactt ttctgtgaag cgcgtgttaa caaagacatt 840 ctcaacggta ctagggctac cggcgtcagt ataacattcc gaggacagga gtacaccgtc tatgcaagat gcgaggtcat cgtttttggc gggaccatcc agtcccctca gattctggag ctatccggca ttggcgaccc agaaggtctg gctgcctccg gcgtccagag tatgcttgag 1020 aaccctgctg atcggtgcta acgtacagga ccacagtgtc agtctgaaaa gactgcacat 1080 gcaaccagtg tggtgaccag cgacacattg agccaggttc cttaatcgga gctgaacact 1140 gaataattcg cagatcccga caggccattt agttaatggg acccacgggt ttaaaccgaa 1200 agagatettt aaaegegttt ttgetgattg eecagateet ggtteageea gtgggeteea 1260 gaaagaattg atagttattt tataaaagga acttggattt agtttttctt ctctggaaag 1320 aagttgactc cttttttcc cccaataaac ttttttccc ttttttccta cgttttttaa 1380 tagggggatt ttttttttg cttcttgttt tatttacaat tatattttc tctatataat 1440 aaaaaattttt atatttttt ttttttataa aaaactcttt tttttcttt 1489

<210> 2034 <211> 985

<212> DNA

<213> Aspergillus nidulans

<400>	2034					
ctatcagaaa	aaaagctatt	gtatgtgtat	cgcagccgat	gaaagaaata	ctggccttgg	60
gtgttctgga	accactacac	agctggacat	gtcttggcgc	cagcgttgaa	ggcggcgaga	120
ttctccccga	ctcggcgtca	acctctttac	tttcggagca	tcccccagct	gttcttcggc	180
ccaaattgaa	cggtcaggtt	accgttttat	ttatgccaat	gcatatcaaa	cattaaagac	240
aattattgat	atacaaggcg	acaatgcatg	cttgcttctg	acagccgaaa	cgtgcgcaaa	300
gaatcacccg	gtttcgaatc	tcatttccca	tccgaccttc	gcagcaaata	ttactgttac	360
tactggcaaa	gagagcaata	tggacaaccg	tacatttgtc	tccgattctc	tccttcgctt	420
ggcgaacgcg	tcggatccta	ctgtcgtcga	cttcatcctc	gccaccgcga	catccgccaa	480
atcgtcctct	tcgctccaag	ataagatagc	accttttctg	gatgcaggtg	cagaagaggt	540
tagctcattt	tgttcggaac	tctataaacg	ggttgggaag	tctgaaacga	gcgcaattac	600
taatgctggg	accgggagcg	ggaatcgaga	tgggaaaaca	gttgcggcgg	ggacagagaa	660
gaagaaatat	cgccttctgg	atatggatga	ggtcgattat	gagggtgtaa	gtgggactgg	720
gagttcgcta	gggcctagga	gtgttgagac	cgagaggaaa	gacaggggga	ggagggcgca	780
cgacaagagt	cgggatggag	atgggaatag	taagagtcac	agtgatcgtt	gggataagaa	840
cgagaatcgg	aagagggaac	gcgaaaatag	ccgcgaccgg	cgtcgatcga	agaagttaag	900
acg g cgcgac	gttgacgact	tcgaagatag	gtggggcgat	gaggagattc	tggaggagga	960
agagcaggat	gttgaagggg	agttt				985
<210> <211> <212> <213>	2035 3352 DNA Aspergillus	nidulans				
<400>	2035					
atcacatacc	actcacaccg	tttgcgctca	agacaacgca	aaatacgtcg	aaattgcttc	60
caataacgcc	atcatgcata	tcctcccaat	catgaaggag	tgttggaagg	atccaatatc	120
aaaacgcaca	acaaaaatac	gaccgccata	atccaaccca	gacgccacct	gcccctgtaa	180

ggatatcaac aaagaagcaa aaaaagcaac catcgtaaat cacgtaaaca tgcgtcatga 240

gtcgtatcag cgatgtgtaa gcaccagtgg tcttcctcat atatccatac gaagcgccga 300

tcatgcagca acggaataaa aatcatacat ttcaagtcgc aacatgatga attggcacca aaatcagtgt ttggcccatc agtcgccctg agtcatacgc gggccgagga acttgacagg 420 gctggttgtg agtttcccct atctgttcca agcaagccca gccgggtggc gggatctcca 480 ggactagaac gaggtggtga cgacgacgag gaagacgatg agcatgaagg aagtttggaa 540 cattcaacgc tgcattctgg gtccggtgag aagaagttgc tctcacgata cgaagcgaaa 600 gatggcgtgg ttccgcgctc actgctcgaa acaagctcca tccctctagg ttcaaaccca 660 cgggggtgta cccacgtcca gtcaaggtcc tctttcaatt gtgtggactc gaagctatga 720 gatagcgatc tcccgacctt ggctagactt ggtcggccca tccggcttgc agcccctttc 780 ctcctctcaa tctcgtgatt. ataggaacct ctcctcttgc gacctcggtc tgtgctgccg 840 tcgtgtgaat gctggaaaat ggcgttcgcc atgagttgtt cctggctatg gctcaaagcg 900 accctagcac gcattttctg aatagcagag tccaatgcta actcgattgc gcaatgattc cggatgcgtg caagctttgg ccatgtcgcg cgctctccac agaggcacgc ctttagcata 1020 aaatcagtgg tggggttctt caataatcga ggaaagtgcg cataatgaat ctcagataga 1080 tgttgatgtc ttcagagtac ttctgattca taatcgaaat tgacttggtg aaggaattcg 1140 gaaaaacgcc aagctccgtc aatactgcca tccgatgcat aatctcctcc tttgcaagat 1200 gtgaaacagt atggaaaagt cgagagaatc ttgacgtcgg gaccgccaca ctcttcggct 1260 catcggcttt gggaagaaat ggtacaatgt gcgggttgac ttgtgataca ataaagtggt 1320 tgacgttgaa catttctgac aagcgattca taggcagatc tccgtcaacg gagccgtcta 1380 tatattgctt gtgaaggtca ttccacggaa caggttcccc tgtcagcggg tctttggcca 1440 tcaaggtaaa gggcgaaaat actaccggca ccgaacatga aacggcccta ggcgaatgtt 1500 agtatggctc tcaaacaact ccgcagttca cgtacacagc agaccaaatc aatacgctgg 1560 gggctgtaat gtagtttaga agctttggta gctcgtacac cccagcgcta gatacgcaaa 1620 tgttgagaat tctccgggtt cggttatacg cctcctgaaa ggtgatgtcg cctagccaat 1680 ttctcataac tttggccagg tgtgtgatat ccaaaaacgc tccatgcttg aggaaccgcg 1740 cggttttttg caggatgttt tcctcgcgat cgtcttcatc aaacacagaa aagtcaccgt 1800 agggaaaaga agctaacaac gcaggaagct catcctcggt acgagtgcaa aatactgcgc 1860 agacgatact gccagcagag gcgccggaga tgatgcgggg cagaagattc gccatccaaa 1920

gcgacttcaa aaccccaatg tggttcatcc caaaagtagc tccacctgag aagaggagcg 1980 cgcttcgccc aaaagcctgt ctcgcagcta gaagctggtc tagtatatac ctcgactcgg 2040 ccacatcaca ccgattgtct cccgacacat ccactagaga cgatattgtt tggacggcgg 2100 tcgttatata ttgatctatt aaattcttgg taccagaatg ggtgtgtttg tacagagagg 2160 cattgctcat gcctcccaaa tcacgactca acgaggtccg aatcaggtat agcatgcgac 2220 tgacatcaca geteagaega geegetteta getgetegag geggetetgt aegagatggg 2280 ggtcatactc gtcgcattca aaagtcgcct tccaggcgtt attatcctcg agtttatcaa 2340 gttcacaggc acattette cattettegg eggatacage etageaacge aaacgaatta 2400 gcgcggggtg tggtagtgta acgcaatagg cacgaaacag actcacatta cgcatgcgca 2460 agtatagcac ttgcttgcga tcctctgtct tcaagtggag ttcctcctca aaccctcgct 2520 tcttcctgga tacgatatct tcggagctgc aaatgctgcc ggcccacgag agggatcctc 2580 tcacaacaga agccagcgaa ggcacgggat ccaaggtgag ccgcggacgg tggccatttt 2640 gaggtgcatc tttggtaaca gtgtggctgt tcgagtgttt acccttacta tgccacqtcq 2700 aggttatcag tggggagtcg ggaataggcg acatgacagg ttcaagaggg atagtgccag 2760 ccggatatcc attcggtgga ggaagtagct gagtgtgaaa gtgtcgactt tctagccgaa 2820 ggggctgctg taattaaaaat tataagaaat ggccgtcaag catgggacga gtgagatttg 2880 aatgctgggg aagagaaaac ctggggtcag gcgaacctgg aaaagagtca cgagcgatcg 2940 ccgtgcaggg agctggcgca gcattcagtc cgtagcctta ccgcttacgc tgctcaccgt 3000 taagggtccc aaggctggtt actggccaca accccacgac cgcctctctt ggttgtgacg 3060 tctggggaag acagtcttca gtggtttcta gtcgtgcaat ttctcgaaaa tttcgcttga 3120 agttccccac agttgtcaca atgtcaattt tcctcagacc gatgtcactt ttgtttattt 3180 caacatcccc tgggactcac cttggggttt atggatgata ccctactcgc actaaaagta 3240 gcaacgttcc accttcgctt gattttgtcc ttgcaaaggc aatttttatg gactgggcgt 3300 tatttccgag ctttttagaa atctaatacc aaatcatggg ggggaaaagt at 3352

<210> 2036 <211> 2711

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations <400> 2036

atttccgaat ccagcggatt gctgtgactg accaacagcc tgggacgaag ggtgggataa 60 gcactgcatc cctgcactgc tccacttcca gtatccaatc atcgacctga acggatcttt 120 tgatctcgtt tagggcggag aaagggaaaa gaaaagcatc qaqaaaqcat qqqcqaqcqa 180 tttggggcga tgtggtcagc gaacaacact aggtttgttt acttttagcg gctgccctc 240 ctcccagatg atcctttcta gaagacgaat agcagagagg cagcagatat taattctctt 300 ctgaagcgag acgggaaatt aatcettgag tggcaaacat aaggetetga etcactgete 360 gcatggcttg acgagaagag cggctacgtc gccttccagg attattatcc gaagagtctg 420 cctctcaccg aattgtgtct aaatgtgtta aagtgaatgc agaatctaca gagtatacga 480 ttagcgagac ttcaaggatc gtcgaagctc gtgagtagca atatgaatca ccaatgaaga 540 tgaaagattg ggcatgtttt accgttagtt tgctcctctg ctgtccctcc aagccttgca 600 cogtocttog tttcttcttt gagotgotgg acacatottg aggattaggt tgcctggatt gatggagtcc tactgagggc actgtataca ctctcgggtg ttaacgggat gaagaaattt 720 ttcgaatctt caccgagagg ccgccttcaa tcatgctcta gttgtgccgt atgatttgta 780 ggcgtccacc attatcattg attatttaga cactgcttgc tcaggtgaag ccatgcagat 840 ttaacgatcc tagtaagacg actaccataa gcgtcggggg gtctgtaaaa taaaqtggaa 900 atacgaatac cagctccaat tgttcccctt agcgccgtct tttgcattgc tttctgcccc 960 accggcttgg atcttgacgt aggagtaacc taatcttctt gttaaagggt tgaaaagcca 1020 ctatcttgat tggctggcgg tttcttatct ctcacctgct ccccggcttg gagacgtcca 1080 tggacggcct cccgctgtcc tcatcgtctc atcccgacgt atgcagaacc acaaactqct 1140 gaacggcagg gaataacccc acgagtctac tctgaataca tttaaaaggc gtgaattagt 1200 ctgtacaatt gggttagggg cggatgcaga tcctggaagg agagctgtac aacagcaaat 1260 ctgacttttg atactggtct tgcatgtgaa gttttgctga agttatgctg acctagttcc 1320 tggttcccag gtactccaaa gtagcgtggt ggcggacatt ttttcgtcca ggagcggaag 1380 ccgccgaaaa cagctctgtc ctgctggtgt gccaacgtag tatgattcac ttagagcgca 1440 aagggtctgt ctgcttcttt gctgtgcatt gattattttt tcctgaaaag ccaagtcgtc 1500 tactccgcgc gtccactgca gttctccaga gtaggcatta tacttaagca aacggaaatt 1560

cgccacggat cattgtcttg tcgaccgtgg tcataattcc ttctcgatcc ccaccattgt 1620 attititecca gitactectg tacagggtgt cegicatece gigateteaa tigaaacate 1680 ctccggcagt gtatgggtga tactccataa tacgataccg aaactcggag accagacgaa 1740 ttccccggac ctctttctcc cgtgctcctc ccgccgccca ctgcccactg cccgtagccc 1800 tgtccagtca cttttttccc tttactacgc aggccccctc cccctcaccc tgctcttatt 1860 tctacggttc cccccatcat cttccacctt cttttccctt tctctcactt tactacatct 1920 tcccggagct cgacgttggg caaatatcat tgcaaactct aagctattgc ccaccgtccg 1980 ccattgacga catagcttta atctacccat cacgactact gccccgcaga aacacaacag 2040 cggcggccga tcccaaaatc catcagcaat cccccggttt ctgtcattcc attctctgtc 2100 ggccaccggc ggaagaatgg gtctgaactt ggaggaaatc tatggccaaa ctatagttga 2160 ggagcagcgc ccgaatgagt attcggaata tcagccgaag aagggttatg gctgggccaa 2220 cactetgeec gageggeaag gtetetatga ceeggaatat gagaaggaeg ettgeggtgt 2280 aggetttget gegtaagttg attteetace tgeaaceggt etgagaaage aggteetaat 2340 ctgtgctttt ctgcagaaat attaaaggca aggctagcca taagatcgtt agcgatggtg 2400 agtccctaag agcagaaatg cgggagatta tctgctgaca tggcgtcctt tacaqcccqq 2460 aatctgctct gtaacatgac gcaccgaggt gcggttggtt cggatgcgcg agacqgtgat 2520 ggtgccggtg taatgaccag tatccctcac aagttcttca ttaaaaactt tgcgcgcgaa 2580 gtgggtgtgg atcttccccc cttggccagt atgctgtcgg taacttttct caaacccgac 2640 gaggaggett tgaaggagec atcaagcagt ttgaggagac necacgtege ttggaetgeg 2700 cgtacttggg t 2711

<210> 2037 <211> 1542 <212> DNA

<213> Aspergillus nidulans

<400> 2037

aacccgtcct tgaccatgtg ttgttttgcg gtcgatagcc ggctctggaa gacggaagtt 60 cttcctcatt tcggcttcca cgtaagcaga agcaagcttg aatcgtctat cgttgtactt 120 atcgtaaata gctgaatgat gcttgcgggg catctcacag cactcaacaa tgagagagac 180

gagcgggtat agctgagagt aagtataacc ggcgtaatgc acatgagcag gagactaatg aatcgtcagt cacgtataca taaacagatc aaagaaaaca tacccaggtg cctttcttga 300 gcattaacct cgccaagcaa tgagcgccgg cagcaaggaa actagcagga ctaccaacga 360 ategeteate catgatagta acetecagga aatatttege aagggggeea ggtttegagg tagtaatggt cagctttgct gattatgcga aggaagctca taggtcctga aaacccaagc 480 tcgaactgga gcatgcttag catgaaccgc tctgctttca gaatttcatc gacagtgtaa 540 ccgccgtcaa ccatgtaaac aatctcctgg acagacggac agttgatctc ttcatatttc 600 gcggcgataa aaatagcagt cgcaccaaca agctgcagct tgccaagcga aacaatcttg 660 catgagagga aacggtcgat atagttgacg caaagaaaaa gagtttcagg gagcagtgag 720 aaccgatggt ggacctgcac aagccagtcc atgagaacag accgcatgga ccattggatc 780 tcggcttggt tgtccatata atgtgcattt ggcagcatct tgatctacaa agatattgtg agettagece egittgatag tigeggatat eigtacatae etettgetet eigatgiact 900 cgaaaatctc ctcgctgtat tcagccacca tacttgtatc acaatagtcg tcctcgatat cttccacggt gcgggtagcc tcgactatct gctttgcgag agccagctca cgtttgacct 1020 gctggttata tctgggaaac agtagggtcg ttgctccqcc ggtggtattc tcqctacggg 1080 ageggtatga tegggeagtg atatagtegt etteetegtt eteeteateg teategteec 1140 agtattette aggtteegae tgatgaggta agteateetg tgaageaegg gagaetgtgg 1200 tggatttgca agtgaccctc gagctaatag cgggtccgtt ggagtccgct gcgatatgag 1260 cttcgccggt ttgcttcggc ataggttgca ctttgcaatc gtcgtcctca agatccggqa 1320 actecticte gtettetteg geteeagget gggacaacag aacetegagt tigeacatti 1380 cgctctctaa tttttcattc aaagagacag taccctccac tttgccgtcc ttctgcagat 1440 gttcccccaa gcttggtttt gaatggccct tcatgttgcc ttccttaggt tcgggtttcg 1500 attccttgga tgtaagttct ttgctctccg tcaatggttc ta 1542

<210> 2038

<211> 3198

<212> DNA

<213> Aspergillus nidulans

<400> 2038

ctctcacgtc cctcttccac gccctctcaa acacttcact ggcctacaag tgtgacacaa 60 120 taacqtctgt cgccttcaac cagactgaga cgtccgtact tgcgtctacc ggcattgacc 180 gctccattat cctatatgac ctgcgcacat cttcgccttt gtctaagctc gttctgaaac tagcatctaa cgccgtctct tggaacccaa tggaagcctt caactttgct gttgcaaatg aagaccacaa tgtttacatg ttcgacatga gaaagatgaa ccgtgccctg aacgttctaa 300 aggaccatgt tgctgcggtt atggatgtgg acttcagccc aacaggcgag gagctcgtta 360 420 ccgcatcata tgaccggacg atccgtcttt ggaaccgggc tactggtcac tctcgcgata 480 tctatcacac gcagagaatg caacggtagg gcacttaaac ttcacacttt tcttaaactc 540 tgtgactaac ctattcaaag cgtcttttcc gccaagttta ctcctgataa caaatacgtc ctatccggtt cagacgatgg gaacattcga ttatggcgtg ccaatgcctc tgaccgcagt 600 ggaatcaaga gcgcccgcca gaggacgaag ctagagtacg atcaagctct tgtccagagg 660 tatgcgcata tgccggagat caaacggatc aaacgccagc gtcacgtgcc gcggactatt 720 aagaaggctc gtgagatcaa gaatgaagag cttgcggcta tcaagaggcg cgaggagaat 780 attcgcaagc atgctaagaa gagtactttg cgcgctagac agagcgagcg tgagaagatg 840 attctggctc aggagaaata gatgcggacg ctacatcccg ccgcgattgg caagctggaa tgtgcctagg cgcggcagtc aagacgtgac taagcaagaa gctcattcca tatgcttagc atacatcgcg agctcatgcg ttcacaagat gtctattttc tcttgactgt tggtttggga 1020 tttccaggct gctttgtttg agacgacgct tgtggtacgg cgaagtcaat accggtcaaa 1080 cgtcgggcga tctgctggag acctgctggc agagccgcat atatgtcgat aaacatggcg 1140 tatgeeggea atetgataae acegetteta ceattgteta teagggagae gatettttga 1200 gcaacacgaa tgggttcgag gacaggtgcg aaaaaggagt ttggcgtttt gatgaacatg 1260 aacagtggcg tagatatctg gccggtctcg accagcacca ttttcacttt atccgcgttt 1320 cctgataccc ggagttcagc ctccaaggcg cgatgcaggg cgctgaggcc agccttgctt 1380 gctgagtagt ctgcgagacc agcggcgcac agctgtccaa ggaccgagct cacgttcacg 1440 atggtgcctc cgttctcgcg ggacagcata tgtgggagga acacttggca ggtgtggaag 1500 accyctagaa gattcytcty tatyytcttt tygaatyctt caycagagay tyacayyayc 1560 ggctggccgt taattcgggt cgctgcacag ttcacaagca ccgttggcgt gcccaactag 1620 acatettata qttaqeqaaq caaataaaaa gtaetacaac agcaaceact aggtegtaet 1680 acggggcgta gtcaaaatca agcaagtcgg aagagaaaca tacatcttct ttgattctcc 1740 gcgccacttc ctcaacttca cccctcaccg taatatcaca cttataatac tcaacccctc 1800 cqacqtcttc ccagcctttc acatccttct gctccgcaat atccaacact gcaacgctca 1860 cgccacgcaa accatagatt tgcgcaatca atctcccgac cccgcttgcc ccgccggtaa 1920 tcacgacaac ttcgtcgctc agatcgacct gtctaggcac cccatatgca atctgatcgt 1980 ttatcatgaa cgcgacattg agaatagtca aaaatgtggc gtaggcggtc gcggtcagaa 2040 acgctgggtg cgtataggga gtagcctggg cgcggaggca gaggacgatt atccaggcga 2100 tgaaggggtg gaaaaccgag cggttcagga ccgttacgaa taggtcgact gtgaggtgct 2160 cgtgccattg ttttggcgtg gttggattga gggagggaga gggggtagtg aggatacgtt 2220 gaggtgccat tctactgtat tttctcctgg acacgtttat agcgattgtc cgaagcagag 2280 gttgttcgag taacagaata acctttttta ccttttcttg ttcagagttg ggatccagct 2340 atgtcgacga gaatcacatt atttaggtgg gaggaaaggg ccgagattcg agcttctggt 2400 tggctatgaa gaataattag cgtagaacga ccgacatcaa ttttgatata tactggtcct 2460 ctggaataca aggaatgact tgctcaattg cgagatggag tacggttgat attgttcgct 2520 tagggatttc cagtcttgtg ttagaattat atattttgga ggtgtctccg cacccacccc 2580 tcgtactcca agatgctaag ataagggaaa taaattatct ttaagatgga tttctctaaa 2640 ccaacaaatc actgaaaagt tatggacccg tatcttcaac tcatataaga aactatgccc 2700 cctcgacttg gatatcctgt gaagacaatt cacagcgtca agcttgccgc aaccaatcca 2760 gaaaccacct gggatatcgc cattggatac ctaccagact ccccagaggg agtcatatcc 2820 tccataaccc cagattactc gagcacctca tctcgtccat tatcacctct tgcgctgccc 2880 qccctcgtac acccccatat ccatctcgac aaagcctatg ttcacagcac gtcctcctac 2940 accgatetet teceeteaac eggtteatte caagaageee tgaeeeteae aageaeggeg 3000 aaageeteat ttacagggee egaceteeta caaegeggeg aatggeteet tgeegaatee 3060 gtcgcctccg gtgtaacagc catgcgcgcc tttgtcgagg tcgaccacgc agtccagcat 3120 gcctgtcttg acgctgggct agacctgaag cgaaaatggc aagaggcatg cgaaatccag 3180 3198 ctcgtgtgct ttgcacag

<210> <211> <212> <213>	2039 839 DNA Aspergillus	s nidulans				
<400>	2039					
tttaatctag	catagcacag	atcccgtcct	cgtcaggttc	cagcgtcatc	tgctagatca	60
gcagagtagc	atactttatg	tacagcgcac	cataggagtc	atccttcccg	agtgtcctca	120
tagtatgcca	gatcgcatgg	gcttccattt	ccttaccagt	tttggggacg	acactgggat	180
acagcagcat	agggaaaatt	ccgccgtaaa	gttggttgtc	gatctgaatc	catttgatgg	240
tggtgttcag	agtctggtaa	gccttcgatt	ccttgaactt	gacctcgata	tcacggaacg	300
tcatgtaaag	taactccttc	attttctggt	tgattaagga	gataccgata	ccaccaaggt	360
gaagctgagc	tttgaaattg	acatcagagt	caaattcctt	gacttcgaag	ccagtattga	420
tgctcgtttg	cgaggtttgt	gatctttgct	gccgatatat	actctttgat	gctttgaagt	480
tcgataaaac	cagagtctgc	gtcggaccat	cagcaacaat	attgatgtcg	atgatcttct	540
gcgcttctcc	aggctgactg	ggaggaatac	gcataggtat	caagtttcca	atctcggtca	600
gcctaatccg	ccgttctttg	cccttgcaag	ccaacacgag	agacttgttc	tttgtcgccg	660
ggaagtccca	ggcatatggc	atgatgctgc	gaggaggtag	acggtagcgg	atcggtcgcc	720
aggtatttgt	ccggtcttcc	tcgtcatctt	ccaagttcgg	gttctgcaaa	aattagtaaa	780
tgagactgat	agaaagccag	atgcccggac	aagataacat	accgtgttga	taaaacatg	839
<210> <211> <212> <213>	2040 2701 DNA Aspergillus	s nidulans				
<400>	2040					
aaacagagct	agcagcttgg	ctcatagtac	ttggatccta	tcgagcgatc	ttctgaaatt	60
ggcgcagaat	agtcatagct	gctcgcagtg	acaggtgccg	cgataccgcc	ccagtttgtt	120
cctccgaaca	tcatgtatag	actcatcgca	gatacccgtt	ggccgatgtt	ccatctgtag	180
aacagattcg	caaaatcggc	cccagtatcc	tcagtgcacc	ctccttcagg	tccgtcccac	240
gggttataag	atccgccttg	aaactcgggc	atgaagaacg	gcatagtcgg	ttggacttcc	300

tgaaaatagt catagtagtc tagcacctta tatggcacat attcaccgtt tgttccagtg catacactga catcgcagct ccagcactga tccgtcagaa atgtttagca atatagatat 420 480 aagccactta cagaagggta cgaatccaag cccaccgtat caagattgcc tccagcatct gaccagtcac tgccccagga ttttgtgttc atattagggt cgttcccggt caatggaaca 600 qtqataccat tctcacgagc cgaggcttgt agcaattcca tgtaagcaat agctgtctga ttagggttcc tgtcacgcgg atccccaatc cattgctgtc cgtattcgtt ctcgatctgg 660 720 tagcaaagtg tataatgacc atcggtaacc tgatacttgc tggtgatttc ggacacttcc gcaaaatacg gttcccaggc cgctgtatat ctggggtcgt catttctcgt cgagccatat 780 gcgcctgtcg taagccagag tgggaaccct ccagcgctgg cttcggcgtt gacatatggc 840 900 ccagggcgca cgatgatgta cattccaagc tectttgcca agtcatatat cggggtgatg tcacgagcac cagtcgagaa atcaacagtc tggttattgg gtgcgtggta agcccagcta gagtagaacg caaagccagt gaatccaatc gccttgattt tctccaatat gtcccgccat 1020 agtgctggga ctgggatacg ccagtagtgg aactcccccg agaacaggaa tatccgctgc 1080 ccgttgatgt aaaagctgta atggtcccat tgtacaactt tgctcagccc attgtcatgt 1140 ataggccatt cggattggga actattctga gctgcagtca gaacatggag gcttcccaga 1200 aggaagagaa gcaaccagaa ggccgtcgcc atggccaaag actcggacaa caaagtgtgg 1260 gctgtctacc gtgcatggta cctggctgaa gctcggccca atttatgttc tgggacttgg 1320 tgaagcgggt tgagcatcgc ttagacctta cgaccaagcc tccgcatcct agagtagggt 1380 ggacgcaata caagacgatc gtcagttcca gaggccaagt ggagtcgaca atcgagccat 1440 gttaccttct gtggtcaaat ccatgctggg atgaagcata gatgtgggga caatgtagat 1500 tttcctccat tcacctggca ggtcggtatg gtttctcccg tcagccggca ggagactgag 1560 aatagcagcc gagcaggggg tttatccaga attatggagc gtgtgaatta ggagattgtc 1620 cgatggagag gatgagggt tcatcttctt gccgacaagt cacatgatgc agcgccttca 1680 tacaaggtac tactgtacga tggaggcaag gagtagtggc ctgtggtcca attaattgat 1740 ttctatcgca ttgagaacga agagatcatc aactatgcgt tctgacaggc attatcattt 1800 tctaccccag gccaacttct gttctgattg acctagcggc acatacagtt tccgctcgat 1860 cgagattaga gaacacatgt tgagagcctg gtctgtgatc ctcgtagttc tattaataag 1920 atacatectt trategeetg gaacaeggee cagtagtaga gacaeegteg aaaacaccat 1980 gtaaatatgt acagageaga aaacaacege gaaagacata acegaetege tittatacag 2040 gatteacagg geatgeagae gtaaaacgtt gaateatget geegggggee catgeegeee 2100 attgeegegae gggeegaeeg gateceaaet egacetetat agggteteea acacaeteet 2160 gaagetetta gatgaaatae aggaatatgt caagatggtt gtegtigggg tegageegga 2220 taggatatgg atagggggg tggataaaga tatgeeaete taaeeteeta atteaceaea 2280 etaeetigtag ggeeaattee actteetget tetegeaatt catggitigge caaaatgaatt 2340 aatgiteeea acttagitet aggiteeeae aaeteeatag ggattacagg tetitaeette 2400 aggeaeegeg ecageeetti gegittette titageteati eteteggeee etitteeate 2460 aggeaeaeeg gaaaaeeett gaeetggeee titgetaeta teagtegeee ecetitate 2520 tigteaaetet acategeet eaaatggiee actitaegat agaatteeet ecetiggetae 2580 gaatacaeee ataeetgeea tiggeeteet etiteaeag teeaaetigti teeeegataa 2640 ettaeeeege teetitataa acagettaa teeteaage teeteaaee etetitatega 2700 t

<210> 2041 <211> 2969 <212> DNA

<213> Aspergillus nidulans

<400> 2041

cgccccacga tcttcgcgag atcattatag aacttccgtc cgacttcgat atttgaaatg 60 atctccttat acttcaggta cccgttctcc agctcctgga gcgccttctc actgcacctt 120 tgtagaagca tcacccgtat gggcgcgcgt aaacgcacga ttcgcgtccc gcacctgcgc 180 gacgatctga tcctgatcgt gcatctcctg cgcaaccata tctagatcga cgtcgtaatc 240 gcgcagttgt gattcaaaga ggtcctcgaa ttgactagcc tggatagcct gcattggaac 300 tegegeteta aaegtgetge etegeggaea agtgeagaae tgatgtegte egegegeget 360 ttgtccttga cggcctgagc cttgcgcttt cgccggcttt cgagtcgatt tacttcgctg 420 atgcagctgc ggagccgact cacctcgcgt tcgacttcag gcggtatcgt tgcgcgtcga 480 ctacttggga caaaagcctc aaggtcgcga ttcgtgccgg tcaaaacgcg aaagacagct

tccgagtcgt gcagtttctg ctcaaccagg ttgtcactgc tctgcgctga ggtgaagtag 600 ccgtcgattt cccgggcggt ggtgtagagt ttaggagcgg cggcttcaga ggcctcgcgc 660 gtccagcggt cggtgccaaa tttccggcgc gaagcgtcgt cctcagcttt ttcagcggcg 720 780 aggagttcca cgccttcggt atagacggcg cggtcgttgg atttgacttt ggcgatgtcg agaagggact tgcggaggcg gttgaggccg tcttgttgac gcatttcttc ggcatgggcg 840 900 accagtgatg gcggcaggcc caggggcttc tcaagggctt gcagcgagcc ggggagattg agcgatgata gtagactggc ctgttagcat aaatagagaa tgtaaaagga tgtgacatac 960 tegegtaget tgtccgtcat gttctccaat tegecgataa teegeteatt gacaagaegg 1020 tctctcctgt ccgagtaaat gctcgccgca atgtgcacgg catacgggac gagcttcgaa 1080 aagagegget gteecaaegg ceetttttee eecageateg agattgegta egggaeetge 1140 gaeggegeet tageegeaac catacaegee egateaataa gettgagete egaettggge 1200 ggcacggggt tgagataaat catatcgttg tccttctcgg cgcgcttcaa atcctccgtt 1260 actetattet ttaacceetg caaatcacce ageacegtge gattgateea eeggetetet 1320 ttgagcgctt cattcacaca agccacagcg tcccgtaacc gtgccacctc ctctccatac 1380 ttgcgcttct ccaggcaatc cagcgactgg cgatactgcg ctgcagctgc aaaatgatgc 1440 tgtttcgccg tcatatggtg gatccattcg gggctgatcg cattcgactt gacggcgtga 1500 tegeaegeat egecataaaa gteegacaet tggeeegega gtegtgeaat tgatgeatee 1560 tttagcccat ccatcacggc cttctgccag aaacattcct gagcttgtgc gaggagcagc 1620 tettecagge tteggagggt catetegtee atgtetteeg geggggegga gegeatgtea 1680 gggacgatgt ctgttcggag gtgtgctagg ataccggctg cctggcagaa atagttgcat 1740 gcttgcttga gaccgtcggt tgttgtgcgg tttacggcga aggcgagctg ggagtagagt 1800 gcggcgaggt tgaagatgac gtttgccagc tcgaagcgga tgttatcctg tgagactgtc 1860 gtacattagc caacatccta gcagattcgc tgtgagaaac gtcgtacctg gccgacttgt 1920 gttgaaccca aaagcaggat accaggggaa ctcgaccccg acctacgacc gtcaactcag 1980 cccggaatat ctatgatatt attgatacgt acatcaactg gaaactttcc cccaagccat 2040 ttcagttgcg cggcgtaagt aaccagccgg ctgattccgc tgacatgtgg ttcctgcacg 2100 tttatggcct catttcgtaa ccgatcgata atgagcaagt catctgcaaa catgtcaggg 2160

cgctggtcat atttggtgga aatgtattg gtcaaggcgg tcgagaggga gacagtgtgc 2220
gagcggcgga agggaatctg gaggatattt ctgtttctgt caataggtga tatttttgca 2280
aagtactgga cgtacgtacg aggccatttt ggcaatgcgc ggtgttgcgc ttggatggag 2340
cgattgttgt tgacgggatg ctaaaaactg tcccgccgac gaccccacgg caacgtaggc 2400
gggcaaatga cgtggtagtg ccttaggcag ctatctgtat ttactacttc ggaaaaaatt 2460
ataatcaatg tgcatttaac aggtcgttat ttattgctat gttcagataa tacaatactc 2520
ctggactcca gtcgatggga ccgataatca tcggtctagc tcgttgatgc gcatcttaat 2580
atattcgaag atgctgagca gaatcatgtt attactcca gtgcggatca gaataatcga 2640
cagaccctta tacatgcttg atcgtgccac cgcagcggaa gcctcgccga cttccttcga 2700
tttgcctaaa agcacacttt gcgcgcgcgt tttgcgagta tcgaggggt aagctgcga 2760
ctgtcagtac ggtaatagct agctggggt gtctagacg accgagaacc acggcacagt 2820
actgcagatt gctccagcaa tcatggggc accgaacgga gacttgtccg gtcccagctc 2880
tctggcagca acctgcttga ctatcacata gactgcaaag tacaggccag atccaactgt 2940
gtcgcgcggg cgatcaggcc ataacagta

<210> 2042 <211> 2292 <212> DNA

<213> Aspergillus nidulans

<400> 2042

ccaactcacc aagtacaagg cccctacaag ctcaaggaag acaagtgtcg tcggtactgc 60 aacaaagacc tgctttctgg cctcagagta acgagtctct aagacgttca aagatgaagt 120 tggccaatac tggcgagcgt gcttcaaaaa gtgtgaaagg aagaacggta aaatagagag 180 aagagcagga aagaaactca gggtagcggc agatagtcta cctaatacca tgagtgcatt 240 tectagaaac etgeteagat cacegegaeg egtategegg caacettace ageattgaaa 300 agggacacag tgccgggatg acgataacag tcaacgacta atcgtgctcg aatatagaaa 360 gagcatetga tagatgeeae teecegatte tetaceeaee ttacetaete ttataegeeg 420 gcatggcctg aacaacacct gcaatgagat aaaccagcta ttgaagcagc ccagtgaaga 480 caaagaaacg tttcctagcg aaaaagacta gctgaatgga ccaactaagc cgaaaagagg

aatacagagg atgcgtactt tgactataga tggattctag tggagaaaag atccctacta acaattccat tcctatctgt aggtagcaat tcgaagatgc gcgcaagaca aggtattaat 660 gaaaacttta agagaccaga gaagatacac aaaatggaaa cctggttaag actatctcac 720 atacataccc tacccaccaa ctaggtagac aaatcgattt ttatacgaca cagaatttat 780 aacaagcaag cagcgctaaa tgtctattca agagggatac cctcgtactc gctgtatccg 840 agggcgaggt tcatgttttc tgtacgccgt atgttagtag ggcctaaggc ggatggggat 900 atgtgcgggg acttacgcag gcattgagtg gcagcacctt tgagaaggtt gtcaatggtg 960 gcgcaaacga cgacacggtt ctccttggag tggacggcaa agccaccgac ttcgacgccg 1020 tgacgaccag caatgttctt gacaaccgga ggctcaccga cgatcttcac aagcttctcg 1080 ccagcgtaac ggtcctggta gatgttgcga atgtcacgag atgacattgt ctccttcaga 1140 ggaatgttga tggtgaggtg gatgccctgg aaccaaacag caacgtgggg catgaaggca 1200 atgggagtac cgagctgaga actaatttcc cgctcgtgga tgtggtcggt caaggagtaa 1260 gggatgatgt tgttagtaag gttctggacg tcgttcttgg ggctaggctt ggtaccagct 1320 ccagagtaac cggaaacgcc aaaaacggtg ggttgtccac cgaggtgagg aacgatagga 1380 gcaatggcaa cttgggttcc ggtggcatag caaccagggt tggcgatgcg agttgcctgg 1440 gcgatcttag agcggctgac cagctcaggg agaccgtagg ctcagttctc atcaaagcgg 1500 tagtcggcgc tcaggtcgat gatcacgtta ccatccttgg caccctggtc aacggcatca 1560 acgaaagget tgcagacgec gttagggagg gccataacce agcagtegac gtcgccgttg 1620 gatgacatgc gcttgacatc ctcgggactc aggttctcgt agatgatctc tcgcttgtcg 1680 taaccetgea gettettgee ageeageteg egggaagaga catgaegeaa atceaggtga 1740 gggtgggcgt tgatgaggtt gatcagggcc tgtccagtgt agccacgggc tccgatgagg 1800 gcgactttgg aaggcttagt gttggagttg ttcttctccc caagaggagg gttagggttg 1860 gttgtggcgt aggtgcggac agtctgaacg ggaactgaag ggcgtccgaa acgggcagaa 1920 cgaagggcgt tgcttgcagt ggagaaagta cgcttctgtc cagcagcagc accgaggggc 1980 ttgccgatat tggcagccgc atgagcagcg cgctgaagcc tggactcaag gttgatgtcg 2040 ecgaacatet ggegaeegtg etgagtgaat teetgaacea acagetteae etcateaeta 2100 ctctcaactc cgtaccagaa gagaacctcg ccgtctcggc ttagactgcc atcagccttg 2160

tcaaagaacc atgtgaggtt ctcgtccccc tccttgacgg tccagacaag cttgggaaag 2220 tccttcttga tggcggcgaa aacgttgtcg gccacgtttg ctgaggcagc cagacttagt 2280 atggtaaggt at 2292

<210> 2043 <211> 1711 <212> DNA <213>

Aspergillus nidulans

<400> 2043

ttcgacatcc tcagaattgc tctcaactac ggggctagtg tccataccqt ttcaaatgaa 60 ggctggacac ccctccatca ggcggtttac gtcggcacag gcgcgccaga ccatgaattc 120 ccccaaatag cagaatatat ccaccttcta gtcagccgtg gtgcggacat taatgcccgt 180 ctgcaatccc ccgcaagcaa cagcgaaacc tcactccacc ttgccatcac cgccattgtt acteggeeeg atttagtaca getgetaate caatgeggeg eegatateaa egeacetaeg gcagacggga agacgcctct tcatctcgcg gccgaacgag ggcgcgaatc aattttccqa 360 attctgtacg acgcagggc cgacatgtcc cttgaggtcc cggatagtgc gaaggctgac 420 gatgggcacg acgggacagg ggtgggaaga accgcgtatg atattgcgct gagtaacccg 480 ttcggtcggc attggttcga gagtgacgga aagcttaagc ctgttgtcaa agaggtgaag 540 aggaaagaca gtgtggagac acttattgac gaggatgagt ttcatggaga aggtgaaggg 600 gacagcaacg cagtgatcat cgaagataaa gctggagaag gctccgccac tgaggccgtt 660 gaacgtcccc aggagccatt accctcagac aacgccaccc ccaacccagt cttcgcaccc 720 cggaaatcag tctcgagaag cgggagcttg agcgggagca tccgctcctc atctgctctc 780 ggccgcagca tcgcccagca tcccaggtca aactcaatcg ggggcgtatt atcgcctgca 840 togtactcag attotgooto gocatttoog acgotgoaga acattaacca gaagacoggg 900 agtcgaactt ggaagggaaa caggagcttt gatcgtgaag cttggggtca gctagagaat 960 ggagtctccg tctcaagatc tgggtccggg tctgcgtctg tgtctggatc tggggaatgg 1020 gctgggagtg gggactgcga tggtgatgga gatgttcaaa gtctgaatga gaaacatgag 1080 cctgtctcgt tcgttcaaaa tgaaacacca tatgtgattg tttgagtacg accgcgtata 1140 cacggctagg agagggacag gtaagtcatg cgttctagcg agcatggcat ggcatggcgt 1200

cgcttgagtg gtaccttttg ttttcctatc tcaatccgga tttgtcaagg tatgcccggt 1260
atgtctgtat atagtatgtt tgttatagcg tggaatgata ccctatgtag tgaatgaatc 1320
aaaagtcgag tgcatatcga tttgcagtaa ccaagtatac atgtatgact tccaacaaca 1380
gaatatatag gtattaatgt cattcggtag ccccagttcc tacctaaact gctattttc 1440
ggtgcctccc acagcccct tccctcaccc acgctcctac acgcagaagc caactggaag 1500
aaggttgagt gcaaagatag aacacatcgc tcctgattga cactagacgg ctaagcgaat 1560
agaagacttct ccgttcattc gctttgaaga gatccaaccc aaatacccat acatatgcag 1620
gtgacgagat tccgatataa agtggcctcc atcaaataca agtgcccctt ttaagcaatc 1680
gaaagactcg acttccactc ccactcacac c

<210> 2044 <211> 2000 <212> DNA

<213> Aspergillus nidulans

<400> 2044

aaggcatggc agattaccca tctatctaga taggagattg ccactatttg tacctattgt 60 acttetetga aacccetttg etectaatta gactagaaac agaacaggte geaaccagta ctgtattagc tataatcagg catgcagact atacagcagg ggaccctgat aattctcctg gcagctcaag ctctgattta agttcaagct ctagaagtaa ttcagagtca qqataqtccc 240 agcaagcaca gtactgatat taaaataaga tatcagcaaa ggaaaagttt tactagaagc 300 ttatagtact tatttaacaa agcttggtaa agtaaatccc agaattggaa qtcaaqqcaq 360 gcaagatgcc tatattcaaa gaaaaagatc ctactaagct tgaaacattc ctcctagacc 420 ttgaggactg ctttattggg gcgctgaacc agtataaaat agagaagaaa tagatccttc 480 ttggtactag tcatgttagt aaagatgctt gatactgttg gcactccaag gtcaagtata 540 taactagaga gccaacctgg gaggatttca agacctttat atacttctgg gttgatctgg 600 aggctgatca gggccaccaa gcagcctttt acctgctaaa taaataacag gaaggatact 660 ctattactaa atagactagc caatttatag aggtgttgcc ctacctcact gagcccctgt 720 tctatgctca gctacttatt aaaatactta ataaggaata tcagcagcac ctaatatata 780 taagacatet accetagaet gttaaagagg teaaagtaga ggeaatteag etggaateta

ttataaaata ggaaaccaaa gccaaccaaa aggctgacaa taagaggctg ggagataaat tagaggggaa taatccccag ctatagacaa aatagcacca aattaatagc tcagaagagc 960 cacctgtctc tactaagaac aagaataaag ggcaattaaa ctacaagccc tgaaqqqqca 1020 agaagaaaga taacctagtg tccaaagaag agcaggacca ctatagagag gaaagacttt 1080 gttttaaata cagcaagtca gggcaccagg ctaggtacta ttactccaaa gagatgccag 1140 agaaaaagat agaagctaaa gaataggaat ttgcagctcc agagttactq atattgcgct 1200 gtctaaacaa gactctaacc ttccctattc ttgcaagcct gaaaatatac tagaatagct 1260 ctaataaact tctcaaggtg ctgctagata ctggagctaa tacaaatttc atctcttata 1320 attatcttat taaacaaggt atctatacag acaaaactgc tatggcgcaa tctgtctagt 1380 atgctaatag agagatagta ccctgctata gaaagtttat taccaaggta tagatatttg 1440 actetaetta aaaaetttaa aeettgaata ttatgtteta tattatagat atageeetaa 1500 tataatatca ggctatctta ggatagccat agctgggcca agcagatcta gatattctcc 1560 tgtctaccag gtgctggcat tggcggcatc aggatccaaa gactatggta gaaaaaccta 1620 caaagtttct ttatttaata aaagacaacc ctgtactgct ggtcatgtat aaaccagaga 1680 ttagcagaga ttagcagtgt aatagaacca gtcctaccct gatgttatgg gtcctttgcc 1740 tatacaagga cettagacet tagtgacteg gecaaggeet gegetgteet gaaggeggtg 1800 agccacctac aagactteet tgcaacaaca ateettettt eteatttett etttagegat 1860 teettettga acgtaeggea egtettaggg ttagggttag ggttagggtt agggttaggg 1920 ttagggttag ggttagggtt tagggttagg gttagggtta gggttagggt tagggttagg 1980 gttagggtta gggttagggt 2000

<210>	2045
<211>	1311
<212>	DNA

<213> Aspergillus nidulans

<400> 2045

geteteagat etgtgttaat tetttgteea tgeetaatat getacaeata eacegeeaca 60 tacategget ggatgattgt tetetgaeag etegggeact tagttteeag ettatteeag 120 ttaatteaaa acataetgea eatgtataat ateaagaeeg eagaaagata gataaaatga 180

atacgtacct gaactggatt cgatcttctc ttccactata ctacccatag tctgcctcag ctcgtggaaa gcacgaagca aaccagggcc cgggcggccg gcggcctcta cgacatgtcg 300 tataagggcc ttgaaatgcc cattcacagt ccacttgaga ctcccatctt ttgtatctgc 360 tegagtecaa gecaetetge eccateacet gecetteace teacegeete aaggeeetga 420 tcatcttttt gttcactttt ttgttcccac ccgctcgatg atatagaagc ctcctccttc 480 tecttaette caeeggataa tageaggeaa ttgaeectat attgaeteae ttegaageae 540 acaagtagtc acattaccca caagtaggcc gagaaagtgt tggatgcaac tacagaaagc 600 togaatgtoc gcatoccatt catocaggto gcttggtgtt tgcctagctt ggtgacgcga 660 agcatccagt gaaaagttca ctgtaatacc ccggccataa atcatactgc tcaggggaaa 720 tattaatggc aatatttcgt acttaataat actctaatat aactcagagt cgcacgtaat 780 gcgtacacca tggttcctga aatcaaggtg gcagtcgatc ttcctcttat cccgtgttat gctgcctagc ccgctcgatc atagcttcag taactctgat tcacaggctg tcctaaaaat gcgaacccag gatgtccctg ggtaacctat cccttgactg ggccaaaccg tccaagtggc attacgagtc gtccaattat ttgctctaaa cccgtttagg tcctctacct cgtcttgaaa 1020 agctgcacag agactgattt acatccctga ctgaaagaac ggctttgtac ggaagtggta 1080 gtgggaattt tgaactatag acagtgccct ggactgggta gtcctaagga attcaagcaa 1140 acggcgtcgg agagctgagt tgagcacgaa cataggtaaa ttaggaaaaa atgtaagatg 1200 gatagtggct attgttctaa gataagacac aacctcactg atatttcaag tcatactgct 1260 ggcatggtat ataatagcat ttgaagtgtg cgcatttagg taaaatagca t 1311

<210> 2046

<211> 1216

<212> DNA

<213> Aspergillus nidulans

<400> 2046

agaataaaat gtctagtatt tctttttaa atttatggag atccaaaagt ttgtcccata 60 catatttcgc ctggtttggc ataaatgtcg agacccggcc tccctgtggc caaagatcag 120 gactctgtag gagcggggt ttgcggcaaa ctgaagacaa aagcggggat tgaactgtaa 180 tgtagcgggt cctgaccggg aaacctataa attgatatta tctccttcgg gtttattggt 240

aatgacgggc	attctaacct	tcccgcgttt	cgtatgttaa	aaagtcgggt	cagatgtagg	300
ggcctttaaa	agcttctttc	gcggagctgt	tatctcggta	agccctgggc	ctggacagac	360
cacgcagcat	tggggcgcgg	ttcagtctca	gcgagcatgg	cacgctcccg	tcaaaaatag	420
tcgtggactt	ggggcagtag	gtggtgttca	cagtgcccgg	ttcagtgatg	ctctgttggg	480
ctctctcaaa	tgcgccaggg	tgttcatcga	catcgacagc	gccggccagg	aggccggtag	540
cagcagcgaa	ggagaacttc	attttggctg	agtaagagag	aatcactggt	tctgatgttt	600
taaagagtgt	gggtgttgat	aaacaacggg	cgttgagaaa	agagtggaat	cggtatagaa	660
accgggtagt	gagcgagtgc	gtttggcaga	tggagcagaa	acgggctgga	gagggagagg	720
aagaaggcag	acggacccgg	ggcgagagtc	tcatataaat	gatcatcaac	agcgccaggg	780
ctggcaaact	gggcgctcag	tgctgcagga	accagggcct	acgagagtgg	actagtccag	840
cctagcgtgg	ttgcagccgc	cgaatcgtgg	cagcgtcagg	ggctgttggt	ggaggcaccg	900
acggcctaat	ttcctttgac	ttactctgat	cttaatttcg	ctactctcat	ccgctgtctt	960
tttaggggct	accggctcaa	gcggctcctc	cacgttctga	aagatcgatg	attctagagt	1020
ctggattcaa	tggattgcag	tctggactct	ggacgctgga	ctgtgaactg	cagtctattg	1080
ttaatagact	gaggctttcc	ctatccatgt	cgccaaaccc	tcagctcgct	gtacagacta	1140
gcccgggggt	ggcttgggtc	aggaacatgt	ttaaattgcc	gggggccatg	gaaccagtca	1200
aaggcatctc	ctgaac					1216

<210> 2047 <211> 145

<212> DNA

<213> Aspergillus nidulans

<400> 2047

gaaggcaaac aagaacggaa acgacgacaa gaataccgat tatccggaag caaaagccag 60 agaccaggcc accaacagcg caccaaaggc cagaaagcca ccgaacaaca acacagacgc 120 acaaaagaac agaaccagga gagaa 145

<210> 2048

<211> 2556

<212> DNA

<213> Aspergillus nidulans

60 tttatagata aaaaaacata agattgctag tgagattgga aaaaaattta taaaggctta 120 taaccccgct ctggaaattg agagattcaa cacaccaaat ctacccaata accaaatatc ctgaacgaaa agactagtca aaccagaatt aaccttcctt tctcctaagc gcctgataac 180 gcaatatgcc tcgcaaccgt gtatggtgag gcccaaactt cagctgcaca gctgcgcagg 240 300 cagtttggaa gcggcacatt acgaaaagca gcgatcagct taagatatga gaaaacctcc tcgcgaactt agggtctcca atcgtcaaaa tggttcgtca aggacggtgc tggccatcga 360 gtcggaaggc tgacagaggg cgatgcgaaa aagctccttg gccgtcctgt tgacgaagat ggcgatgtca ttgaccagca cggtagcgtc aagggtcacg cagaacccta cgaggaaccc 480 540 gaagaagagc agcctgaaga tgtagacctc tcggtcctag aaggaaagac ggtcaacaaa 600 gccggaaata ttgtcgacga gcacggaaaa gtctatggtc gcatcatttc cggcgatggg aaqcqcctcq caggccggaa agtcgacggt aagggccaga tttggagtga tgatggcaaa 660 720 gtcatcggca aggccgagct cattcccggt gctgagcagg agaagccaga aggtatattc 780 tacggtttcg agagcctcac ggttgggaaa gaaggcgtgg tccaggatgc atctggccgt 840 attgttggcc gtgtcgtcga aggagatttc gccaaacttg ctggtcgcaa ggttgacgag 900 qacqqcqata tccttgataa gaatggtaac accattggaa aagctgagcg ctgggagcca qaqqaqaaqa aacgaaacat caatcccatg gcaaaccgca aggtcaaccg tgagggtgaa gttcgcgacg cggacggaaa cctcatcggc aaattgactt cgggtaatct gagcagcctc 1020 attggaaagg agattgatga caacggatat gttgttgaca atgacggaaa caagattggc 1080 gagtgcactt tactcgagaa tatcccggag cctgaacctg aagaacccga accagaaggc 1140 ccgtctcctg acgaattgga agctcaaaag aaagagcaag aggatagaga attggctaaa 1200 aagatgtegg ceategttte tggaaceetg gacegtatee aacetgtetg caggatgatt 1260 acagatgtga gtccgactga tcctaaccca gagatagett attgacgett caaagcacgt 1320 tgaccgggca gagaagacgc cgaagaacga gcttgatgag gaggagcttg tcaagaatgt 1380 taageegetg ettgaggagg ceageaatat eeteeaggag tgtaaeggeg eeattegtge 1440 cctcgaccca gatggtcgta tcgctgccaa cgcaaaggcc agagccgcgt ctcacgaagc 1500 ctctcccgaa gaatataatc tggccgagaa gctaaaggag ctttcagact cggttctcag 1560 gaccatcgag aacggaaaga gaaagatcga tgggatgccc catgcgaaga aagagctgaa 1620 ccctctctgg ggactcctca gcgagccact cttccagatc attgccgccg tgggtctcct 1680 cttatctggt gtgttgggtc tcgtcggtcg attgcttgag ggactcggac tggggccctt 1740 ggttaatggc ctgctcggtg gtctagggct cgacaaactg ctgtcgaatt tgggattaac 1800 gtcgctgacg gattctctgg gattgactgg caagaagaaa tgaaggcgag ctgtggaaga 1860 cgaagctctt gggccggaat tatgataagc taatgctaag tcacggatgt taatgcctgc 1920 ttaagtaatg catattatac agactagtta gtaatgtttc aatgacagtg acatattcat 1980 ccctacgaat ctcttaccgc acatcacccg ggtgaactac gagaagacaa cgacgagcct 2040 ggattcagcc acaggaaact ggatagtggc cggtattgag acagatctcc ccggatgcag 2100 tgatgatgct tggtttcgga ctgaagctga ctcgcaggtg acaaagatgg tagagggagg 2160 gcctgggtaa aaaattcagg gaaactgtcg actgctttga ctgcttcaac aagtccgagc 2220 cgttgggaat tcttcaaggg cgaacccagt aagttaaaat atctggacta aacaaatggt 2280 gttgttaaat cacctttagg tgttcggaag cctacgtgtc agcgcgaggc ttctgatgga 2340 atcatcgggg aacggtcacc cggactccgc cgcgaatgtg ccttaaactt gtgccttacg 2400 cctcgattga gaagttctac tgggtcgtgc aatagtgcaa ggctcattaa ccatcgaggc 2460 ggcggcagtg ctgctggatt cagactacaa cgcctgttaa tgccacatga gcataaagag 2520 2556 tctataatac cttggcaggc aacttgggtt aggcaa

<210> 2049

<211> 2871

<212> DNA

<213> Aspergillus nidulans

<400> 2049

tggggttcaa cttgggacgt gggggacacg gcgtgacaga catcccggga atggaaatct 60 cttctggcgc ttatgatttg tcgcgatgcc gagtttctcc cggtaacgat cccgacggca 120 tcctctcagt cggcgggac gacgttctat ggctggcgtg attggaggtc gcgctcaacc 180 gactggctcc ccgggcagct atctactccg tacagtcttt cggttcgcgt ctctccggat 240 ttcggatatc cgactgtctg gatagcatgt cgatgactgc ttgtctggtg gacgggccat 300 ctacgaccgg tatccgcga cagagggacc ttcgacttgg atatgtctac gattctaccg 360

480 cattactggc gtcacaatga taccettagc ctagaaaacct tgaagacagc ttaagttggc 540 taaggcatca ggcaagctct gtcttcccga ccgatggttc gcagttttgc attttgggaa 600 tggaattaca aggtttagaa gtgttgaggt gttaaggtgt tgaagattta aaagatgtta agatgttaag gatctaaaga tgttgggtgt tagatgatag gtgtaggtgt aggtgttatc 660 atgtgtcaga ttggtctgta gtaacacaac gctgcatgag gccacgccct ggtcctggcg 720 tagatggcac cccgtagcag ttctcttctt cctaatctct ctcttctcta ctttatgctc 780 gccatctcaa ccgcatcacg gtatcgagtc agttgctttc ggagtattgt tcaaacagtg 840 tgacgccgcg tttcatgatg tccttgctgg tcacggttcg agatgaccag gtctggtgct 900 ctaccccgcc atcaccactg taaccctgcg gcaacctcgc tctctcgttc atcgaccaca 960 tggacctcgg aggctttatc atgatgatct cttccccaga atgccatgag atttcgatta 1020 cgcggtagcg gattcgtcat ggagactaaa gccaagcttc agggcgcatc gctaggcgtt 1080 cagtccgacg gcgatggatg ataaacaggg acaccaggaa cctaaatcag acctcgtgga 1140 tgaagagtcg ggcatgaaga ttatgccatg gaacgagtcg actctggaga tattatagtc 1200 tggagttttg gcagcagcag cgtctgggga tattttagct gcctgcgctg ctccacctgc 1260 tecetectgg gaegtetege cetgegteat egteaacgte caeegeteet ecaacaceaa 1320 gatcgcaata cacggcatcg atatttatca tccggtataa tcagtcggtc attgtaggtc 1380 atctcgaatc cgtgactcgt gcgttgtcca cagaccatcg cctctgcatt ccaatccccc 1440 tgcattctca tcatgggtga ttcgcgatag tttgtttagt cttcgagttt gtgcaccatc 1500 ctgacttcag gtagacccac attctcgtgg acgtctcagt ctctggcatg cgcagttgag 1560 catacttcca ctcagttgct gcgccgttgg ctcagattag ccagattccc atcagctgag 1620 tctggaatcc gccgacaata atcacgtccg gtgagccttc tttttattca ccatgctggc 1680 cttcactcct gtcatccaac cccatcccat ctgggccatt cgttcgttgc tgtacctggg 1740 tcaaccatct tgggtcccgt cacgctcctt ttcacgctct ttcatccctg tctgttgcta 1800 gagtataata ttttcgttcc atacaacgct ccttaaccag ccctgtgggg tgcaagccgc 1860 tctttcacat actgccctgg ttgcagtgtg caaatgggac tttgatatcc accataatca 1920 tttgatcagg ccttctaaaa gaagctggct cctgtgtctg atttctgttc actttctgta 1980 tcctcgattc gaatttgcct gttccatact ttttcagaat ggaggccaag tgcaagactc 2040 qtctaqcaaa cgtgctaatg ttgcttctcg ccgcaaggac tgtgtgctct gcgccaactc 2100 catctcaatc ctctggggtc tcagagagca cccagtatcc cccttccacc cgaggcgcaa 2160 gactgctgcc gcccgagaca cagggcgtaa gtactcacgg gggcttgata ggaccgcact 2220 gacgatgaca gttctaccct accaaacttg agcgtgaggg ccacgaactg gagcagccga 2280 cqcccactcc agacgaatca tttgttggac tgaacgacct actagacacc ttgggtcagc 2340 ctgagtcttt gcttaattgg ctacttccca acceggacga accaacagac gttccatctc 2400 ageogecage tgeaceaeg teagaageet etteeaeaee tetegtggee gegaegeetg 2460 ttcctactac gttgcctgct actcacaaca ttatcgagca gcccactact gtcagttcag 2520 tacccagete gttegagget accaeagtea caacttetag tteagaegaa aacageecag 2580 tagtgagcac attcacaacg catatccaag gtatgtaatt ctcccaccga acacaaaccc 2640 tccctaactg ataaggtcct gccgaaatgg tcagccaaga cgtatttgtg ccggtgggaa 2700 ctggtccgat tcctgccgcc atcacttctc ggaacgacca tcctgttcgc aagaatggag 2760 ttgtaagtgc gcctacgaac attcatgtag tcgcactaac aaggctagaa ttcttcgaat 2820 cccattgaaa cgaacaagtt ccacagtgca ctcttcctag ggaccagacg a 2871

<210> 2050 <211> 573 <212> DNA

<213> Aspergillus nidulans

<400> 2050

cagacggatt cgctatggcg aagaaaaccc catcagtgcg acctttcaaa tctgtgtctt 60 gtgggctggt tagagggtt gacgatcgac gagaggtgaa aggatggacg gtcggaagcg 120 acggaagaca gcgcttaaaag gaggcgatcg aggagaaaat cggtgaggcgg accggtcttg 180 tcgacacgtc tgaagggcga aatcgatgaa gaataagcag tatttctgga gatgcagcaa 240 aagacaaatg caggcgctc gcaggagcga agagagggca ggcaggacgc aagggcgacc 300 ggtggagagc ggataaggag agtgtttgga acagctgctg tgatagcttg gtcgagaat 360 ttcaatctca ctgggaaaga aaaaaaagaa gggtgcagga cagaaggaaa gaaaagaaac 420 agtcagacta tggcgataat gattgaatga cgagaaggaa agaagcagat gaagatcagt 480

gcagtcacag	gactaggaga	aagacgagga	gggtggtgaa	tggtgagtag	tgagtggtga	540
catttccgag	tccctacgcg	actagcccgt	cat			573
<210> <211> <212> <213>	2051 6490 DNA Aspergillus	s nidulans				
<400>	2051					
gacatgagcg	gcgagcagat	gcaggccaag	attaccgccg	ccagacgcga	agctgaaggg	60
ctcaaggaca	agatcaggcg	cagaaaggat	gatcttgccg	atacaacctg	tacgaaaatc	120
ccctttgttt	ctttgcatag	tgtggtggaa	aacggccatc	tttatcgcgt	ctgccatcct	180
actgtctccg	gagagttgct	gactagagca	aattgaacag	tgcgtgatgt	tgcgcagaat	240
cagaccgacg	ccttgcctcg	cattggaatg	aagccccggc	gaacactcaa	aggtcatttg	300
gccaagatct	atgctatgca	ctggtccacc	gaccgtcgcc	atctcgtgtc	cgcctcacaa	360
gatggaaaac	tcataatctg	ggatgcgtac	actacgaaca	aagtccacgc	catcccgctc	420
agatcatcgt	gggtcatgac	ctgcgcttat	gctcctagtg	gaaactatgt	cgcctgcggt	480
ggtctggaca	acatttgctc	catttacaat	ctttcctcac	gagagggccc	gactcgtgtc	540
gcgcgcgaac	tctccggtca	ttccggctac	ctctcctgct	gccgtttcat	caatgaccgt	600
cgaatcatca	cctcttccgg	cgacatgacc	tgcatgctct	gggatatcga	gtcaggctct	660
aaagtcaccg	aattcgcaga	ccacctcggc	gatgtcatgt	caatcagcat	caaccccact	720
aaccagaaca	tcttcgtctc	cggtgcctgt	gatgcttttg	ctaagctctg	ggatatccgt	780
actggaaagg	cagtccaaac	ttttgctggt	catgaatctg	acattaacgc	catccaattc	840
ttccctgacg	gcaacgcttt	cggaaccggt	tccgacgata	ccacttgccg	tctcttcgac	900
attcgtgcag	acagatcact	caacacctac	caggtgagac	ccggttgcca	cactcattgt	960
aggacagtat	tgttaacaaa	tgccacagag	cgatcaaata	ctgtgcggta	tcacatccgt	1020
cggtttctcg	gtttccggaa	gattgctttt	cgccggatat	gatgattttg	aatgcaaggt	1080
atgttctgtt	ctcgacgcct	gtgattctgg	agacggtgac	tgaccgatga	ataggtctgg	1140
gatgttctcc	ggggagacaa	ggtggggtct	ttaagcggcc	acgagaaccg	tgtcagctgc	1200
cttggtgtca	gcaatgatgg	catcagtctt	tgcactggat	cttgggactc	tttggtaagt	1260

aaagcaaatt ctcagttcat gaaaaagcca catactaatc tgcctttcaa taacagctca 1320 aggtctgggc ctggtaaacg gtttaaagaa taataaaatc acaacgacgc gataccctgt 1380 ctcaqtcatc tqcqactttc cccatttgaa attctatttc tacttaccga gaggccggat 1440 gtccgcattg tacgataatc ttgtttgtcg ggatacagtc tatcgccttc tccctttatt 1500 caacgactgt gggagcgcag actgattcag catggaccgg aagacgcgag aatagagagg 1560 atatgtgett cagecegtet egtataceeg aacttggate gegeaageeg gateatetgg 1620 aaagaaaaag aaaacaaatc ttatgcagcg gttgtactaa tgttgtcttc tcaggatggt 1680 tacaggggct ccggctggtg tctggcatga cgcggaatcg tcgagattca tacggttggg 1740 cttcgacgat ccccaagact tttcaatttg ttctatgatt tctttctttt cctatcttt 1800 ctttgctcct tatatccccg cccaggttcc ttttttgatc aattaccctt cgctatacct 1860 ttgattggat tgttttctac gcattgatcc taaatgtact tttggtgagg caggaggaat 1920 gttttgtttc ggccacgacg ttaattgagt gcatctggat tttattgctt ttgtcttcta 1980 ttttctaata acaqcttaca ttggagagtt agtgatttga agcgaacttt gcctgacttg 2040 tgattggata tgctgcattg cagttggatc tccaaccact ttttattgtt tgattatctc 2100 ccccaaaqcq atgtagagca gtgatgaatc caatgcgaat ttcaggaatt gcggtcaaga 2160 ataqaatatq ccaqqcaata acqtaatatq ggggttccgt atcgaagctg aaacgtgttt 2220 ccaqccatcq tcqtccaqaq cgtcgggcca gtggcttaga tctcacaagc ctccacgtgg 2280 aaaagtaaga ataacatcat caacgtcaag atatcttctg caacttccat gacggcggaa 2340 ttcttggtgt cttctagctg cagccggaga ccgggacggc aggaatcccc cacccgaact 2400 acacgaaaac gaaatacggg gcacagatga aacaccgttg agttgtcaca agcacacgat 2460 catcaacaga gagggcccgc ctctcgtttc agttaccgcc ccctcgtcct ccgtggctcc 2520 gctcctgaac tctctcccac gtcaatcggt agacacgacg caatccatct caggtttgct 2580 tttgcttttc ctgctccgtg ctccggaatc cgatacgacc tctcaaacaa gtgccctgct 2640 cacggatgct gcagacctta cgtatataag tgtttcacca cccccaacta caggcctcct 2700 ctcttttcaa tatgtctaca gcccaagacg agttcaatca gctcttcagc aatcgagaga 2760 agaacttgtc ccatcccgag gacaggaaca atctctctga caacgacccc tcccctgacc 2820 cgcacgacca agaccacttc gagcactccg actccgagga catggcagcc atgacctccc 2880 gaacaaccag ctacacagtc cccaacaccc gattcgaagc taatacaggc cccaagggtg 2940 tcattgcaga cgcccaggct ttcgagcgtg cccgccgaac gaatttccgc aagtcatttg 3000 tctccggcaa ctcggccgcg cagcgctcac accaccactc atcctccaag tcatccggcg 3060 acgctcgact cctccacaat tccccaccag ctgatggatc aggtagcgat ctcgacgagg 3120 acgaggacac ttttttgcgc cgatggcgcg aatcacgcat gcaggagctg cagagcatga 3180 aggetaaacg geetagtgee eggeggagat attatggate gttggaaacg gtegatgegg 3240 cggggtatct ggatgcaatt gagaaggtcc cagcggacca ggttgtcgtc gtttgtcttt 3300 atgaccccaa ggtaggtgcc tcctgcaccc gccggtcacg gcttctgctg ttataaggag 3360 cgttagcgta gcttaccagc acagtccaac accagcgccc tcgtcgaaga ctgcctgcac 3420 acgattgctt ctcgccaaca actagtacac ttcgtcaagc tccactacga gattgcggaa 3480 atggataaca ttgaggcccc cgcgttacta gcataccggg gcggagacgt cttcgcaacc 3540 attgtccaga ttccgcagca gattcccaaa ggtcgaagct gcagcgcgga tagtcttgag 3600 gacttactaa aatcgtgagt gtttctttgt tctcgtatct tatatttttg cttcttctgc 3660 cccggcgccc ccactgctac acctacgtaa gattcgctga gtgacatgaa actaactctc 3720 ctccctagac atcgagtgct gtaaagtgat aaacatagtt ctttatttcg atgtctctga 3780 attttggagc acggagtacg ggttgcctat tactttaaaa cggtataccc gtaacgagat 3840 tcacgctata gcctacagga tctgaaaccg acagacgtgc atactcctgt gtcacagtat 3900 atcttcgcat cttccttcct atccctccgc tctcgctctc aagttgctca tcatatatcc 3960 aggcatgtcc aagcgcccgt ctttcatgtc atagaagcta tctcgtcttc tcccattttc 4020 atttgtcttg tcatctgcgt acatacattt tttattgttt tgcttcttcg tttttcttct 4080 gctcggagtt caggatagga caggtagggt aggcaatttg gctttactgg tcagtcataa 4140 tttcagcatg cgtcttatgc cgcttactag cttctctgtt tcagctgggc tatttttgta 4200 catagcatac tcacaacgta atatgatatt cgatcagctt cgaaccttat tctatgctca 4260 gttcaagtag ttcagctgcg cagtcagttt acgtgtatgg tgttaagcct agttggctgc 4320 tattcttgag gtatccattt ctttatctac acaacgcgca agatatatat gtatctaaag 4380 catgtacaac attccttttt tactaagttc taagtacacg caaggatata gcatactaca 4440 ttqaacctca caatacqccc attgaaggga tagtttcaaa ccacgatgaa gggagcgaaa 4500 agacacctac actgccagac aagcaggatg gtaaggtaga cagccgaaat atgtcgccca 4560 aacacccttc ccgtgcaagc gtgtaacttg agaccgagac aagacggttt ctaagcagct 4620 ttctttacat taggagttac cttacgctaa aagacaaagg acaaaggtaa gtgactacag 4680 acggcatctg acatatatat tgagacagaa agatgatcaa ccttaataat gtacttccat 4740 ttcctagatg ggatcaaggg tagtaaatag acaccaacca acatgttgtg agcttccacc 4800 atgacgatgg cccttcattc ctctagaaca tccagtttag agagtaaatc agaatgaata 4860 ccagtgataa catgaatagt caatatgcga gaattgcaaa atggacgtct ggaactctca 4920 gaacaaaagg ccaagtaaaa gagaagaatg agggtacaaa atacggttgg atagggtagt 4980 gtggagtacc ggcacgttga gcacggcgta agaaggacct gaagctcatt gttgatataa 5040 aagaggaaag ggaaatagga gacgagacac atgaaaaact acagagctcc tttttcctgt 5100 gtaaactccc aaagcatttt gatcaatggg tctggcagtg tatagaggtc gacatggaat 5160 tctccttctg ttagatgtgg ttagtggttg gtttttcgga ctagatctga ctggaatgga 5220 ggacttacgc tcgacatcat tcttggtgta agaatcaggg gccttattat cgtgtaccat 5280 ttgtaccact tgcaggaggt catcttcccc cagtcgctgg agaccatcgg ctagtttatc 5340 catgtcaacc tgggagtaag aatgtcagac gtcaacattt cagtctctat attttcattg 5400 acteacgete trateegtte gettettett ettggateet tetteteeae etgeagageg 5460 cttcgacttc actccgttct catcgccagg aacaggtcca gattcacgaa gcgccgccaa 5520 taaagccggc ttggggttct tgaacgtcta cagaagatgt aagcatatat gacataagag 5580 tctgtctgga agcagtcgag acgtacaata acgtgcttag actcataacg cgattgcgca 5640 aaqttqaqat catqtqcqat qaaqtqctcc ttgttgtccg cagcagtgag gccgatctgc 5700 atatcaaact caccccatcc ctcttcttga attctgaacg gtgggttttt gaatactatc 5760 gttccaggtt agccctagct gtagtaatcc agtatgttgc gtttatcatc cgagctctcc 5820 ctgtaatgag aatcgggata aaagcagggt ataaagacca cagaagctca aagggaaagt 5880 gactgacett gagtegeteg gttteegaaa etaggatgta atgagtaagt caeettgteg 5940 aagacattgg ctggcacctg ctccccatgc tcattgagga gatacacctc gattgaccat 6000 gategaagag ggaaacette gacaceggag teettgttae tgtaaaggeg egaaagteaa 6060 gcaatcagca agtttgtcca tatattatcc ccaagatcat gatgcgatgt ttcatataac 6120 acgggtagtt gtcgaggaaa ccgcgtataa agcccataac gcgcggaaaa ggagtaattt 6180 cgcatgaccg gtgaaattga cggcaggatt gacacaggag gggaagagtt ggctgtggat 6240 cgggctgttc tcgacacgga gatgaagtga caggatgggt ttaacgtaca tgacgtgctg 6300 ctcggttaca agcttgacgg tcctcttaac ctgtatgata gaacgtgttt gttagcgaga 6360 tgcgagagca gggaatgtca ggccatgaaa ggagatgata tccagtcctg gcggctgtac 6420 cgccgtagac tggggaccag tacgggtcaa ccgtgcggga aactcacgtc gggcatggtg 6480 atgatgagct

<210> 2052 <211> 2559 <212> DNA

<213> Aspergillus nidulans

<400> 2052

ctgtcgcgcg attgcggccg cctctcctgc tcgtccttgc gcaaggctgt tgagataatt 60 ttcccgaccg gctaatagct ctttccgctc attttcgtat tcctctttag cggcctggcg 180 ccgcagacgt gctagctctt gttcttggtt ctggcgttct tggaacgagg agacttcttt agcttcgaga gcttggttgg cacggataga cttcatgttc tccgatgcat agctctgaag 240 atcggcctca gttttcgcga cgtcaatcct gttgacaagg ttgaatataa tctcctctct 300 ctgctctaaa aagttgtccc agtctagctt ggaatcgaac tcttcttctc ggcggttaag 360 gctaagcatg gttagcactc aggggggagg cagacaggag aacaactcac acagtcatta 420 ccctgcgccg tatatcaacc tccctctcaa catttatatc ctcgaatgtc tgtttgcgaa 480 acceptigett teteaatgie tigiggeace eggecaeagg acagitegee gggeeteegg 540 agaaaatcct gtccacgcat gactcgcaca ttttatgata gcattctggg tttataagga 600 atcgcatgtc cgggttcaga taccgcgagg atttgcagac agggcagacc tctaggaagg 660 acgtggttag catggattaa agcctcatgg tccgggaaca gagcttacca tcttcatccc 720 780 cgcgatttac caaagcctcg cgagaaggcg gcatgactgt agtaccagtg tccagtagga tggacaacga caatatgtct taaacactgt tgagagagtg acggagttaa gagcaatgca 840 ggtatctgac ggtcattgat atgtcgcgtt acccaatcag attgatgccc cgttgttccg 900 cgcggcgagt ctttgcaagt gctttttgcc gcccgctccc caaaagttct cttcacttta

cttttgcatg aaagtcgcaa cctttttcac ttcctggcat tcgattgagt gatagctttc 1020 gcttattact cgttctgaat ctgaaatggg agttccggac agcagtattg aagggctcga 1080 acgccagcgt cgcgaactcg agagcaacat tctacaacta caacaatccc tttaccactg 1140 gaggacatgg gaagcggaat atgaggggct gaaagaagga atcgccgact taggcaacga 1200 tgctacaaca aacgatttcc tgcgagtcag ccgcaaattc gggggacttt cgtcaacgaa 1260 gacgagtttc gagtgattat tggtgagaaa caagctgtcg gcgaaccaga caacaagtta 1320 tcgaccttat ttcgaggcga atagactacg ttaagaccaa tgtggcatcg atggaaaaga 1380 gactgcgtgc agccgagccc caaatggaag ctttagactc tgcagaacac ctaactcgaa 1440 atccagcaga cgactttcct atgcgagaaa tcattgagga gcttgacgaa aacggagaag 1500 ttatttcgag tacgactacc aacccggggg atcaggcctc gagtctattg gagattctaa 1560 aaaaggctgg tgttaaggat ataccagacc ttcccaagcg ggacgcttcc gcgtttattg 1620 agacacactc teeggacact gegteaaaag atactttege eecageagee gaacaaggtg 1680 aacaggcggg ccagaagaag gaaggtcaag aagaggctgg tcaggagctt gcctcatcag 1740 gaggcaatga gccctcttcg tctgcatcgg atgcgggtgg gactccggca gaagttggaa 1800 aagagacccc tgtcgtggat gtcgacgagt ctccagaaga tgctcagcta cggcgtgaaa 1860 tgttgcgata tggactggac gaggtaggcg ctgtagttgc cgagcttgag ttggatgatg 1920 atgcaagtga aatctcaatc gaagaagaat acgatcccta tccatacgac gacgaagacg 1980 aagaggaaga ggaagaagat gagtacggac gaagtatccg gcctgttctg gacgaagact 2040 accaccgtca gatgcgtgaa ctggaggcga aattgaacgc tcgtggtatg tggaatgtgg 2100 gcaaagactc tgcgtcgctt cctgcggatg ttaaagagga ccttgaacat ccggttcagg 2160 taaaggtaga gaagacaccg gaaacgaatg gtgaaacggc ttccaaggca aagcctagag 2220 aaaaaggttg ccttcgctga taatcttggc attgcgccaa ccccaaagcc ccctgctcct 2280 gaaagcataa aggttatccc tccaaaaccc gatgttcctg ttctgtcgga ttctataatt 2340 gagcgtacag cagcagagaa ggcttctgct gctgttgacg cacctacccc gaagaaagct 2400 tecegattea agacegeteg tggetetgea gegacgattg ecaatgeaag eteegetgea 2460 ccctcgacct cattccaaca caaacccgca tcgctcgaac caaccccgtc aaaaccactg 2520 2559 tttcctgcca agcctgcaga accgaaacca ttctcccgg

<210> 2053 <211> 2078 <212> DNA <213> Aspergillus nidulans

<400> 2053

tacgtccgtg cttattgttg cgctcactgt ggtcaagcag agaatacgga cgacgaacta 60 120 tcttgattga tgttggtttg gttgggctat ttggtatgct ttgctggaca tcatcctaaa ggaatattgc tgactgaaaa ggcgggtaca ctgctctgtc aaccaaagga gtctcatccc 180 tactgtcata taccctgtgg catgtcatca catttccgat cacctatttg ttggtgttta 240 teettgtett cagtgeteta atgeaaatte ggtatateaa caaageeetg cagegttteg 300 attctacgca ggtgattcca actcagtttg ttctcttcac actctcggtg atcattggta gcgcaatact atatcgagac ttcgaatcct acacagcgtc gcgtgcgggg aagtttgtgg 420 480 gtggttgcct gctcaccttc ctgggtgttt attttatcac aagtgggcgc attcgtgccg atgacgagtc cacctactca acggatgagg aagaagctat cggactccta.cctggagagc 540 gatatcagga cagagtcgat ttgtctcctc ctctgcaagc tcaaacgaag aatagaccac 600 gaccgagaag ccctgattta gacggcactc tccagtcgcc tccagggtcg cttctcagcg 660 agggccttag gaaccttgat gatgatgatg accagagcac tccccgagcc gctctctccg 720 ccgagtctcg ctcgcctact gggtcggtgg ttgccgatct ctctgaaccc tctccaggct 780 cttcatcctc atcccgccct ttgtcacttc taagaaaccc ctgggccgag tcgcttgaag 840 agacagcgtc tgaaccagag atcgagcgac caagcacccc tccagaaccg gccgtgcaca 900 aaccagccag ctccaccata cttcttcgct tccctcctgc cccggacgtg gatggagcga atggtacaag ggttagtgcc cggaccaatc ctgcacccga gacgccgccg cggagagtac 1020 ggaattcaat ctcttcacac ttctcaccag gacccttgtt ctctacacta tctggcggat 1080 tcagcgctgt agttgctgac tcgatccgcc gcggtgagat gagcccagtg aaagaacgaa 1140 gggcaataaa gtcacggggc cgaaggaagc atccgagtac gtcgattatc gataacattt 1200 cgcgagatgc ggatggtgct gcaggggaat cgagccagga cccggatgcg ctggtggaca 1260 gttctgataa cgctatcgcc gcacctgcta ctgcaggaca ctctactcct gctatggagt 1320 acggagaggt ctcgcgcaac aactcggacg acctgacgac aatttctcgc ttgcgcagtt 1380 taagcgactc atggagtaaa acagtccct ggctggagg tgtgctgcag aaacgaagcg 1440
aaagccagac aagccccggc gaaactgaag ttagcgaggg agctccaaac cagtctgatc 1500
gcccagcttc aggtgacgca aatgcttgag ctaccagcgg tcctgatctg ttcaggtacc 1560
tgccattatt ctaatgttct tagtacatag tgcctttcct ttcaaccttg ttggtatatc 1620
ccaactcatg gcgtctcttg cacctttgtt catagcatat tagtacccat agtgcaattg 1680
taattagaga aattcattc acctcttegt ttcatcatc atcatcatca tgaacccagc 1740
cattttttg aatccaatag ttaaagggaa taatgcatag ctacttgatg tccggtggt 1800
gcaggtgata atttaccgga gagtcccaat aggtggaaaa agccaggact atcggtggt 1800
aaggaagcac taggtcccaa accccaattg gcgaggtcat tacgccgtcg ccgtcagggg 1920
cctattttgg agtagtatac atacacccta tggtgcactg agctcatccc cagtgtggac 1980
ctccctttca actccgcagc tgcatttagc cgtccttctt ctcttctcg ctggggtcg 2040
accagctcat cgttattgac tattctctga tataactg

<210> 2054

<211> 2465

<212> DNA

<213> Aspergillus nidulans

<400> 2054

tacctaatta gaagcgtttg gcgtgtgggg ccagtacctc aaggccgtcc ctgacatgag 60 agccaacgtc aagcaccacc tgtccgctgg caccggtggt ggccttcctg gcgacgctgc 120 180 tgatggtggc gctagcactg gcgatgggga ggtcaagaga ctgggtaacg gtctcgaggt cctgggtgat cctggtggga gcagccacaa cggaggcggc aagggccgcg agggcagtga 240 tgtaggcagt cttcattgtg atggaagtaa atgagtgtag atagtttggt aaggaaagac 300 taaagttgga atcggacaat agagaacgac tggctggttg gaaggaagag aagaaagatc 360 420 ggcccaggga aattctgact tcttatatgc cgccgggaat agggatcacc aacatcgaag ctgtgatgat cactaatatc cacatcctag atgcaaagga gcgtttggcc catagccagt 480 tggcgggtga acccgtatgc tgggttgtca tgggaccgac atcaataatc caggtacgta 540 tggagtacgt ctagggtgtg gatatggata tgatactatt tgtcaattcc acatggtgta 600 agatgagtgc tatatgggat aggaatcttg cacgagatag cccgagtcca tcagacgaat 660

720 actgetette ettgeetget etteettgee tgetetteet tgeetgetet ttgaetgete 780 gtgcctgctt ttctctgcat cttctttgcc tcttctttga cggcgattat ccgagcctct 840 acggaatacg caccgttgcc cgaacgaaag cagacactag cagaaactcg cagccaacgt tgagcctgca ggacagcatg cgtacctatt gtgatcaacg ttctcgttct cttgagcatc 900 960 gccgtcaaac cctcgagctt gaagccacca gtcagaaacc gtcaagcggc aatgtagatc ggcacctgaa aaatggacga atcatacaat gtatgacggt cattagttca gggtatgtcc 1020 caaggtacat acgcggtgga gcgtacggtg ggacctatac gacggacttg acggcggcgt 1080 gttggccgca atggatctat aactctttaa gagtactcgg agtatattgg aggtacgcac 1140 tagcaagaca tetegtggat catttgetgg egaattttee gatagetete egtetgttga 1200 ctcagagaca tctagcttcg tagccggcca tcgagtggat gtctggatat ctggctgtcc 1260 ctggctggga cgactgggag tctgaggtgc ctgaagcatg gggaccgaac aagagtccgt 1320 ataactetga ceteaacttg etecegatge egagtetegg tetgaegeeg taacaggett 1380 gacactttcc gaacctgttt ttggccccac agaaatgatg agccaagtta agcaatacct 1440 cagegaageg gaagetetgg agaceagtge tgategtgea aateeggtea teeteattta 1500 accatectea cegtactgte gggeaatate egeegeeeat gtagtaaget tgateatgea 1560 gggagctagg gtagcagcca gtctccaggt tccatcgact catacctcgt gaggactgac 1620 tctcggcggt atggtgcaat tttactgatt ctgcattccg gttatccaca ccccagatga 1680 gatggagtcc gtaggcattg tggctgcggg agcgcagctc gggcgagcgg caggcaccgc 1740 cttctcgcag ccttgggcac cgtgaatttg agaaaagccg tgcccacgcg gaaatgacct 1800 teegagttet tgetttttgt teetetetat gateteatat eatttaggae eteaaggaga 1860 aaggggttgg aagetttett ggtggtggag etcaggeacg gtgagtggeg aacaggaaat 1920 actecgetgt gegggeeetg eggaeteagt ttgggaeagg egetgaeget gatgeggata 1980 tgcggatact tcatactaag gccagactct gatactaagg tttgtttagt ctgataattt 2040 agtattgact atttgtatta gtacgecact ttgtcaagat gagggecaat tcacctatta 2100 ttcccaagac ccaacttgcg cgttaaaatt cctgaccgtc tcgagtactc tatgggcaat 2160 tgaataccca ctgtccctag ctgtgaggca ccaaatggag gcgtggatca tcgtctaggg 2220 tatttgggga tttggagttg attcgtactc ctaggcagat gtcaagatcg caaccacttg 2280 atgacattgt cttatacggc gatcagggga aaacagcaag aatactgtga cgccaaaacg 2340 tcatggtgtt tgaacattgc aaatctggag tcgtcatttc tttttgtcta tgtccacggt 2400 ctatcccgtg ctcgagatca aataggctga gaccaatagg ctttgtcaaa ggggaaaggg 2460 ataga

<210> 2055 <211> 3089 <212> DNA <213> Aspergillus nidulans

<400> 2055

taaagcacct gcgacaagtc gttaactgac agttccaaca atatggagaa ctcaagtcga 60 aatgaaatgg acatacgata aggcaaaaaa tgcgatcaaa gcaactccga ctatcaccgc 120 aaatgcgacc cagcggcccc attcatgcca tctgtcgcaa cgacggcggc catacccgtc 180 gacccagcta gaaggatggt tagctcaagt ttgcttactt ggaggaaaaa tggcgaaatg 240 gacaagactc tcgacaagct tgagcggtca aatcaccata atccatttga ggcactcacc 300 agtctcgcgg taacagaaca cccatagtcg attgacctct ggatttggaa tccgaatctg 420 gagtggagat gacgtcgatc cagcagtgca cgagcaagct gctataggtg aaaaaaacag taggctcgta aggtttcaca aaaaggtaca ggggccaaaa ggtcgatgat aaacgaagga 480 tagctgcaga atgccactca atagacaaag gatagacaga tggcaggatg aagtggtgca 540 aggggagaag atcttaaagg cggctaaggc agcagccaaa aagcgactga aagcccggca 600 aggctgggct gtggctgagc actagtccca tacggaggat ggcgaaacga agcgcttgac 660 ttcacgcatc cgcatacgag cggggaaccg cggttagggg cgaggccatg gaggatcatg 720 aaaagctgat gatatcgaaa tgttgcccag gtgcttttga gcttctcctg acctggatac 780 ttggacccta ggctgctagg gctatatgtc ttcaggtaca ctgcgagtct ccatagaacg 840 cttggcatct tctcaacccc ttgtctttga tcagctcact ctcatacact aaggtgtcag 900 ccctattgca tttcttcaga cagtagcaat gacagatgat tatttcgcct cggcaaatca gcctgcgatc ccttaataat ctccactcgt cgtgaatgtg gtaactgtcg catagccctg 1020 cgccactttt gaactaacct gacccatcaa ccaccgaaat ttccgtatcc aatcatctac 1080 aaggtgtcag gtctggggta aatgaacaat aatcgccttc caatttcatt gcaaggtctc 1140 taggtggtcc cttcggcgcc aggcggggtt ggcctggtta acggaagaag acccgaatgg 1200 caactaagga gatgattagt tgccgtcctt ctgcattgcc aacgcacact tggtctgtgt 1260 gttggctgat gagctggccg cctctaaagc ccaccgagtt agtgagctgg cgacgcgata 1320 ataaataggt cgcgttccct ggtgactggc caatttatct tttgctttct tggattttgg 1380 cetteegegt cagaatttee tacagettge actaetttgt egtegeatte gtettatagg 1440 gcccgagatt ggacaatgat actgacccag gcggaaaatc gtaagacatc ccaaaatgca 1620 atcatatcgt caacatcata attggtgggc tgcgggccac agtcttggta tctacatggt 1680 catagggcgt tcagggcatc agagcgttca aaagtcaaga cggagccgga acaagccagc 1740 ctgccaaacc tcatatgtta ggacaaggac gttagctggt caccggctag ctcgcgcaat 1800 cagccagtgc aagaccgcgt caaggtttgt ctcctctttt gcactgatgc cgtagcagct 1860 cacttegege egegtgateg attteagatt catetgttet ateaggtegt caacagatag 1920 cttgttgggc aggtcggatt tgtttcccag aaccaggaga gggattccat ccaaggtggg 1980 cttgttcatc agctcgtgca gctcctcagt cgccacgggc agagccgccc tgtccgcggc 2040 gtcgacgata taactatccg atgtcagcag tgtcgcaatc aatcatcgat acctgtctta 2100 cacgategeg ttgaegeege ggeaataaeg eteceaeatg ggtegaaaee gtggetgeee 2160 accaagatcc caactgaggc ggttagagag atgccctgga tgaatgcagg ttcacgaacc 2220 atttgagcgt cacatgtcct ttttggaccc gcttggtatt gaagccgatc gttggaatag 2280 agctaaccga ctcgacttag ccagggcaca agagccttga ggcacttaaa gagagaacct 2340 actctatggt gaattctcct ccctataccg atcatagacg ttagcgatct aggcaacagt 2400 ttgggtctgg ctagtaggga caggcaggac ataccgcgag cacacgcaac agcgacgact 2460 ttccggcatt ctgaagaccg atcatggtaa cgtccatctc ggtcgccctg cagatgcata 2520 actggactca gccagccgaa ctctggatac tgcggggacg ggccgggggc tctggtattg 2580 gaacatattg gaacggcggc ccacttacca gaacatcctc aagagccagt catagatcgt 2640 ccggaaaata cccgccatgt tcgtgacgtt tcaatgagaa ccagatgaac aaaagagatg 2700 acgaactggg gtggaaggac tggctgagaa gtgcagctcg ttccaaccag ggtcggcggg 2760

atatattgag atcagaattt tggacggcga agtgggggct cgagcagaat gggttgcggg 2820
aaaaaaaaaa gggatcetcg ctgactgctg ctacaccggc ggcgagcaga cgaggtgcga 2880
gcgtagtcaa ggtgacaggc gaaacttaat agacccgcga aatggtagaa gagcggcgct 2940
gaactctgac ctctggcctc tgaagcgccg cgagagtcaa cgccagatac ggaatagaca 3000
ctgctggaat gactgagaac ggccccaaga cctgagcgcc aaagccagcg gcaatcaatc 3060
aataagagcc tggaatccaa acttcgttc 3089

<210> 2056 <211> 8953

<212> DNA

<213> Aspergillus nidulans

<400> 2056

cggagacgga aaaccaggtg ggccttgttt tacaacccaa gggtgagtcc cactgggtag 60 ccgcgctgag actgggaccc tttgtacgaa agcccaaggg aagaatatca ggagggtata gccatggtat cggaccacat gaggcaccaa aagcagcatt gcaaatcatg acaaatataa 180 cggtaaggga tggtgtggct tcaatatgga taaaaatgaa ataggaaatt gcccaaagag 240 aaagaactat agccaaggca ccggaaagaa gaatgggacg cctttcctaa ccatccacaa 300 360 gataccaagg aggaaccgtc gacgccaagt aagttagacc atttattccg gtcatgagga tggcatcacg gcccgcccaa ccggcggact cgaagacaag cggcgcgtag tatgagatga 480 cattgatccc gttcagttgc gcgagtgctt gtgcggacat tgcaataagg acacgtctgt 540 tgtacctttt gaacatatca acgtaagatc gttccccttc ttgacgtgta ataagcacgt tcatcttgat ttccctgtac tctctttgag cctcgggatt gtgaagatct cctttaccat 600 660 agaggtttgc aatgactacc ataccctctt catcatgatc attatccaat aaccacctac 720 aattagggtg agcgttagag ccaatttcac gaattgcgcg ttttcgagaa tcaataaagg ccttacctcg gcgattcgca aatgatgaga cttcccaggc caagtaaaaa ccccatgata 780 840 cactgcaaaa gcagcgggag acgccaggaa aagtcgctgc gaatgaaact gcaaaagtaa tcgacccaaa cactagcagc atatccgaag atatttcccg tgaactcaat acatgccaat 900 ttgcctctat tgtgaggggg ctggtgatca aaaattagca tcgtccatag tagccttctt gattagggag atgagggcaa ctgtaccgat atctcggact gatataccgg gacaatagtg 1020 gacaacgctc caacgcccag accggcgact atacggccaa gcatcatcat aggtagcccc 1080 gtcgcaaagg tttggaaagc gcctcctacg aaaaacacca tggatccata aaggatggtt 1140 ctgcggcgac caattaagtc gccaattttt ccaacgagta atgaggaaat gaaggcccca 1200 acttctaata ttgcgacgac agtgccaatt tccgctcgcg acggttggtt gaagtaatcc 1260 ttgaagtaca agcctctgtc tccctgtcag taaagatagt ctcaatttgt acttcagcat 1320 gcatgcggga agacgaacgt tataattccc gacatcacac cctgatcata accgaaaagg 1380 aagacaccta atgacacgaa tacactcgtg aagtaactgt agcttattag tggcctagtc 1440 tagaaatacc agggtagcag ggttcctcac agcaatggct tcccaactaa gccatgcgtt 1500 tgagttgatt gccggctgcc aggtgacatt atgacaacga taaagcgttc aataccagat 1560 atatttctgg gtggtggttg tgggatttct attttctcaa gatcaaagtc gccagcggtt 1620 tgctgctcct ggtagtgcac acgtttcgct cgtttcgtcc gtgccctcga tccggctcga 1680 ccggaccccc cacgacccag ggaatttatg aggcggattc ggagaggatc ctctgcatca 1740 gcgatttgtt cacccaaatc tccagtatcg gtccaaagcg agaaatccgt cccaactgag 1800 tgagctgagg agatagaaga gcgacggctg cctttctcgc ttgcagattc taaggctcca 1860 gcgggcagat tctgggactc gaatcgtaga ggtcgcaggg gtatggttga ggaagtacgc 1920 ggcgacgacg gcgacgacga cgttgttgga ggaatgttgg cggttgaggg ctgatgtcaa 1980 cagccctgtc gttggtgggg aatcaaaaag ggcggatgac tggacgtcaa agttggggta 2040 tcgataaccc ttggtcacaa aaatcgtttc ccgccgtgag agtttggacc aaagaatcac 2100 attaaaagag cagatgaacc aagacgccct gttggcggtc ttgtgataga gaagtaacaa 2160 aagggaaact tgaaagttgt cctgcactag aaacaatcta ctgcaattgg acgcaggcga 2220 caaattgaag cggagactcg tgaacaatgt ggattgcaac ttaacgaagt gtgaacaaat 2280 agggaaagca atgatggtgg tcttttgggg tttgctcacg agacgagatg accagcaatg 2340 caggatgacg gtggtttctc tcgaggttgg ctagctaggt atccagccaa aaggagacgg 2400 tcaggcggga ggcactagcc aacaatgaag atctgactct tgataggcct ctcacagagc 2460 gttgaatatt acggggtaaa ctagttgcgg cactccagtc tcccaggtcg tcagacactc 2520 tgctgtgggt actcgtaaat atgaggccgc ctaaggctaa tttcgtccta aagtgtggtt 2580 cttgactgct ttgggtgtgg ctgtgacgat tgcatatgag cctgagctga gcccccgtca 2640 ctqtqttcta tgctagacag ctactttgca taatccggac agactgctac cagacgacta 2700 ggtaacgatt tgggagtagg tggtggtgtg cttaaaccaa atacggtgcg gtgccactgt 2760 qccaccqccc gaaactgccc gttggatttg gtggggattt tcgggcagtg cctatggacc 2820 atgaccgatc tcctggtagc gtagtattag tggaccatac cccctcaaat actgcgacgt 2880 accccgtgct tggtaacagg aatcctccat ggcaccggtg gggtgggggg aaacaacgga 2940 gccgatagtt agcagcaata gataggaccg caaggatata tgcgcagtta ttatcccaat 3000 ctctatgaac tgttgtaagg atgcgaattt cggtgggcct gtcctatgac atcacaagac 3060 tacaattgta cctagatggg atcgtgagta agcgatactt atggggtagt attggagtct 3120 ctgtagaagc ttgtctcacc atgaattcag gcctgataat aaagagaaaag gagaagagac 3180 gacatacttg tgctccaaaa cttgattaaa gactatcgta tctatgtcta gtccatctac 3240 aacccggccc acataatact cgaaagagtt tatacattaa tggtccgcta aaagatacag 3300 ccgagcagta aggctcccaa gggttgatga cgcttcttta tacagccaac gaagcgcgat 3360 tatgtgaagt cttttgacag tttgttgaga agcgcttcac ccttctacca actcgtaagc 3420 gtgcgacacc acatgggatt tgctgtgcag actgcaatgg gctgtaattt agcagataga 3480 gtgtgggaca tgccaaaaga actttgaccg caccaaataa gtcctcaact tgagtcccaa 3540 aacccataat gggtgaattt cacagatgag aagaagcgtt atggcagcag aatatcgtag 3600 ccatcttttc gtatatatgt ggcatctgcc atgcttgcat gtttgcggcg cactaactcg 3660 aaaatcacga gtccggcact tgtactagga acttgacgaa gggtattgcc caagaaccct 3720 cgataaagcc atctggtcca gcctccagcc cgagcagcct ttcttatgca ccgcttataa 3780 gtttcctggt acgctaagta gtatattcgc agcatttgcc ttctcgaagg gcgtaaggct 3840 geetgatggt caaggtatte caacegtgea atgtgaatat titgtatege atteagtggg 3900 tgttggatga tctgctgggc gacagacgcg agaaggcccg cagctaataa gaaacatggc 3960 tccagagcat aatgcggttt gattagcggc actccacggt cgctggactg agatgactgc 4020 agatagecea etttttgagg gettgaggae eeataatage gagtaaegaa ggagtagtat 4080 gcctgcgatt tgatgtactc gaagaaagaa aagaagacgg cactgccgaa agagtcgcgt 4140 aaaaatgaca gactccagcc ggcgaaaata ccgcgtaccc cgatttgttg tagtttgcgc 4200 tggccatagt gccacatgct ctgataacgg ccttcgataa tatcgctggt tctgaggcgg 4260 acttgcagag catccagggg ggcagctaca acagactgaa ttgagccagc caccaaaccg 4320 gctacaaaag tatcgatcgg gctagctggt gggtatgtac gtctcacacc ttgcgacaca 4380 ttacgacatt cagctgcact tttcgtcttc gcccgggatt ttcagtacac ttacccagca 4500 ttagccagca aagggggtac aacctgattt ggtatgaacc gccagccata agcgcgaaca 4560 gcatgaatga gtagacccgg agtagtggtg tgtagggacc agcgaccacc ttcagataga 4620 cgtggggaaa cagctcgagc aaacgcctaa caaaaaaata attgcattag tcgtcgtggg 4680 ggcaatgccg aataagaatg agaaagggat caggatatgt gtaccatgta actgtgagga 4740 aaacaaaaaa aaaaaaagaa ggctgcatta gcctacagca aatgccggaa gagaagcagt 4800 tgggtaccta ctcaacccgt gtgcgaaaga acgcctttac agggattctg aaataaaaag 4860 cgacaagttg cgcactaaga gcacgcacac cagcggctga agcgcctgtt gccgcattgc 4920 teegeggatt tetgegggtg etggagtett etgaggtega eagteegeeg teaetttgta 4980 tctgctggct catcgagtct tcgggaagaa cgtccatgtt aaactcgagt ccgtcgttga 5040 gcgcaaacgc tgaagttcaa taagatgatt tggagcgctc aacattggcc ttaggtagaa 5100 acattgtagt gaccggcccc gcatataaag gtgatgcaaa aaggcaaaat tgtacgagat 5160 gaggcagaga tggctaaagg attgagtccg gatcggaaat aactgcaaag ttcatcatac 5220 tcttgatttt tccaagaaca aagataaaaa ggataaattc ctgcttacaa cagcggacgg 5280 tcttctataa tgctgtgcaa acaattcaaa cattctgatt ccgctaaaag ctaaattgca 5340 aacgccaatc caaaagttca agacgcgcgc catctctcgc gtttactccc attgcttcgc 5400 attcatttat atgcctaaaa aatccacaag gataacaggc ttttatcatc tgaacctgcc 5460 acaaccatta catatcattt aagcaactta aagtgetttt eegtttetge tteteaettt 5520 gctaccaaga ttcaacttca cgaactcgtc taagcatcct ttaacccctt agtccttgcg 5580 ccaacggcag gtccctggag ccacggcgcc gctttgggag aaggcacatc atgggcgacg 5640 agattgtcat tgataaaaca gccttcttca atcgtctctc gagcttctat gcagcatgga 5700 aggcagacaa acgatccacc aactctgtct ttggcggtgc gggatctatc attatcctga 5760 tggggaagac ggatgaagca aacagctatc aaaagaacaa tgctatacat gtatgctgct 5820 tacgtcgtcg gttacttatt atatctactg atacttttag ttttggttac tcggctacga 5880 atteccaget acaetttteg tetteacace ggaggttatg taegttgtga caacagegaa 5940 gaaaggtatc acctgatctg aacaaggaat agcccaggaa tcctctctcc ctaacttcat 6000 gacagccaaa catttagaac ccttgaaggg tggaaagatc ccggtcgaga ttctggtaac 6060 gactaaggat caggaagaaa agacgagatt gtttgaaaag tgcgtggata taataaagtc 6120 cgctggggta tgttttctat catgtccagg gatcaagatg accatgcgtg gttcgttaac 6180 ttccgacgct aacaagctat ctgccaacag aataaggttg ggatcttacc gagagacaca 6240 accacaggtc catttgtgga agactggaag cgcgtatatg gaaagatatc cggcgatgta 6300 gaagaagtcg acatttcgcc cgctctttca gccgcatgct tttcggtcaa ggatacggat 6360 gaactagtac gtctattcac ttacaacgtc gataaaagtg gtctaaagtt ttgcaggtgt 6420 ccataaggaa tgcatctaga gcttgcagtg gtctgatgtc cgattatttt gtcgatgaaa 6480 tgtctcgctt gctagacgaa gaaaagcaaa tgacgcataa agctctatct atgcgtattg 6540 acgccaagat tgatgacgct aaatttttca acaagctcgc aaaactaccg tcggaatttg 6600 atcctcagca aatcgattgg gcttatggtc ccgtcattca gagtggcggg aaatatgact 6660 tgaagttaac agctgtgtct gatgacaaca atctggaacc cggaatcatc attgctggat 6720 tcggcattcg ctacaaaacc tacagttcta tcattgggcg cacctacctg gttgacccga 6780 caaagtccca agaggcaaac tattccttgc tcctaagtgt ccatgaggct gttttgaagg 6840 aggctcgtga tggtgtggtc gccaaggagc tctacaacaa ggcaattgga attgtgcgag 6900 ctaggaagcc ggaactcgaa tcccacttcg tgaaaaatgt cggtgctggt ataggtattg 6960 agcttcgaga ttcgaacatg attctcaatg ggaagaacac ccgggttttg aagagtggga 7020 tgacattttc tatcacggtc gggctggtgg atgttgaaga gccgagcgtg aaggacaaga 7080 aaaagaatgt ctattcaatg atgatcacgg acaccgttcg ggttggagaa cagggacctc 7140 acgtattcac caaggacgcg ggcattgata tggactctgt gtccttctat ttcggtgacg 7200 aagaagagcc acagaaacct gcaaaggaga agaaagaaac caaatcgagt gcgattgcga 7260 gcaggaatgt cacgaggaca aagctccgcg ctgaacgtcc tacgcaggta aatgagggag 7320 cagaggcgcg gcgccgcgag caccaaaagg agttggccgc taaaaaagacc aaggagggtt 7380 tagaccgatt tgcaggtacc actggcgatg ataatggagt cacgcagaag aagttcaaga 7440 gattcgagtc ctacaagagg gacaatcaat tgccagccaa agtcaaggat ctcacagttt 7500 atgtggatca caaggcatct actgttattg ttcccgtaat gggtcgacca gtcccttttc 7560 acatcaatac catcaagaac gctagcaaaa gtgatgaagg ggagtacgcc tatcttcgca 7620 tcaactttct ttccccagga cagggtgtgg gaaggaaaga cgaccagcca tttgaagatc 7680 tgtcagcaca ttttctaagg aatctcactc tcagatcgaa ggataatgat cgatttgcgc 7740 aggtagetea ggatattaet gageteagga agaatgeeet gegeegtgag eaggaaaaga 7800 aagagatgga ggatgtggtt gagcaagaca agctagttga gatcagaagt ttgtcaccct 7860 tttatgacat atgcttttga aactaatcca gagtcagatc gtcgccccgt gaagttgcct 7920 gatgtttacc ttcgacctcc gcttgacggt aaacgagtac ccggtgaggt tgaaatacac 7980 cagaatggtc ttcgctatgt ctctcccttc cgcaacgaac acgtcgatgt gctgttcagc 8040 aatgttaaac acctttttt tcagccttgc gctcatgagt taattgtctt gatccacgtc 8100 catctcaaga ctcctatcat gattggcaag agaaagacta gagatattca gttctacagg 8160 gaggctaccg agatgcaatt cgacgagacc gggaaccgaa ggcgaaagca tcgctatggg 8220 gatgaagaag agtttgaggc cgagcaagag gagaggaggc gtcgggcagc tttggacaga 8280 gagttcaaag catttgctga gaagatagct gatgctggca aggatgaggg tgttgatgtc 8340 gatatteett teagagaaat tggetteace ggtgteeeta ateggtegaa tgttetgatt 8400 cagccaacca cagatgcact cgttcaactg actgagcctc ccttcctggt catcagtctc 8460 aacgaaattg agattgcgca tctagagagg gtgcaggtaa gttaacacag atattctagt 8520 cattcaggcg gggactaaaa tgctgtacag tttggcctca agaatttcga ccttgtcttc 8580 gttttcaagg acttccacag ggcaccagtg catattaaca caattcctgt ggagaatctg 8640 gaaggtgtga aggattggct tgattctgtg gatatcgcgt acacagaagg gcctctcaat 8700 ctgaattgga ctacgattat gaagacagtt gtcagtgacc cgtacggctt ctttgctgac 8760 ggtgggtggt ctttcctggc tgccgaatcg gattccgaag acggctccga tgaagaggag 8820 gaatccgctt tcgagctctc tgagtcagaa cttgccgcag atgaaagctc agaggaggat 8880 agagactacg atgacgatgc tagtgctgac gatgatttca gtgcggatga agatgagagt 8940 8953 gacaggactg gca

<210> 2057 <211> 2295 <212> DNA

<213> Aspergillus nidulans

<400> 2057

tacctccctc tacatatctc tacatcagct tatcctcctt aaagctctca ctacctatct attctgccaa cttattctag ggaggccctc catcacaagg ctcaatcacg ctctagacga 120 agaattggat tccccgcact cgtgactttt agtcatcatt ccgaggggcc acccccgcgg 180 ctacaatgag cgcaatcctg tccgcagacg acttaaacga tttcatctcc ccaggcgtcg 240 cttgtataaa acccgtcgag tcgctcccac agaagcagtc gaatgaggta agttagtaat 300 caatctgctc gcggggtagg tattgattgg agtatgaata gaatccctac gaagtcacca 360 cagaagacaa agtgcaacca gaaaatcccc ctccagcgca gatctccctc accgattgcc tegeatgete eggttgtgtt aegteegeeg aggeagtget catetegeta eagtegeata atgaggtcct caacacctc gatgcgcaac ccgagattcg actagtgagt ggcgagaatg 540 ggacagtcat agaggacagt gggagaacaa gagacgaagg gcggattttc gttgccagcg 600 tcagtcctca ggtacgcgcg agtttagcag ctacatacgg ggtttcggag aaggaggcaa 660 atcatataat acatcagttc ctcagcggac ccaatggttt gagggcaggg ggaaagcacg 720 gcagcggttt cagctgggtt gttgatacca attctctacg cgaggcagtg ttgggtctga 780 840 cggcggacga agtcagcgag tcattgacgg gctcctcggc gcctaaacga ccgattcttt catcagcatg tccaggttgg atctgctatg ctgagaaaac gcatccattt attcttcctc 900 acttatctcg gttgaagtca ccccaggcct tgacgggtac tttcttgaag acagtaatca gcaagaagct cggtgtacct gcttctcgga tttggcatct atgaattatg ccttgttttg 1020 acaagaagct tgaggctagc cgagaagaac taaccgatgc cgactggaat agactctcat 1080 cgggggagcc aaatacgcct gttcgcgatg ttgacttgcg tatcacctga cgcgaactac 1140 tcagcttagc gtcatctcga gggaatttca ctgtccaacc taccaaggaa gagcctttct 1200 tagtcgcttt cgctaccttt gccagaccca gtacttaacg tttttctttt ctctgagaag 1260 tegtteteae gacagacaag egeetetggt aceteaggag gttacetgea taatgtgete 1320 ctgtctttcc aagctcgcaa ccccggcagc gagattgtca ctcagcgggg tcggaacgcg 1380 gatgttgtgg actacacctt gatgtcccct gaaggtgaac cgatactgaa agcagcccgt 1440 tactacggct tcagaaatat tcagaattta gtccgaaaac tcaagcccgc gcgggtatcc 1500 cgcctgccgg gggccaaggt agcgaccgga caaacggccg gaggtcgacg gcaaccaata 1560
tcacgaaacg gagcctctgc cgggtcgagc atggactatg cttatgtaga ggtcatggca 1620
tgccctggtg gctgtaccaa tggaggaggt cagatacgca ttggtgatgc gagggaattc 1680
aacgcgcagc acgatgcttc agtgacgtcc gaaacctcaa agcccttacc acatgagcag 1740
cgctcctggc ttgctcgcgt cgatgaggc tactactag ctgattcaga tatggatgac 1800
gcggtagagg atgtacgaac agtttcagtc acagataacg aagatagagt ccacaagacc 1860
ctgcagcact ggtctgctat cacggatatt ccacttgaaa agctggccta tacgacgatag 1920
cgcgaggtgg agagcgatgt cggcaagcca agtgcaccga atgatacct gcgggttgtg 1930
gagttggcag ggaaaattgg tggtggttgg taggtcggag tcgaatggtc atcacgctt 2040
acgatcgata tataccctt gtactacgt tcgcattggt atactgcatg ggatggttg 2100
cataagcata gatttagagc gataccaaaa tattcttggg tcttgcttt atctcgtgat 2220
aagaggtcat gtatgaatgg tcaatggagg agcccgttta aagcgcacc cagttgtcc 2280
ttctctccgac tgtcg

<210> 2058 <211> 2654 <212> DNA <213> Aspergillus nidulans

2058

<400>

ccttgttata tactgaagag gagatggagg gcactgccga gacatcatct gtcacgaact 60 ttaccggatc taattggcgc caaccagttc atgctgctaa tacctcggac aggtccgcat ctggccacgt ctcttccatg gatggaggac ggtcaccaag gatggaccct actcaaggta 180 aggatgttcg ctgtactttc tttcgcatgg ggtcagctaa cctcttaatg tagctatcgg 240 ctggtctctt agtaacgcaa ccaattcctc gcagcccaac cttagtctcc tctaccagat 300 gcctgctgct caagcaaacg aacgcgtttc taatagtcaa tctcacgctt ctcgaactcg 360 ccatggctac cccgatgttt cagttcaatc agacatcgag caaagctcga gctcttatgc 420 gcgaaacact gagcgcacaa atatttccaa tgtggctcat gatcatttgg tttctccccg 480 ccgagtcgca gcctcggaag taaatcttct cggtgtaaat tcctcatatc ctcatcctgc 540 accgcggcct ccgaattctc agtcagcgca caatcagagc attcaaatct catcttcatc aggeeteaac ceteaagtgg cageatatag etaettacea tetaetacag etgateacea 660 720 caccagtgat agccacatgg catcaaggca ttctgatact cattcaagca tgaatccgca ggccggcgat ttcctaatcg agagtcaaga catcgatatg tctgcccttc accaacaaga 780 ccagctacct cttcccttca ctcaattacc ttggctggag tatttacccc aagatgttct cagctacttt ggcgaacacc aaaacttccc tctcatgagc actaatgaag gtgctcctcc 900 tccgcctcag taaaactaac tatatgtgtc acacacagtc aactcttacg tgttatgctc 960 agcgatgtca ttgatatgtt acagtcaagg gcgaaggtaa ccatggagtc tttaggtcat 1020 tacatttttc ggcgttggaa tatgatgagc gcacaccatt ggtactgctt tcttgtatca 1080 tatacatata atctaccagc gtttgttgca tggaattgac tttaaatatt caatctatat 1140 ctactttttg gtggtcgcgt gtcatacttt gctaagagaa ggtctattta accgcggcgg 1200 cgttgtgcgg ctcaactcgt agttgtattc gtgatggact cggacgtaat tgtacaccca 1260 acagctetta tatgttgtag gaatcaagat ateetetate gtaaggatga atgageggaa 1320 ggattgtggg cetetacatt gteceettgt etagategga geeteagget egeteeggtt 1380 gccagagtaa cccacccgcc aacacatcaa ctgacaccga ctatcacctc gtgaacttga 1440 atggttatca actctttcga gttctggagt gccaaattat gggctctggc agtatcattt 1500 ccttgattca ctcacctaag gggcgagtac attgatattt tcctgtgtcg atttcgctgc 1560 agtaggtctt gcttccaagc cgttgttttg gctccgtact aaattatata tagttggcta 1620 gggaaaacac gagtctatac aaatttagct aatacaagtc acgactgaaa ggcagatgga 1680 aacatcagta gactctcaga ctatacatct caaggagaaa gcgaacccaa gcatgtctga 1740 ccatgaggcg actacgattt ccgccgctat ttcagacccg gccaactcag aaaaacaatc 1800 ggagcacagc gatgaaagca gttttgacag aagcatgcaa gttgcagcac aagacagcgg 1860 gtataactct tctggatctt caggccacca ttctcctgtc ggaacacaaa atggcggacc 1920 ggaggaaggt gaacttgttc ggatacggtc gagaacatca agctgtactt cgatttcctc 1980 aatccctgct tcgacattga ccagcccggc aggtgagaat cgacgaatga atatacgcga 2040 gggacaggac tatatggcac agccgtggga ccatcacgta ccgcagctcc gtcatacgat 2100 ccgtcagcgt gaaggtacat ttcgaaaacc tagctcggtt agggcgctgc aaatgcatac 2160 ggaggatgag ggcgatgatt attaccatct gacaccgcct aaacgccggg gtagccaacg 2220 gacttecgat atetecatte geteegetgg tteetegeeg tteaagagat eccegtteta 2280 tteetegacg ggaggegaccg egaageegaa aateaagaag gaatateeee ttgttettet 2340 teaetgtace etgetgeeae egtegetace tgtgtetggt ttgatagaac atecgaaccg 2400 teagaatatt ttgaaagagg gettgeeete ggtgtaetgg aggaggtgga aactaetega 2460 ggagaagace gggtetggeg ttattegtga eegtggtatt eteattteee acceggaaga 2520 eggatatgae ettettgaag ageggttaet agagagettg gaactaeage aececeggtt 2580 agaecatgge caatttateg gacacgatga aacggagtea gatggtgaag accgettggt 2640 accggaggat ageg

<210> 2059 <211> 2140

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2059

60 ccagaacgcc cagaatgtgc tgtctaagaa actcggcggt agtctgtcac tgttctgttt tcqttqcaca ctggtggcgc gtttggagaa gagcttcatg aacgccacgc ggcggtggac attcaaqtat acqcaqtctq tcggcatgga caggagctcg tcgttgcgtt gcaccaggaa ctgcgtgtgg gcctttctgt cttgcttctt cttgttcttc tttcctccct tctcctccc 240 cgtgctcgac cccgattgga cctgctcaaa ttccgcgttt gccttttcga tctcatcaat 300 cacagaccaa ttctcattct gtacggacgg aaccaacgca aggagtttcc gcagcggctc 360 gcccacaggt accggtaagc acccggcgaa ctggtcgtag cccgaggagc agtcgccgtg 420 gttgtgcagc gcctggccga gagagccatg tgcgtcaagg atgtggactt tttgtggcgg 480 540 aatqcctqcc agttggatta ggtacagcqc ggacqcaagg gctgcggtgc cgctgccgac 600 qatccaggct tcacgttggt ttttggaggg ccggttttct tgcgtagagg ccatgctgat tactggcgat gatgcgtggt ctttattaat ggaacagggg gagatgcatt atgtacacgg 660 atacaaggta taagtagctg gaaattatca ggggttagat tagtttaaaa ataattagtg 720 780 gttgaagaga aggacttata gtggtcgctc tcagtacctg gagagctttg gacaggtaac

cgggtctatg gtccgcgtga gcgtttacat tgggggtctg atatcatcaa gacatataca 840 gcgaccatgg gttcggttga caccgtacga ggtctggagc ccgggaaaga atgggtagac 900 cagatgcgtc ttttaattga ggggtccagc tgtcctccac tgatttctgg catttggatt 960 gactatgtta ccatgcatct cgctgagatt ctgctcacac atatggatgg gtgaatagtc 1020 gatatgcggt gtcactacct gatatagctt caatcgccta ccgtaattgc aaatttgtaa 1080 gccagcggca atgcaataga gaatgcatat gcaaagaact ataagcacat ctggccatcg 1140 tggaagtgga cattcttacg gatcaagctt gccatcggca atttgcagaa gaataattga 1200 ccagactcag agaatcaata gctacctttt tacaagagca aacattagga atatgatatt 1260 ttgttatttt ctccataaca aatattgatt cctagttaca aaatagccaa tacatattat 1320 ttagtgtaca caaatacaat tactcctcat attctggctc ctcatcctcg agctgctctt 1380 gtccctgctg gttgtacttg gacgcactgc ccttcccgct cgcgacgccc ccagcgtggc 1440 cgccgacctt gccgccctca tggccagcct ggtgcgggtc gactttgccg taggcgaact 1500 ggtgctgctg cgtgcgcttg tctggctggt tgtcttcacg gcggccgccg tgctctgcat 1560 ggatgtcagt acttgaaagt tattgagaag gggaaagaca tgggatatgt accgctaggc 1620 ttgtacttct cgccggttgc tgttgagcct tggaccattt ttgcggtttg ttggtagatt 1680 ggtaagagag attaagagtg atgaattgat tgggaatggt ntgnnnngat gggaatgggc 1740 ttgttaatcc aatggagagg gagctggtaa ctcggcggcc ttaataccag gtagaatact 1800 tttgcagggc aataagccaa atttgcacat ggccggagga catgggtttc catgccgaaa 1860 gcgctttacc agtcctgtga aagaactcag gttcccatta aattctaacg aaatgaagcc 1920 cggattgttt tggaacgggc caaactacct gggccgttcg ggtttccacc tattgttttc 1980 cgggacataa aatcactaga caatttgcaa catttttacc aggggttaaa aaaacagtct 2040 gtgttttaca caaaaaatac tttccaaagt ccttctctca acacccctct atttgttcca 2100 2140 tctatcaatt accaaagtct attctcttct tccccttata

<210> 2060 <211> 1819 <212> DNA

<213> Aspergillus nidulans

<400> 2060

cttcctattg tatcatcagg taccagaccc tcccgggcac atagactcaa gtacctacag 60 gatacgcatg cccacatgta caagaatgcg caggctgcca cttcacatct tagccttgat 120 cgactcgtag tactccttga gcttgtccat gtctgttgcc tgagcaggcc atccaattcc aaggccttcc tcctcgttgg gcttggggat ctgtaaaagt aaggtttagt acagtgaaat 240 gaataccagt agctgaacgt accatgtgga agtggacctg caaaagcgtt cattaggttt 300 ttggaaacga ttaggacagt acagtggtga tggagctgtg caacatacat gatcaacaac 360 ctggtgcgca atacgaccat tgttttggag aacattgaag tcagttgcgc cggttacttg 420 480 agcgattttc ttagcaacgg gctgtttgtc gtcatctgtt agctctctcc aatatgaagg 540 cccatttgaa aagccgtgga tgtggattga gaccggtaat gcattgggcg ggaaaggtcc tgggggtggc ggagtgtatc ccgcaaggta cttggattcc gcataatgat atatattgaa 600 ggggtaggta tcatcggtct cttcatcatc cgctatctct ccgcatgggt acgtaccagg 660 720 atttcagtga ggtggtcatc ggggatatcg gtgagctttg cgccgtggta cttgggggatc acgagetgtt gaacagtttg egetgttage ttettetega catecaettt aeggaageee 780 ctacgcggtg gacgtgttat tcaagaacgg ggagtgggcg tgcttaccgc atgtccacga ctgagcggct ggatgtcgag gaaagcgaaa accttgtcgc tctcgaagag cttgaaggaa 900 ggtatttctc ctagttggag ttagtttcac gcattgaaac catttactgg cttcttccag tgcgagaagc gaatgctgtt tacccttgat gattctgcag aagatacagg cggccattat 1020 tgcgacaggt gggaatttcg attgacctag cgaaggagga ggcaattgag cttgaagtcg 1080 tcaccaaaga cccgatgcgg ggttggcggt atcggaccgg aagggtcagt ccactacctg 1140 caccactcta cactcttctg ggaaggtcgc tcgaacgctt cacttggaga accagattcg 1200 gggatttctg aaggeettgg ecacegaaaa ettttettat eatggtttag atttgetttg 1260 ttttgtttat gatttgatag caatgccgag tccaacatct aaccccgcct cggataaggt 1320 atgaagctgc tatagttgga gtcgattcgt ccctagggac cttatcatcc ctcaatgcac 1380 acttggacat cttcttatct tgtcttatat ataagattgc tacactccgc cagtgacact 1440 cgaaatggct ggtttcctgc aaccgagagg ttctgttgca agcgtaatca aactggcatt 1500 ccgatctacc cattttctcc ctacacgagc cccatcttca tatctacgac gcgcattttc 1560 cgtctcctca agtttaccca tgttatctac agagctgact gaggcgcaag tgtcggcttt 1620 gagagccaat aaagaacgcc ttgcagaaga ccttcatcac acctgtcaat ggggggtacgg 1680 aattcgctgg ggagagtaag tatagtctac cggccctcgt ggcataaaga gccttcatca 1740 atctcatggt aatttagtgg ccacacggac acaagtatgc agcgcttagc gcagtcacag 1800 1819 gaggataagc aagtacggg 2061 <210> 3220 <211> DNA <212> Aspergillus nidulans <213> 2061 <400> atggctcatc tgacggaagc caagagactc gtacggcatg gacgcaactt gtttatcctg 60 gaggtagcgg atgagatcaa gaccagtcca tttattgcca aagacaactc gcacggggat 120 180 catattcaaa cagggcccga cagtatcttg aaccccagga atggatgcat tgcgtccatt 240 aacagtcaag ccgaagacaa cgtcagcatc agcagaaagc ttggccagcg ccagagccca agcggcctga actagggtgc caacggtaat gttgcggatg gtggagttct gagagatatt 300 gatcgtcgtc cgaacttctg cataagtgcc catcgtctga tatgtgtttg gatggtctct 360 acagacaacg tccgtcattc tagagccctg caggagcttt gtccaatatc catagtgttc 420 cggggtgatt gaacttggaa gcaggcgcat ataattagcg taagacatcg taggaggtag 480 agtgccgcct tcatatcctt gcttgatggc atcgaggatc ttggagatgc acattccatc 540 gtactgggca tgggagagtc gaataaggag gcggtgctgg gtcgtccctt tgcgtttcgc 600

tagaatgaat tgaacgaact gctcgccttg gcgaagaccc tgatcgcgat cccgttgctg

aaggctggta gtgaacgtgt ctagatcggt atgggtctca tatatgacga tggatggccg

gaccttcttg agaatgacct gatagaagtg gtccccagag catacaaaga cggttcgcag

gatatcgaac gcatccacaa cccgggcaca actttctcgg aggcgtttga cgtcaagctg

gccttcccca tcgagataga agtagttgag catccaccgg gattcaaaca attgtgcggt

taaagacaga gcctggaagt ccgttactgg aaggacatcc gcaattcccc ccttgaaaaa

gccgattttg gggcagatat cggactgaag aacgtctgac tcgatttctg ggttgtgggc 1020

cagttgtaga gactggctgg atatcaccct gcctgagatg ctgagctcgt ccgcgctctc 1080

gtctacccgc tgagcctgga attcgtcctc ttcaatagac tccttcgttg ctacaggggc 1140

660

720

780

840

900

tgcgtggaca atgtttgtgg agcaaatgac cgccagcatg tcttcaaaga tggggttgcg 1200 gaagacgtca gcaacggtaa gcacaagccc ttcctctcgg gcagcactcg ccatcttcat 1260 ggctttgata ctgtctccac caacacggaa gaagctatcc tgcttatcca ccatgtcggc 1320 aggtacatcc aaagcagtgg accagagaag caggagcttc ctctccaagt ctgacgacat 1380 gcggcggcgg ctggcgcgag aaatggtgga aaagcgacgg cggattgatg tcattcgaga 1440 gacaggggaa acgggcggct tcaggaactc gtttccgctg gcaaagctct ttgcatcgtc 1500 tggggaaacc gggcattgtt ccgtttcctg aacggctgcc aagtcctcct tcttgaggat 1560 ttgactcagt atctcgttga cgcgttcatc aatctgctgc tggattcggg ggtcattgat 1620 ggatagette gagettegag aceteacaet getttgteta egeaggetaa ttegagageg 1680 gagatcgtca tcctgctggt ttgggggaag gctaccattg ggttcctgca ggctggagat 1740 tgacccagat ggactctcaa taaaggacac gaagactctg gcaatgcccg ctaccaatcg 1800 atttgcttgg tcggtcgaaa tggcatcgga ccaataccgg acgaggatcc cttcgcctcc 1860 ttgagctgtt accacgttca ccgttacggg aaactggaga tggtgaggac taaagcctaa 1920 caggttattt tgggtcatac atacctcgct cgggtcgtac gctttaagag tgtcaaaaga 1980 caacccagag ttccttgaac tggccgatgg catttggttt tgaatcgaaa gggctgtgtt 2040 aaacagcatc tgacccccta ggccgagctc gttctggact gttgctagag agcaggtctg 2100 ataggggatg ctgcggaaaa aatctgcttg gaccttcctg tagatgtcgg caaaggattg 2160 gctgggtgtg aattgaacac gacaacacag catgttaata taaataccca ccgcgtcctg 2220 cattccaggg accggggcat cgcgtcccgc ggagaggtag ccaaagcata cgtcttcggt 2280 gcgagtgaac tctcgtagca cgagtgccca tgctgcgagc accaaattgg caacggtgac 2340 ggattcacgt cgacttactt gacgtaattc ggcgaaacgg tggaagtcca tcttcacaga 2400 cctgagctcc cggggtccat tgctggatgt tgggagatga caaggccggg tgccacatag 2460 atattgcgcc cagaaattat ttccttcttt caagggactt gtgcgcatgt attcaatata 2520 gtcgcggtac cgtggccctg gctcggatga aagctggcgt tcgtatgcta acgagaagtc 2580 ccttaggaga atgccaacgg atgcgccgtc gataattgca tggttcattt caagcttcat 2640 gacagcgcgg ccatcggggc ccttgcacac ggtgagctga tggagtttct tgagcggtct 2700 cttgtggttg gtctgctcga gcgagacctt gtctagctgc tcgagcacat tggagccgtc 2760 gcagtcgagt tctacaagat cggcatggag gtgcttcagg accacttggt caaaggaccc 2820 gttcttcgag ctactgtcca caaagatggt tcgaagaatt gtgtgccgat taaccaccat 2880 ttgccacgcc ttccgtagtc gagggacgtt gattggctgg ttatttcggt tgtccctgat 2940 gtcgaagatg gtatgcagta tataagccga ggggtcccga agctggctga acaggatgcc 3000 ttcctgcatc ggagagcatg gataaatgtc ttcaacctca tcccggctgt ggatacccag 3060 tctggggaga gtattgttga agagagtctg caggctgtc tgggagattg acagcaaggg 3120 gtagtcggag ggcatcacct caagctgagc tggctgctg aggatgtcta gagcctcata 3180 catcgtcatt tcgcattccg aaatccagct gctaatctta 3220

<210> 2062 <211> 1524 <212> DNA

<213> Aspergillus nidulans

<400> 2062

gcacgaccat acagtccaac tctgtatgac caaagtgcgt acatccactg acctgtccct 60 gcagtgagaa caataatgag gacacttatc acacagtagg cacagccggc acatgctatc 120 180 taatgctttt ggaaatgtgg attgtttgct gtgcatgggg tcagtacact tcccatacag agcggacgcg gtgtatagcg tatactaatc atagtcacac cacccctctt ttcccttcaa actttcaagt gagtttcaaa atctttcggc ttttcccctt tcctttagct ggggtttgtc cccgacctca ggctttgagc gaactgaaga atggtggata tcctgagcga tatacggttc accttcctac ttggaaagag tcaaaggctc cgcttgcacg gagacgggca gaacagcgtc 420 tgcctctgtc aaatgatcat ctccatgagt ccaacccccg aaattagccc cctgagggct 480 540 gaacggaaga tatccagcta ctgtatccac gtgaagtggg ctcctcttat cggttgtctc 600 ccggaccaag atttggcgtg accggagaac cttgaccgat ttgacgaatc tgactcaggc tcaacgccaa gttgccaaca gacgccgtta tggagctagt actgagctag tcgttcctgc 660 720 tgcgccgttg acaggtcgac acgccgacat cgtgcaggca tgattccagt acgatcgaag gggcgcatca actaatcact gcgctcgata gcctcgatca gacctgcgcc atctttcaag 780 ccggtacgcc gtacgactac tttattatac tttgtaaatt attgactacc tgcacaagtt 840 900 gggaagttgt atgataactc caccagacac cttcttgcag ctccctcaa ggggtcaagt 960
tgagaaaagc aatgaacatc accaactgcg tgcctcctag tcagaatggc aatttgcaac 1020
tagcagagaa aatcgaccac gatcgcctgg aatggggtt cgttttttcc cctttccatt 1080
taagggatcg tactcgttgg cgtctcaacg gtcatcccgc agaaaaaccgc cagaacaccc 1140
aatccctttt cgagttcccg gaccgttgag cgcaatccac tttgacctat catcaatgga 1200
ccccgactgt ggctcgagga tccgatccac ttgcgcgtgg ttagaatttg aaggaggga 1260
gggagagaac caggtggcgt agcctcgcag gattaattcc cgccgtcagt gccgcttgaa 1320
ccgtgagtgg aggacaaggt aagcagcagc cgatgccgaa tttcctttt accggcctga 1380
agaaatctta catgaaaaag ccagattgt tcaataacgc taggaagcaa tatgggaggg 1440
acgaagggga aaaaaaaaaa taaacactgc gacttgcgc ggtgtctggg tgtttcaccg 1500
ctacatgtca tccaacctcg ggtg

<210> 2063 <211> 1586 <212> DNA

<213> Aspergillus nidulans

<400> 2063

60 ggcttcgata ttgcatgcac tttttggatg ggatcaaaaa tgggtgaggc accaagtcac gattggatcg gcccttttag ctatattctc ttattgctta tagtccttgt atatcagtac tactgtaaaa acatcaacga caaaaattat tgagcgtctt agcccttcaa cgtacacggt attcaccact tetgegatte geteegtett egtetgetge agtgacagee ateagetget 240 300 cocqcctctq cttcatqcqt attttaccqq caaqqctttc ctgtctttct catgaagctt gttgaagccg tcaatccgca gcctatctgg ttgagttcgc cggtcaaccg tactgaaagt 360 420 agcattgagg ggcagaactt attcgtttcg agacagcaat gaattctcaa gtgacaccta 480 tatctgccca gctgttgtct cttcattctt ctttggacca agtttttact ggagtacaat gaccetgtaa tectaceggg tgggeetgat etggeegteg gagaaegtag ggttteeeta 540 600 ctgccctact gccctttact aggccattat cctgtccacc acctttcgct tccggctttt 660 ctttctttca tactttgctt tcctccttga aattgtttac ttctaccatt gtctatcagt ttcttgttaa gccacctctg gtctcccggg tgggtatggg ccgatcccaa tttcgcagtc 720 ttggcacttt tactcgaaga tgagggaagg tcaatcaggc tcagcctcat tgagcgatag 780 gccgccaatt ctcaacctag cgagtacgag cttaagcagt ttggcggagc ccctgttcta 840 gaagctgtcc agctcggtgt cctgtatcat gaagcgcatt cgatcgcttg gctggcgtca 900 gggttcgtcc aacggcactg aatccacgat cactactggg taaacacccc gcaagcgcct 960 gggcagcgac caaggtacgg aaggtccggg ctttcaaaaa ttaccgcggg actactccgg 1020 agtcgaccgt taagcagggt cgatgattgg gtagtgctgg cgaagcgttg catttgctcg 1080 ggcttttacc ggagactgcg gagtccccaa ttcttggcag tccatgaagc ggagtataaa 1140 aggcgtccgg caagaagata gagtatcctg tagaccagct cttcctcact ttgtggagtc 1200 aagatgcgct ttcagcagct gcttccatgg gctgcggccc tgactggctg cgtcgtcgcc 1260 cagagccagg ccggcgtcga tccgctcgac cgtcccggca atgacctcta cgtaaaggac 1320 ctttcgaact gcactgggta caaggtcacc aagcattgga agacccgatc cggtttctat 1380 acggacctgg cgctcgccgg gccagcatgc aatgtgtacg gaatcgattt gcccaagctg 1440 aagctcgaag tcgagtatca gaccgatgag cgactgcacg tcaagattct ggataccagc 1500 aacacagttt accaggtgcc agacagcgtc ttcccgcgcc cgggcttcgg ccagtggtgc 1560 1586 tcgcccaaga actctaagct cgaatg

<210> 2064 <211> 1780 <212> DNA

<213> Aspergillus nidulans

<400> 2064

ggagcgactg ttgtttgtcc gcatattccg caaactcgct gagcgcctgg agcatggata 60 cgtagttagc ggaggccgca aatgaggggt actcgaggca ggacaacaac tcacgagctc 120 gcctcttcgc cggtcttcca gagagggttt taaagagtcc gtccgcatga tccgtgtttg 180 cgcccagaac gaagtagttg acaagcaggt acaatgattt actggttcgc gaagtcggtg 240 tcgttatatg atgctagcta aacggtcgga aacgagcagt cgccaatggc gtgttcagac 300 acgtattcgt acgatcattc ttcgagccgg agccagaaat aaatatatga attttgagag 360 acaaacgcaa agtagatgg gttgtaggag cagaggaagg gattattgtg gtttaaataa 420 gagctggga gacggggtga gctttatcga tagcagcca tttgagtcag tccaactaca 480

gcggcactgc acaacagcac aagacactaa aacacaactt gcattgactc agagaagcat 540 tgccctcgtg aggtagtact ctgccataga ttgatcctca gatcgatgac taattcatta 600 660 tgctctatca atgaacctcc aagaggggga ataaagtatc gcggttaacc ggcgattcct 720 atgctcctgg agctttaccg gcaaagccgt ataagcgaca gaaaatggga agttatcaac 780 qccaqaaacc gcgtccgaaa ccgtgtccga taacctgcaa ctaagtctcg gtcattcgtc gaattcgtag ccccagtatg atggctcgtg aagtcggaga ctcgttatgg caaacagtcc 840 ccqaatqaaq tqcqtactct ttctaaagtt gcaatggatc acagtttgaa tcaatcaggc 900 ttqqqqaqat attaaaacga ccgagtcacc tggccgggtc agcggcagcc taattattat 960 atgaaatcga tagcgcacct cgaacgaaca gcatctcttc ctgtttcttg atcgtctaaa 1020 aagtcgaaaa caaaaggtgt taatcaaatt cttcatgatg ccgcattgga gaggaagata 1080 atcagcgtac teggatgtge tettgetegt tetegteete etceacaacg tagattgtet 1140 cctcaacatc acctagaacc agattgcaat gactgtcgta agcctaagag cacaattggc 1200 attagcaaaa gtcctgaagc cagctggcta gacgatagac ccacgtgtaa acgacccttg 1260 agctcgcgat caccccgcag cttgacaaaa acgatctcgt cgagggagag gcggacgagg 1320 tccaaaggct cggatacgga tgaggtgccc gcgccctcgg tgtcggccat tttgttgtag 1380 atggagggga taatgaaagg agtgggtaac agggacacag ctctgctcgt cagacagatc 1440 ggataagaca aaaacgcgcc gagcgccaag actgaaatta gcgccatttt cctaccccgg 1500 acttaacacg ggctagtaac acaccactac tggaccgcta ctggcgctgc atcttactga 1560 aggacaaagc gtaccactta gcagccagac ataatggcaa taccgggcag tgttttgacc 1620 aggggaccet gtaccaccec etcatetgea ceatgttete etcaccetee titteacett 1680 ttcttgcctt tctgctttct cgtagtcatt ctcaatgagg ttggttttac aaagtcgctc 1740 1780 tttcaatagt gtcagctctg ctggctctct tagccgtcat

<210> 2065 <211> 3015 <212> DNA

<212> DIVA

<213> Aspergillus nidulans

<400> 2065

ctggccagga agetectece ageaceateg tecagtegae tgttgaggag getactgege

60

ctgctgaggc tgcgctgaac ctgagactac tacctcgact tccaccagca ccagcgctgc 120 tgagcccacc tcaactgctg agcccgtagc gccaacggcc gatgccaacg tgcaggccgc 180 cgcccagcca accaccacca ccgtctccga ggctcccgtc cctacaacta ccacccaggc tectgetect atcattgetg tegagaette cagegaagae eegageeagt egetaeetet 300 360 agtgccagct ccggctccag ctctggctct agctccggaa gcagtggctc ttctggacct tgctccgccg actctccctg cgttggccag atcactttct acgacactgc cacttccgcg 420 agegececca geagetgegg tacaacgaac gaeggeagea gegagaatgt cattgetete 480 cctgttggta tcatgaccga cggcgactgc ggaaggaccg ttactatcaa gtacggcggc 540 aagaccgcca caggtaccgt tgtcgacaag tgcatgggct gtgacaacac ctccattgac 600 ttgtcgcgcc acttcttcgg cgagttggcc tccttcgacg cgggcagagt ttccggcgtc 660 gagtggtggt tggactagat ctgctctttt accatatcct cctcatccta ccgttcttac 780 attegetata teataettte tataettegt atetegtggg tgaetegtee agagteeetg agaccatttt atcattcgtg ttcataaaat ttttgcggtt gttgcaaagt tatccaacca 840 agccatttgt tatttttcat ggaacaaaag cagaacggac gagaatggac aggatctgga atcccgctgg ttttatgatg ttatgaatca agtgttttcg gcattctgta gtcttgtagg ttaacttgat ccattgtatg accgttgcca gcgtaaactg tcggtctgac tttgcaatga 1020 ttggcgactt gggaccggtg gtctacttct actctaaacc caattatggg ttgtcggcgg 1080 tcagctgaac aggcctgtga gttgtcattg caagattcac caccaataat ggaagggtcc 1140 acgaggtatt tgcccgaaga ccggtggcgc gatactggat agcctcaagc ggtcgcttcc 1200 ccgggttcag ttccagtggg ttggaactaa ttaagagtcc ggggtatctt tctcggtcga 1260 cctccatgag ttgagtgcat catcagcatt attgggccat tctgttagcg gtttggaatc 1320 cttgggactg ggggctcctc actccaattg ggaatccacg attcacagac ttttaaccaa 1380 gggtcaagcc tgagagttac tgagtattag cgctttagtg agatgtaatc ccttgaccca 1440 cgcggcacaa cttgccctgt tttactcttc ccctcgcttc cgtctggtcc tggacccatt 1500 teceetttgg gtetegtete tteggeeett gaacettete teaaceceag aateteeete 1560 tttttctctg ctcgtgtctc atcgagtcct gacctcttcc tttactttcc acactctccc 1620 actctctttc attaatagcg tgggattttg gatatctcta gcggccatgg atttctcgca 1680 ctttcctaag tgagccgtta caccatggag gaccgcagac ccgaagtcct cgttgtctcc 1740 atcgttttct ttagccttgc taccatcttc gtggccctcc gcttcgtctc gcgcatctgg 1800 gttgtccgga gactcgccct gcacgactat ttgatgctcc tggcgtgggt atgcttgcat 1860 ggcccaatca tctaggtccg atcgcatact gatttacttt tttcaccagc tcattgacct 1920 ggggttttcc acggctctct tttatgccac taaaaaaggg cttggccttc atgatgttga 1980 catccctgtc actgcaagat cggctctcag cagcgctaat tacgccttta ccgttctata 2040 tgtgagtctt tttttctctg tgcagcggcc gggattttcc gctcatttcc gcgcgcttcg 2100 ctagaatccc gccttgatgg ccgtcaagtc caccatcctc gtcttctacc tcaccctcac 2160 tcaaggcgag aagatcttcc gctacgcaaa ctatgccact ctgtttgtcg ttaatgccgc 2220 cggcctggct ctcacctttg ttaacatctt ccaatgccgg cccgtcgaag acgctttcgc 2280 tgcgcagctc cctgctgacg cgcattgtac cgatatcctg accttatatt tatcctcgtc 2340 gccggtcaat attatcaccg atctagcaat cttggttctt ccgaacccga ttttgacgcg 2400 catgcggctg ccgcagaaac aaaagatcat cctcgtcgtt acattcagct ttggtttttt 2460 cgtagctgtc gttgatgtta tccgcattgc atatttgcaa gaggctacaa ctgaccgaga 2520 gattgctctc cgtcaaatcc acatgcagaa ttatggaggg gaggactttg cttgtatgtt 2580 ttaggcggtc ttttttcccc caaaaccaac actgatctct tcagggtatg catcgctctc 2640 gttcatgtgg tctgtcgtag aggtcaatgt ctcggttatg tgcgcctgcg ttcctagtct 2700 gaaaccgctg gtcgccaggt tggtcccgaa attgatccgc gacagctctg gaggcacgca 2760 aacgaatcca tecgaeeeee egeteeegee gteagggeea etgeagatge aagtegeaga 2820 tgccattttc agcgactcac tggatccgcg gcttacggag attgcgacag gacctaccat 2880 ggctacgaca tatactgacc ccgaagccaa cacgaccaca catacgagca cctcagaccc 2940 gcgcagcatg actttcttcg attttgtcaa catgaagaag ccggctaata tgctaaaatt 3000 3015 gagtaacaag gagtc

<210> 2066 <211> 3568 <212> DNA

<213> Aspergillus nidulans

<400> 2066

cacccctcag cgatacattg tetettette cetteteeae teateaactg gegeteteet 60 cgtatccgcc ttgtaaatga cctaacaatc cttagttgcc tcacagcttt ccaatgcagt 120 180 ttagagagtt atcattacac aacccaatta tagcgctgcg aagcgactct ggatttttac tctagcgttc gtacctttca cttgcacttt ttgacattgt ctggatacca gggtagacta 240 300 atgatgaaat attttgaatg actctcaacc cggatgctaa atgccaaagt tgcaaataga ttcattctgt ttatgctaat gcagtctgtc agttgaaaat gcatagatag atggcactca 360 agtaaatagt atacatcaca catactgcaa aacaacgtat agatagagta cccaccagat 420 480 gcaacagatg cagagactcg aaacgaaaac aaaaagcagc caagggagaa taataacgca atgggtaaaa taaggccgat aatcatcaat ctaaatcagc acaatccctt ctcccatctt 540 caagagctct agtaatccgc tcaatgagca aatttgggtt atccaagaca atattctgcc 600 gccgccgcag ctcttcgagg cggacagtag gattctgtat aactccagta taagtacgtc 660 720 gctcgtagga gatgaaaaag cacatcaacc gtaagacgca cccagtcttc ctggtttggg acgcccttcg ccgcagggaa ttggggcgtt gtgtaatcgt ctggattgcc tactgctggc 780 ccgcggcgga ttggggcagg ggtaaccggg aggctaggac gttcgatttc gctagggaaa 840 tcggttatgc gggtgccgta attggggcct ttggaaccgg tggtagttgt aggggtgccg 900 ggttgatgtt gtcggcttga ctttgatggg aatgctgctt tctgttggtt gggtgcgccg gagagcactt gaactcgggc tctgcgggct tgttgtatgg atcggatgta cttttggatt 1020 tcgggaactt cgtcccatgc gtttgagcgg gagtatgagt caaatgattc gctgggaagg 1080 ctgggcgcct cggacttcca aaatgttggt tgggtggatt tgaaaaatttg ggagtcttct 1140 tcggtaggcg taagggaaac catgggttgg tgttgagagg catcgtcagc aaaaactcta 1200 gttggtttgg gtgcgttcgt ttcccagggg aatatttgcc taagtttctg cggcttaggt 1260 ttcgtctccg ggacctgata gtacatgttc ttcgggggctt ctggatacga ctgtgggggc 1320 tggaaaagct tgcgatcatc ggacatagta taggtcttgc tctccaaggc tattccttct 1380 qqtttaqaat tcaaaqqaqq tggttccctt gaggaagagt cagcagatgt tgttagacag 1440 ccttgtgaga tattcatctt accgagaggc atcccattct gccttagggg cttcgaatat 1500 cggctcctct tgcgatgccg gttgaggcga tggtgcccgc tgtgtcccaa tgggcgctgg 1560 cgctcgagtg gtgcgcgaat cattctgttc aaatggatga gcaggctctg tcggcacact 1620 gggctcttgt actggaggtg gctgtagatc atgatggcta tgttcttgaa cgggctgttg 1680 ttgtatataa gcccttacgt gttcttcccc ccgaacatac tgcggaacca cgctaaaaac 1740 aggttcatgg gaaggtttct cgctctgata ctctgcgtga atttcgtgag acagatcttt 1800 cacgggtaat ggcgcgacgc ttcgctctgc atagtgagac gcctgaaccg agttatttga 1860 agcttcttct gggggatggt agtctggatg ttgatctgat ggcacctcat gcccaagtgc 1920 tgggtggcgc gacgtggttt ctgatcctgg aagaaggggt gtctgtcgtc caatatgctg 1980 ctgtggtgct gttactggga aattatggat gtgcatgtcc agcataggct cctctgcatg 2040 ttgaacatgt ggcggaaccg agtgactact cggctctatt gtttcctagc gatagcgtta 2100 gtctcaaaca cgtttatttc cctaaaaccc aaacatatcc caaccggaaa actcacattg 2160 gctacagagt ggtaatgccg gtcgtagact gtccaccacc ttcccagtag ctgattatac 2220 ggcgaatcaa aaggagacac ttgtctcgac atattccaag gtttttggga tcctataaaa 2280 tgtatcaagc taattgtact ctggaaatgc ttgtaggccg ggatatattg ataactcgcg 2340 ctaggtgtgc agttgtacgt gaaactgagt cggtgccagt ctcgaaagtg catgttcagc 2400 aagccctggt cggcgccgtc aaagctggta ccgcgttctg caagagcttt cagcgcaaag 2460 tagtcttgca tattgggccg cagtaccata acaccgctgt taaagcaatc gggccagccg 2520 acatcggggg cagcggcgaa atctacgtcc atgtccagga gctcgtcggg ggctctaatg 2580 gccaccacgt ccgagtcaat gtatacgatg cgcttgaact ttgtttgtcg ccacagctcg 2640 atctttgtga aggttgctat caagtcagga cgctccatga gccagaggtt cgccggcgta 2700 tggttcgtca tccgatagac gggtatgagc tcatcgtaaa cagtctagac acctcgagtt 2760 agcaagtttt gcgatgtggc cttattttac ctatattagc aagcgaagta cgcacctgaa 2820 gctcattcag cgtcgcggcc tgcaacgtgt cgggcgtata cagagcgacc agcttggcct 2880 tggtgccatt gtcgcgcaat gagtgggcga gaaccacggc acctggatcg agaagcagcg 2940 ggtcagtatc aaaagatgac ggaagtggag caatcattgg tataccagga aggtagttat 3000 cactcaacag cagctgcggc cggttaaaaa aacttgcaat ggatacggaa gcccagaatc 3060 agggtaccta cagtgcaata gactgcacca ccttgggtga ccatcccgcg agcgaattac 3120 agcacagaac gcccaaaatt cggccaacca gtgcgggcag aaagcaaaac gagaggaacg 3180 gaggcagcga cccccaaact gatgaagctg gagaagaacg gaggaaggaa ggaggattgc 3240 cgctggcggc tgtacgcgt agagctggag ctagaggccg tttcccctca cgggagtcgc 3300 gttatgacgg gagcaacccc gcccgccacc agcagggatt tctcagggga cagtgctatg 3360 atgcgctgaa aacgttaccc tgtgtcatca cagtttatca tttgcgagtt aagagacact 3420 attccgcaat atgatggcg gctgaagatt gctgaagtct ggaaggggg ggttggttgg 3480 aagacctgctt tggaagctt gacctctg ttgtcttgc aatgctttga ttgtctgccc 3540

- <210> 2067 <211> 1524 <212> DNA
- <213> Aspergillus nidulans
- <400> 2067

tacaaacccc aggttagatg ggggcaaaca gccttggcgg tttggcggat aaatttgggt 60 gtggaaattt aaacaagaag gcgggttcaa aggggccata ctctgggaaa tcgtccgtaa 120 aaacgtcttt tagttcgaaa gggtagaaaa aaaatttctg gcgggccgct taaaccaatc 180 aacgagcttt aaagaaatcg cggaaattcc ggataaatcg ggggcactaa agagtttaaa 240 ggcccagaca atttccaatg gggccgcctc cacctgaagg gtccaggttc gtatgccggt 300 aacactgccc ccgacgagtc ggggagccga tgcttgacca gggtgaactt tggccatcag 360 ctttcagccc aatttggctt gctgtccgtt caagccgggg gcacatgccc gatgagtatc 420 gctttcatac cgcgctgtcg tagaatctcc agttgcacac gaagccactc catatgctca 480 aaccccggct ccgacggcat cgcacagccg tcgacagcag agttggactc atagaagtac 540 atggtgttga ggctgagagc ggcaagcttg ttggggatca actcggccga aaaccacccg 600 ccttcctcaa aagtgtgtcg ctgggcctca ggaatgaact cggaccagac ttccgtaaac 660 ttccttgtcc atcgattcgg ggcttctctg aagatgttgt gtggcatgat atcgttgttg 720 780 ccaatcgtag ggatgaccgg gatagaaaga ccgcgagcag cacccgagtc ttcaaagact tcaataaact tggccgccaa agccttattc aaatcgattt ttctcgctgg ctgtccgagg 840 gattttctca tegttgtcat gtcgagcaga gtcgccagtc cagagcacaa aatctatttt 900 gcctttcagg ttcttctcga tccaccggaa tgtttcgtca atcagagcct gcggggagtc gcaatcagac ccctctgccc ccagacgacc agcggagccc gaatctcggt gacatagagt 1020 ctcctctgac gttccttttc ggtagtgtt atctagatgg aaatctggag gcggtcagcc 1080
tgaggcctgt caatggaaag gaaagaatga ctgcaagcaa tacctgtcac atgaaggaat 1140
cgtccggaaa gttgcctcga ggtctcagac tgatatggct gactatcgtg attccccaga 1200
acctgttgtt ctgacaccgg cacggccgac gcgccgacaa caagtcctag gccgtaaaga 1260
accgcgacta gaggcagtgg tatcatttt ttttaggcgt ttcgggctcc gtcaaagcgg 1320
gccaagtgtc gaatattaag aagaatcaag catttaaagg tgaaaggcca gacataggta 1380
gtcaggagat agatatgaag tggaacactc gagatcgtgc cagcaaggga aaaaaatatt 1440
gggggcgggc ctacgtcagt gaccaggact aaatcctcga acaagggccc gatcaggaa 1500
agcgtccgct agccccaggg atga

<210> 2068 <211> 3919

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2068

cccatgtttt tattgcaagg atgctgattg gctaggatca acgtatcctt tattgataag 60 gacggccaaa agttcgactt ccaggtgtcc gagggggaca acttgttgga cattgcgcaa 120 cgaaacgatc tagagatgga aggtttgaac gatgcctctt ccccccggtt ctcttaccgg 180 tagtaactca ggaatcctat aggtgcttgc qgtggctcgt gcgcgtgctc qacatgtcat 240 qttatcqtqq aqqacccaqa aatqtttqac aaqatqqaqq aqccctcaqa tqacqaqaac 300 gacatgctcg atttggcgtt tggtttgaca gaaacgtcgc ggctaggatg ccaggtgcaa 360 atgaacaagg aactggacgg attggtggtg cgactgcctt caatgacccg gaatctgcag 420 gcgaqcgact tccaaacgaa qaaataaatt aqqqcttctt qcqaqacatq tattattata 480 atcaaatata cagcggacgt aagttgagta gatgtaatat aatagggtat tccaatctcc 540 600 atatcagcca ttttaacggg acgagaagtc ggtctaataa actgtacata acttttgacc catgatacca ttaacgccgt gaatataacc aatgccactt caacgactgt caagcttcct 660 cgatgttgag aggetteece ttettgeegt tgateaatte caaaaaecee tgettgetga 720 cetggttaac tgccttctcc cgctcgccaa ttccgactgt gcccttcttc ctctcttcct 780 tggcagcctc ttcaccacgt acctgcgcgg cacgaacggc attgaacagt ttcaccacac 840

tcgaaatacc ccgtacatca cgaacgcgac ccctgtccaa ctcctccttc ttttctgcac gtagcttggc ccgtgccgca ttgtccagct tctcttccgc aatttgagag gtgatttgtg 1020 tcacggtttt gctgcgcgat aggacaggat ctgcacgggc agacgttggt aatttcgtcg 1080 caaggatett egagatggaa gtagagaatg eegtagggte atteegttta ggaactgtee 1140 tettteetat ageaeeggtt ggtgtagage categgaatg ageateateg tetgtategt 1200 cgtccacatc ggagtcgtcg ttggacgcgg actcatcgtc ctcgcttgaa gaatcttctt 1260 gaggttctgg tttctttgct tccttgcttt tcgtttgctt ttgttgcttg cgagctggct 1320 cctctgtttc ctcgtcggaa tccgcaagat caactgcttt gaagtcggcg ggttcgtcgt 1380 cggcctcgtc ggagctgcta tggtattcgc gctgcttcct gaatttcttg ttcgggcggc 1440 ccgttttgcc ctgaaagccc tcaagaacct tccgcttctt ctggcttgtc gtaagcggca 1500 tcttgaaact cagcaatatc gaatttgtcg aggtgccctg tgaattgcaa agatggtgca 1560 gccttgaact ttttctgttg cgggcggaaa acggccgcgg gccctgattg gttgtggggt 1620 caacgttggc ctcttcgggc tctccttcgc ctctccctct tcaactactc tgctttcgcg 1680 ggatattgtc gtgtgaatcc cattttgtcc aataagactt gcactaccag ggaccgtcac 1740 aatggttctt caggatctag ggcggcgaat caacgccgcc gtcaatgact tgactcggtc 1800 acctaatctg gacgaaaagg tacgcccgc ctacgtatac gacaactgaa agatgctgat 1860 tttaggagta aaggcetteg aagagatget aaaggagate tgegeegeee ttetetetge 1920 cgacgtcaac gttcgtcttg ttcagtcact ccgcaagtct attaaagcca gcgtcaactt 1980 cgcctccctc cctgcagccg tgaacaagaa acgagtgatt caaaaggccg tcttcgatga 2040 gctcgtagcc ttggtcaacc cacatgcaga gccatttcgc cctaagaaag gccgatcaaa 2100 tgtcatcatg ttcgtcggtc tgcagggtgc aggtaaaacg acaacctgta ccaagcttgc 2160 ccgacactat caaatgcgcg ggttcaagac ggccctcgtt tgtgcagaca cttttcgagc 2220 tggtgctttc gatcaactga agcagaacgc gacaaaagct aagattccgt actacggtag 2280 cttaacacaa accgacccgg ctgtcgtagc agcagagggt gtagccaaat tcaagaagga 2340 gcgatttgag attattattg ttgatactag tggtcgtcac aagcaggaag aacagctgtt 2400 tacggaaatg acccaaatcc agacggcggt gacgcctgac cagactattc ttgtgcttga 2460

tggaacaatt ggacaagccg cggaggtgca atcctcggcc tttaaagcca ctgcagattt 2520 tggagctatc ataatcacaa agaccgatgg tcatgcagca ggtggaggtg ctatctctgc 2580 agtcgcagcc actcataccc tttttattct tcttggaact ggtgagcata tgatggatgt 2640 ggagcgtttc gaacccaaag catttatcca gaagcttctt ggtatgggtg acatggcggg 2700 cttagtcgag cacgttcagg ccgtaacgaa ggactcagcc gctgccaagg aaacctacaa 2760 gcatatcgct gaaggtattt ataccctccg cgacttccgc gaaaacatta catcaatcat 2820 gaagatgggc ccgctgtcaa agctttccgg tatgatccct ggcttgtcaa atcttaccgc 2880 cggccttgac gatgaggacg gctccatgaa actgcgccgc atgatctata tatttgacag 2940 catgtcagcc gtcgaattgg acagcgacgg caagatcttt gacacacagc cgagccgaat 3000 ggttcgtatt gcccatggta gcggcacttc agtgcgcgaa gttgaggatc tcctgtcaca 3060 acaccycaty atygccygya tygcyaaycy tytcygtyyc caqaaqaaqc aaatycaacy 3120 agcacagaat atgctcaagg gtggcaacaa ggatcaacag cttgctqcta tgcagaagcg 3180 gatggcctcg atgggtggag ctggtggcat gggcggcatg cccqqaatqq qcqatatqqc 3240 gaagatgatg cagatgctgc agggccaagg cggcggcggc ggcggcggcg gtggtggtgg 3300 tgggctgcca ggtcttgtgg gatggacttg cgtcgatgat agccacataa ccggttgatg 3360 ggcggatgga ggtgttntaa antttccctt atctatttcc ttcttggcct agtttctttg 3420 tcttaaatta agtcttcctt taatgtattc cccaggggct ttaattttaa gtggagtggc 3480 cggccatttt aaacttcttt tgtgggcccc ataaaaactc ccccctcgtt ttttttttt 3540 ttatttcaaa ggcgcccaac ttatgtctct ccattaaatt cgtggtgatt tttatttcaa 3600 ttttagcacc atctctcagg gggtttttt atatccccca aacttctttt cttttaaact 3660 ccccctctgt tttcctctat tttcccggga tcttctccaa tatagtcctt ctttgcccat 3720 tcgttttctt tggaggactt tctttttct tcccaggcta tttatggagt tggaggtggt 3780 cccccaatt ttttttaata atttttctat gtttaaatac ctccttcttt ctctnccnta 3840 attttttgca acatatctcc acttttctac tcgttctcct tatgtactcc ttttattnnt 3900 cttcttttcc ctaccgatt 3919

<210> 2069 <211> 3454 <212> DNA

<213> Aspergillus nidulans

<400> 2069

cccccgtcg acatgctttg ttaggtctga agtcaaaccc tggaaagcac tgagctcggc 60 gtaaaggaga gcactacgat ctgaacggcc aaccaggcgc atgatacgct cgacctaacg 120 acaattagct tcaatgaggg gcaagagcaa gagcgtttcg atcgacacac ctttttctct 180 gcagatatag ctagactact gacccgcagc atgccttcac aggattgctc aaaagctctc 240 300 ctccccaata cagagcagta ctcaagaaga gcattgagcg atgactgact gcaaaaaaca ttaggtctat tggtagtgac aagaaacagg aaattacaca tacggacggt tcacacctgg 360 gatctcaatq ttcagcttqa ttgtccgtac tccgtcttcc ttccccqaaa cgatgcagga 420 480 ggcgagaatg agcacggact ccgggaacac ctttgcaggt agagaccagg tttgggccgg 540 aagagetgag gtatgaaggt actegatgge tgeageagea gaateetgta geeetttgae cagcaatgct ctattgttgg gagtgtcatg ggctggagag tcctcagcga taggagtagg 600 660 ttccatgatc gaacaagcag ttatataaca agcaagtcac cgcgtactaa ggatgtcaag 720 aagaatctgg ggaatagatt gcgattgaag agtcaactgg ccatggagac ggtgggggga 780 aaggeeggta tttatgeaga gaaggegetg tteateteag agaateaeet categeagaa gacgaggcgc ttgatacgtg ctataggaaa gtcaccatga tactgcagct ttggtaggca 840 tgaataaatt gecaggeact ettteettgg eegaettett egtaeggtea geetateeaa 900 tgaaattggc cttgccatgc ggaaccettg ctagcatcac ctgcaagaga attttatete 960 agccaaccgg agaagcagaa atcctgcaat cgttgtaaag gtccatcatg tgccttgaaa 1020 ggctcgtgcg ttgtctttcg tcgctcagtc agatatcata cgtggacact gaatacacaa 1080 catatttcgt tttgtgagaa accegetgta taccaaacce getgtcaact getgagagaa 1140 agtcctgcac ccaagaaagc caccaagtca tcaaatatgc aacttcgaga tgttcagagc 1200 atggtcttcg tccttgagcc tgatgggccg ggacccttac atcgcgtctt attgacaaac 1260 agtgagtgaa catttctcag tctcaagcta ggcctgtcta gaatatgcgc tgaattccct 1320 gagtcaccga tggtaatcgt cgcgagattg gatactgcag cgtattccct ttacgactgg 1380 aatatgatca gcacggatgg ggccggcgta gcctccaaga atacacgtca atccctctgc 1440 catcaccgta tcaagcatgg atcctgagac caccaggcta cggggcgcac gatatccggc 1500

gtcgagagtt agacggcatg gaggacacac tttggagact ctgtcacggt ctgaaccagc 1560 atgattgtca taccgtggcc atactggact tggtccacaa ttacaaaatt acgtgagctt 1620 ttaactttta ctttgctcgc tatctgcact aatcttacat atttcacatg ggaagaacga 1680 gtaacttcag ctgggcaaaa gccggactca gactgcaggt caacaaacaa agaggaaggg 1740 ctcgaggggt agcggaggag caaggagaaa cacatgaacc tcgaaagcgt ttacggaacg 1800 ctcagatgcg ccatgtagca gcatggtgtc gacagctgct gattacggga gggattaaga 1860 gcctccaagc tgcgcttaag gacaagtcgg actccagtgc catccctata atgcgcagtc 1920 ccgacgcgta cctcttgcaa gagaagatgc tagccagcgt ccacaactat attctctctg 1980 tetteaagag teetaggtgg agttttaget eeeetgaett aetggaeece aeeggeteea 2040 cacatactga cacagattgg aagcggttga gtgaccaggt ttgggggagca ggctgcctct 2100 tccgggaagc aactcaggat ggaggctcta tgaagctcag gcgcattctg ctggatatgg 2160 aaaatgtcgt cggaactcca gaccctcagt tcatggtacg aatctggcgc atatgccgat 2220 acttgcacgg catctgcacc tcgacaggcg atgaggatca cttaaaagcg cgcttcttgc 2280 accgctttcg agagctgctg cggacttcca acggcgaggc aagccctata ttccagtttt 2340 tcgacgcgct ggcctctatg gatatgaact gttttcttcg ggctctgcgc atcgggaatc 2400 tacgagcact acatactttt gaacaaacta tcggccctgg acatcccatg attttaacga 2460 tgtgggtata ctactcgaaa caatggcgag tcgcggaaca aagctacgag aagattatag 2520 aatactacaa ctgtgcacta caaaccgcag acgcatctct cggttcagag tcggatacag 2580 cgatatcgat tctccacgat tacacttact ttgtttacta cggcggcagc agaagggata 2640 atacgcaagc cgcaattcta gccacccaac tatacgaccg aacatatcca cacatgttgg 2700 atagtccttg caactggaat aacaaaactc aatatttcac ctttgcttca cagatcctag 2760 cagagtattg gtttctacag ggcatcccat actgggcaac ggggtacatt gagaaagcta 2820 gcagtctact ccaggtctct gaccgagagt gccagatccg agcccggatg ctcctcggca 2880 aactacgagg ctggctaata cgctgggggt cactggacga ggcgcagcgt gtcaaacaaa 2940 ggcaagtgaa tttaatggca tccatagatg aactactgca gagggagatt caggactacc 3000 cgccggatgt atagtcgggc cagttggtcc gactacggga atatgtgtat ttgcccacta 3060 aaactccacc ggattatget tggttetett acccegtege actttgetge ataggetggt 3120 tagagcacga acgtgaaatg aaggccaaaa tgcttgaagc ggctgaaaca cgtggcgatg 3180
tcactggggt tcaataccat tttccgtttg atgacttcga tgaaaacccc tgaaatgggc 3240
cctgtgcaat atacgccaaa taagatctac gaatgcagag acatggtaac ggaagacgtg 3300
gaatttaatc actcccgaat attcgtacgc cagcctgtcc tggccgcagg gagaacccgc 3360
ttgcgtctaa aagagcgaat ggaaagtgtt ggagacacga ctgcaggaac ccctgaaata 3420
ctcttccagg catagacttc atgtctgatc cccc 3454

<210> 2070 <211> 2134 <212> DNA

<213> Aspergillus nidulans

<400> 2070

60 aagctctttg ccatgggtga ggatctatgg gctgagtgga tccaggatga gagtatgttg gccacgtcgg tgaacgaacg catcgcgtga tggaactctg ccagcggtcg atcgaagaag 120 aatacggcag caccaagctc tggattattt acggagagtg ggtgttatac ctgtacaatt 180 ccgcgcacgg cgactcgagc caaagccgtt ggtcggagga agatcggctg gtgggccgtg 240 aagtetteae etggeagaeg atettggaea catggeagag gggegetgag geaacgaggt 300 ggaggatcca cgacagtcat ctcgtgtggg accgcctgtt ggaattgcaa gtgcgagatc 360 tctctcgaaa cccgtcccag gataagatcg cgcgagtacg agagctgttc gatatccgac 420 tgcaaacccc tcacgccaca tgggacttga cattccaggc gttctctaat ttcatctcaa 480 Cctactacaa cgctaactac gagaatatta tggcagaaaa tgcaggaaaa tatgccactc 540 cggtcaagga tcagtatgcg gctcgcgagg atctcgaaat tcggctccgc aacgccgctg 600 aatccgggga ccqqqctcaq qaqtqqqcaa tatttqqcqa atacattqaq tqqqaactta 660 ategeaaceg ceggagaega aatactaact tegaactaat caaegeaata taccaaegeg 720 780 cggttttacg attccaaaca gacgcgaata tctgggagga ttatatcatg tttttgatcg atgaatcaat gcacggcaat gcacacccga caacaatctc tgcgctcgac agggcgactc 840 gccactgccc tggctccggc actctgtggt cgcagtatct gctcagctcc gaaagggaag 900 gacageettt taccaagate geegatataa ageacaagge aacaageace ggtttacteg 960 atgttggcgg catggaagag gtactgaagg tgcatacagc atggtgcagc taccttcgtc 1020

gacgtgcgtt tttgtccgaa gcaactgatg aagacctgga cgtggccgag gtgggaattc 1080 gttcggcgat tgagagcgtc caggaacttg gcgagaagaa atatggtcgc tcctacgaag 1140 gtgacccgct tttccgctta gagcgcattt acatacgcta cctcagtgaa agtggcagct 1200 gggacagcgc ccgagaaaca tttaaggggc tcatgggacg tcgtggcaac agctacgagt 1260 tctggctgac gtactatcac tgggaattgg tttcgtggag caagtttgtg caaggtgaag 1320 caacagttga cgctgctccc cgaacaccca atcccagctt tgccacggct gttctaaaac 1380 aagctatcaa gcggacggac ctcgactggc cggagaagat catgcaggtc tacgtcgcgc 1440 actgcgaaga ctacgaggac tcggaggaac tgcagctcgc aattctggag actcgcaagg 1500 caatgcgagc tatcaacgcc cgtcgtcagc gggaagccca ggaggctgcc gctcaacagg 1560 cagcggcggc agcgaccgaa acccaggagg cttctcagtc ggaaaagagg aaacgagaag 1620 atgaatcgac ggcaaacggc ctcccaacta agagggcgcg agcagacaga gcgtcagttg 1680 aagcggagcc agttgcgctt cgccgtgatc gtgaaaattc tacggttgtg gtcaagaacc 1740 tgcctcaagg caccactgag cacaaagtcc gacaattctt ccgtgatgta tgtttttcgt 1800 ccttttgcta aatgcattag ctaatttcat atagtgcggt gctattaatg gtgtcaagat 1860 gatgcctggt gaagacggaa aatcggaagt ggctatgatc gagttcaata ctcgagacga 1920 tgcagccgct gcacagactc gtgaccagaa gactttcgat ggcaacacta tccaagttca 1980 cttcggttcc gagacgacct tgtttgtgac caactttccc cctacagccg atgaaaacta 2040 cattcgagat ctgttcagca aagtatgtct ccagcccctt gctcatatca ctcccaatct 2100 2134 aacgtttata gtatggcgaa ataatagaca tccg

<210> 2071 <211> 1826

<212> DNA

<213> Aspergillus nidulans

<400> 2071

acgcccatca gttggttctg gattgctgga ttgctacctt gccaagtcgg ctcggttgaa 60 aagaagcata gttgcggctt ggagcttttt gagaaatcga gccgaataag actcctgtaa 120 aatgtatatg aagtatacca acaaacagtc ttattcgccc atcatcaaag tcctcccttg 180 agttagctat agctagataa ccttttcact tgagcatttg attgacttct ttgcaaccct 240 tttttggcca gctttgcccc gtgggcaagc aatcccacgg ttcccaccta agccagccag 360 tctggtatcg cagccaagag catcagcctg ggcgccaagt gattggcgca tgtctaccaa 420 tcgctactcg atgtctggat gatgctccat agggcgggga gaggggaaaa ctcaatacca ttatgeggea ggaggtggee geegaeeggt gteeegtete tgaagaeata tagtetggee 480 attqccqcaa gcaqtgatct cagctcatta ttctttcgcc gactcaggtg acctccaagt 540 600 agaccttagg cttgaccttc gaatctgcag acgatttgtt tcattggatc tgtccgacgg gcttatcatc tcagttgtca atggctcgcg aaaagactgc agaccctgga gggatacgcc 660 720 ccggccatgc tgacctgagc cagccggctt actgtctccc attcgatgtc gttttgaaag agctegggae caaegtegae gagggaetga caaaggatga ggeegeeegt egeetteage 780 aatatgggcc caaccagctc gacgagggcg agggtgtctc tgttgtcaag atcctcgtgc 840 900 gccaggtggc caatgcaatg atgctagtta agcggcccac tttcctcttt tcctaacaca tcatttatat aagageteet agagtetgat ccaattegte gttgeaggtg etgattetgg ccatggcggt cagtttcgga attcaatcgt ggattgaggg cggcgtgatc tcagccgtca 1020 tcatcctgaa tattgttgtc gggttcttcc aggaatatgc agccgagaag actatggagt 1080 cgttgcattc gttgagttcg ccaacgggaa ccgtttcaag aggcggcgag accttctcgg 1140 ttccatctgc tgagattgtc cccggtgata tggttgagtt gaggacgggt gataccgtcc 1200 ctgcggatat ccggtgagtt aactcttatt caatgatgga ggtacgggga ttgacctgat 1260 tagactggtc gaagccgtca acttcgagac cgatgaagcc cttctcactg gagaatccct 1320 ccccgtgcaa aaggaatgcg actctacgtt caaggaagag accggccccg gtgaccggct 1380 gaatettgee tacagtteaa geaetgteae tegtggtegt geeagaggeg tagtegttaa 1440 tacaggcatg gctaccgaga ttggttccat cgcggccgcg cttcgtgcca ctaacagcaa 1500 gcgccgtccg gtcaaacgcg gtcctgacgg cgagaccaag aaacgctggt acctccaggc 1560 atggacgctg actggtactg acgcagtggg ccgattcctg ggagttaatg tagggactcc 1620 gttgcagcgt aagttgtcga aacttgctat cttgctattt ggtgtcgctg tgctctttgc 1680 cattattgtc atggcagcca atctgttctc gaacgataac gaggtaatct tgtacgctgt 1740 tggaaccggt ctgagtatga tccctgcctg tttggtggtc gttcttacaa tcaccatggc 1800 1826 tgtcgggaca aaacgcatgg tggaag

<210> <211> <212> <213>	2072 736 DNA Aspergillus	s nidulans				
<400>	2072					
gctggcgctc	cgccggagtg	tcggcataat	ctgacgatga	gagcttctct	ttcagctctg	60
atactggcgt	cgaggcgggt	aatgtgagcg	taaactttgc	atcgttcgaa	gctttgatat	120
tgaaggtgat	gggcgactcc	tccgccacgg	tatcatccgc	catggttaat	gggggtgtgt	180
gttggcgatg	agtgaggggt	gtgttgaggg	ggtggtccga	ggcaactcag	gtcacgtcac	240
aagctggtgg	atgagtcccg	tggctttcag	cagaaaaggc	aaagagggac	gaaaactcaa	300
gggaaggagt	tcaagaatga	atgctaatgt	agaagtctgc	aacctaatgg	aacaaaagcg	360
accttggtcg	ttatcgcgcg	ccaatatgtt	ccgacactaa	tggtcaaagg	caaagcccag	420
acagaaccag	gcagaacccc	atcgtcagaa	cctgaaccaa	tggacgaagc	tgtcccggga	480
ttacacgtaa	tattggctgt	aaccactcta	gctcccgccg	atactggtca	taggcttaca	540
ggtcacgtgc	ttgatcaaac	aggacaaaca	cgcgcttgac	ctcagctcaa	gctccacatt	600
gcaatttttc	atcttcgcgt	tctcagcacc	acaagtttac	cagctctcta	ccttacctct	660
cctcacgagg	atacctcgtg	ttcgagtgtt	ctcaacttgc	tgtctctctc	tgcagcaatg	720
ggagtacttt	tattat					736
<210> <211> <212> <213>	2073 5091 DNA Aspergillus	s nidulans				
<223> <400>	unsure at all n locations 2073					
ccttcttctc	cttggaagtc	cttgctaata	acaagctaat	aacaatgaat	tagtacaggt	60
gtaagtgtga	cgctgacctt	cagaaaccaa	ccgttacgtt	actcagccaa	gcggctttca	120
ccgacatggc	ccgtgaacat	ttccccaggt	ctactccgtg	tgcctcactg	cttcccctct	180
cctctctcca	cgccttgagt	ggatcgtgca	atcaaaatgg	accttgtttt	gggcccccgt	240
acccagaaca	gcgaatctag	tcacggccgc	cccagatgga	tcgtccatgt	gggcccatct	300

aaqaqcccca gatccaatga tgaatctcag gaatctgatc ctcgccagtg gcagacctga cggctgacta tcttggcttg atcgcttaga gctgggcgtc tctggcaagg agcaattctc 420 ccgaaggcta tccatacctc gaagtccgct tttttaaggc tgcagagcaa gcgaattgct 480 540 600 aaaqcctttt ctqqcacaaa ttqqacqqcq qaqqqctaga tqaqqttqct ccqccccatq ggcccgetcc tgccacccgt cactgtettt teteettaae ceetteeege gecettegtt 660 ctacgtcatc tcttttgtc gacttgtcct agacagagac cagtcagcca ctgggggtac 720 tgagccacat agactcccat cagagattca gcgtcagttg cattgtaact tagcattagg 780 ggaaagtggc cgcgtccgtg cccgggcagg caacaatgac ttcacctgca cgttggacca 900 ggataacatt caatccgcca cacggggcct aacacgaaca acttcggact gactccatct acaccgtatg ttgcaagggg gctcaaggaa gccgctgcca cggacgttcc cgcatacgtc gatggaaget teaatgteaa eagtteactg ggaaategeg aaaettegae gatgatattt 1020 aaaggettta etagggagaa aacaccgtgg attetgtaca aaaaggeaac tggegeeage 1080 gtgacttgaa teetggeatt aatateeaae etetgttgat attaceaeae tgetteagea 1140 tegtegeata gtegtggaat tittateece tieceacage ggattatgga eteategaga 1200 catcatgtga tttcgaattc aattttgcta ctcctatatt tatcaagact tttatttctc 1260 cytaacacta gttttgcgac atgtcaagtg ttgacaaagg cgaaatttag cytcctcact 1320 gagactactg atcgaatttc tccggcgcga gacccagagt cgtcggggct aggtcctgtc 1380 ccaacatgat ggatacgttt gagctctcag ctccatgatt gccgatccat tcgtggtcct 1440 aatctactgc atatcgcact gggttccata agcgtggtgg tatactacgt tggagtacca 1500 ccctaccgag cctaccttat ccgtggtaaa ttatcgcaca gtactcttat tgcagccatc 1560 caatatectg tgccgactae etetgatggg etetaggage geateegttt gegataaatt 1620 acggactgtc ctcccaacag agtcgatatt cagcttgcct gacaggcggt gaagtgagag 1680 acgcgagccc cttattatta ttagtattat aattattatc agtattattg ctactattat 1740 tccaaggtct gctgcagcct actgcagcta aaatttcagg aatcggagtt gactttggct 1800 ccaggagctg ggtcacccct gcctagcgtg ttctggttct tcgggatcgg ctcgcacaaa 1860 getetaatea tecatgtaca egteecegae etaceettga ettaaagega eecaactgtg 1920

aggtaagtga caggcgcgtc gcccaccagc aggcgagtac cactaatgac gggcacggca 1980 acgtacagag tacagactgt gcagctcagc tcacctcaga gcacagtctc cgccgttgtg 2040 ctccacctac cacctaccaa cgagctcagc gcacagagat tgcggatgat cacccggata 2100 gggcagactg ggcagagctc ccgcggcctg aagggccagt tgatcattct gcggattgaa 2160 tagtcacgcg accatcaaat gacagcccgt ataaaaaacac ggtagattgt acgacgttgg 2220 ctaggataat cctgcgtatc gaccaggatg atggagcttg ccacatgctg ccccttgtgt 2280 agteacegea aegaeattet tgggaaetge attgaetgat egeaaattat attagttett 2340 tatatettae caageagggt tacegagtgg tgegeecagt gegaaaeagt aegttgteeg 2400 gttgatacgg tctaggttcc gtcgtgtctg cagacactcg ggaagcggga agtgggaact 2460 getggatggt geeggegggt eggtgteegg attgetaatt etegatttag tatettttta 2520 ctcattggtt ggctgataag attgcgcatg catagtttga tgaatgatag tggtacctta 2580 gagacaacct gggttgtttc aattctatca gcagaagacg agcttgccga tgtattttac 2640 aggttggcaa gactttctgc ggcggttggc ttacggaatt gctcgaatgg ggaatgcctt 2700 tgcgcacgag gacggccctg ttctcgaaga atcttgatgc tgacctatct tcaggaaaga 2760 tgaaagcagg tcatgtacga cgctaggtat attgctgatt tctctcgcca ttqgacggcg 2820 aggggccgtg aatcatgttt agaagccctt gacattgatg ccagacgtcc cgtggcgatg 2880 aattggeetg ggegtgaatt gatgtggeta eteaggaaet gategeateg teeaatteaa 2940 aacccggcta tggatgaagc ttggaataac aattactctg gcagctccct gaaaagcaac 3000 tettteeega getgtagaca aataeggeat caaggtegeg taggtatgat gttetteaca 3060 tetggeecat tgggatatag tagettegeg ceaeggette aaceaegeae catgaegggg 3120 tataccggac aatcctgttc gtttccaatg gatacgacac gactctgccg tctgqagacg 3180 ttggaaaagg cgtctattga ttttgcacat accgcttgct tattgctagc atcttgtcgc 3240 ctgtcggaga gtagcccata cacagagcgt agcggactgg cgagggctcg tgataggctt 3300 ggcgaaaccc acgaattete geageacege etgaaaacte etacaagget gtetgeacat 3360 cattgaggat ccgttccaaa tgtcacagaa aaggtagggg ttcgcaggag acggggaccg 3420 aactggtcag gtaggacgtc ggactgtaac gggaggaacg ttgtctaggg agacagttag 3480 cacactctag aagatcgcta agccgagtaa tggttattga tcggataaca gaatcttttt 3540

gactgtgctt ttgcttcata attattgaag gtcctagaac tctagccggt tggttagcgt 3600 caqqcqcaqq ataaqccatq ccqatctqaa gttgaggatt tcgctcaaaa gtctatttgc 3660 gtacatgcag cgcaaaaaac agaaccaact gccagtcaaa gccattgtct tgttgaaagt 3720 cattgagtgc tcacctacgt tcaaagctat tgatcagact aaacgagcca agatccggga 3780 cgtcgaagga tacgggcaat gccgaatagc attacagtgt cgaactcgca acccactgga 3840 cgtagtcgag acacaccact agttgaaatc tagcctgttt actgcatctt cgaggcagtt 3900 tgccgcactg acggacgggc gcaaacagcc ttgacatata gaaattaccc aaaggcttca 3960 atcaccatga atctttcgct ctggatagat gcttcaaacg acgcgagtcc caatccccgt 4020 gtggccttcc cgaagctctg cctgtgggtc gaatgcacgg tgcacaatgc aaccaatgtc 4080 agtagogttg gcaaatgogg gttctcgtca cactgggttt ttattattct tatttttt 4140 ctttttcttt ttcttttgag gaaatttgct gtcgttttaa ggttcaccag agcgaacctt 4200 ttcgaccatg atagttctga tgaacagaga tcgactactc cgtactactg cctagtaata 4260 tgagcccggt gtcaatattc gacgccatgt ctctgcgtat cccgtttccg tgccaaagag 4320 ggtctgaagg cttctcatct ctcttgcaga acaaataagc ctggactggg atactgcagc 4380 aggcaagcgt ttatctcatc gagagcatca tcactaaggc agtggtggca ttctaagaag 4440 ggatgttgca gctttgcgag caaaatgcgg gtagaaatcc aatgaagagg aattgtgtcg 4500 agtagaaagt cataggatca aaatctggaa gtgcgatcgt cttcgcaaca actgtagtat 4560 gcattatggg cgacagagaa tgtccggact tttgtatgga tcaaccgatc aacaattagt 4620 tatctccacc tggaggctgg gatgcatccg aggcgcctac ctctcggaac gacaatagct 4680 gtgggttgtt tgtcatcacc tacagaagtc ttcttccttc tgcatttgcc gggtatcgag 4740 atttgagagt ttcaaatcat acgtagctgc tggtttaatg aacatctcga tgagtgcttg 4800 ctacaagagc caacgtagac aaatcaaggt cagatccttg taagttgccc atggctgccg 4860 gccgaatgcc tttccagcga gtggagatcg agtccgntag ttgtacgggg cttaattttg 4920 atgcattgcg gcatgcctcg atgcagtttg atgagaagct ttattcgtag tcctgccaaa 4980 tcaatgtgca tctcgattgg cactcttcac ttctttttgt tgggacccct gaagagagat 5040 tgcccgaata gtcatggccc ctttcaggcc aactttaaaa gggcatgtat t 5091

<210> 2074

<211> 2379 <212> DNA

<213> Aspergillus nidulans

<400> 2074

cgatatgtag gctccccaga gaaggaactc gtatgcctac tcacaatgct aatttgcggt 60 cagatgtgtt acgccatttg ctgcatttta tgctagaaat tagaactcgt agatattctg tagatggtga cgaatcgcca gattggggca gggcacatga gatgatattc ttattctgtg 180 atacaggtgg ataatgaagt aatcgctctc atgatgattc attcaggatg tattctttgg 240 gagttgagac aagcaccta tcgaatctac tctatctctc caaagcagac aagtatatgt 300 totcaataca ggaacaaaat acagtaccqa aagttotato aqotatotga gagcoccgto 420 tcaagtcaaa aacatcgtca tacattatat ctccatctgc aatattggtc ttgtagacaa 480 gaagccttgg gtcgattact gcaacaatca ctcgttcccg cctttgccag gtcaggttaa 540 atactttggc ctccacagaa tcgtatctgc aagctcagcg accacggcct agccaqagcq 600 agctctttga gccacggatt gagggctcga ttcgaccctg ggactgcatg agtgtgcggg 660 gctcgtacat ctttagcaca tggagacgga gctacatagt tgcttgatcc ctcgtcaaag 720 agttgggcgt aaggaggacg ataaatcggt actaggggcc gttgagttaa ttgataggcg 780 ctcactggag gcgaaaggtg acaattgcag agaggatact ctattttatg ccaagtcaat 840 cgctaagccc aatatcggtt atttagttct acgtgcatgt gtatgaatgt ctatgtcccc 900 gtctgttacc tgggaacttt gggttgacga gatatgtctg tcttgtccca gtggttaggg 960 cttgagaagc tggacaaaag acttgattgg gcaattgtat gtaggatgca ggactgtatt 1020 tttgacttca tcagctacgg agtagctagt cttattataa atccatctga gcttgtgaag 1080 gtgacgctca ttattgaaag caaacagttt aactatcaag ccatcgagat aacaggttat 1140 tgaacctcct tttaggccaa ataacttcct agagtattct accgagtcga tgttgatagc 1200 cgttatcatt tcgcgcaaga cgcatagtct gctgacccaa ttctacagac cgtccggata 1260 gccctaagcc tatcgtctcg tgttctacaa ctcaggaaat gggtaacact tctcttctat 1320 cettetgtte tagetecata cetgegattg tggggatata caegeaatga gteaacttge 1440 ctccttgget tcaaccatga tgcgatgcat atcccagcct ggttcgatcc tagcttctcg 1500 cggaacgcaa aatgcaggta ggatccagcc ccgtcctatc tttattcacc tgaattctgc 1620 gettetatat acetgecaac egttgegeat gtaateateg taggeaageg teacetgaet 1680 gtctgttaaa tgttatgtag gttccttggg gagattggat actggtttcg gctccctgcg 1740 ggaaagacct caaaccctaa acgagctctg ttttggcatg agcactatgc atgagcacta 1800 ttagccgctc ttcaatcaag ctaatccagc gctaaactgt aactagaggg atatcacggt 1860 ccgaatqcca tgccctatgc taccccaagg catacgacga acccgaacac ctgactggcc 1920 gcatgaccac cettecagea gcgatggate cgtgcccaa taccetgccg gtetetetge 1980 ctagtttcgg cttgatccgt caaaccttgt cctagatgct acactgcatt ttgcttagct 2040 ggctgggagg tttagaatcc ataaccgcag ccagaagtca catggcaccc ctccgagtgg 2100 aggagggtag ggttacggtc caccccttat gtgtgaattg aactgctctg agacaaccat 2160 ccactacaga ctagaggtgc ggggctatag atcttttcct tgttttgtcg atcatcaggg 2220 cagettggac eggaattage egteaggega ecaacetttt getettgttg egettgeact 2280 agccacagtt ctcgccgagc ggcatagtct acaaagttca ggcagaaccc atttcacata 2340 2379 cggatttagc atcggaatca ttcattttcc cgatcccct

<210> 2075 <211> 3239 <212> DNA

<212> DNA

<213> Aspergillus nidulans

<400> 2075

agtagatett egateaggeg caccaggata agtettetge geceaetttg ggttggtaat 60 gaaagetttg getgtettat egggattett caagtactee egtegaggae eggteettee 120 agegeaaget egeceaecae acceaeaggg taaagaeggt eatggttaet ggggteeaea 180 atecaageta gagtggaagg tatagtteta eegatgtttg eegggtteeg atttetgeea 240 attteagggt tgaaggtage atatacagaa gteteggttg ggeeataage attgatgaaa 300 tggaeettgt eagaeeattt ggteatgget teatgggaea teateteaee aeegeagaeg 360 atgaeettga gggaaggtae agaageegge teeataatge tggegaggga eggagtgeag 420

aagagccagg aggcgtccag tcgccttata gctccggcaa tatcattaag acgctcctcg 480 tegetgggaa tacagacaca gecaccatat atcagtgtcc caagtatttc cataactgca 540 gcatcaaaag tgagcgaggc aaactggaaa actcgaatac ctggctttag gtggataatg 600 660 ggaccgtaag ccatagtgct actggcaaat gcgcggtgct cgatgatgat gcccttcggt 720 cqtccaqtqc ttccaqaaqt qaaaatcqaa tacqcaacqt ttqtactcqt cqctqatcct tgaagggaaa cacqttttqc tcqgtaatqg cacactgtcg gttcgtcaac gccgagtact 780 gtgggcactt tacccgtgta ccgagagcag tattttggcg tgcagaggac aattttggca 840 900 ccagtetect ccaggattte tteatgtete gagactggat gageeggate taaaggeaeg aaggegeegt etgeaatgag aatgeteatg atggtgaega teatecacat agatttgtee atgcacatgg ggaccaggac ttcaggcccg acgccgagct gcgagaggtg gcctgcaaac 1020 ccagaagcga gggccataag ttctgcatac gacaggtccc catcccaaga agctacagac 1080 ggtgcgtcag gttgccgtat gcgctgttca ttgataaggt catgaatggt atgttccacg 1140 catggtgcag cagactagtt ccatgtcaac agatcctttt tattttccqc gcagactacc 1200 ttgagatcgg agagaagcct gttgtcagat gttgcagttg tcgtcagctg gctaacggat 1260 gactgtgaat tggccaagga gccgctgaac tctccagggg gcaaccacgc cgtcatcgaa 1320 ataggaggta atctcaaccg agtcagccag tcgacattca actgtcagag ggtaagtaaa 1380 gaactcatga tttgtctcag tgctttgcgg tgtccaaatg tcggcgttta gctgcggttc 1440 ggcggattga atgacaagaa gggtttggaa atcgcaggcg gcggccgtat cttcgttgag 1500 cttccgtatt tgctgcagac cagcgtgctg gtgagaaata actctcgcgg cagtccggtg 1560 gacttggtca agaaactccg tgatctttat actggagtca acagcaaccc gggttggcac 1620 ggtagtgagc aagggaccag cgatcttcgt ggcgccgacc agatcaacat tgcgtcccat 1680 tagggtttcc ccaaagcaga cgtcgctcga ctctgtgtgc atggaaagga caatagccca 1740 ggcagctctg atcatggcgg gaagggtgat gtccttccgt acagggctga cgttcgcggt 1800 ggcgcattgt cggcttgacg cattgattgt cttggggagt gcgcttttgc tggcagggaa 1860 tgcaggagag gacatattag agagatatgt tcgccagaac tcatcagatg ccgctaaatt 1920 ccgtttctgg agatggtcga taaagagact gtaaggcact cctggatcag acgtagaagg 1980 accaatgaag ttgcggtaga ttccataatt ctcctccacc ttgcgaagga ttagggcaac 2040

actocagoog togtagagag catgatggat tgaccaagta aaggagogta ogcogoott 2100 ctctgcaatg gtataaccgg ttagggcacc gccggctgct gtggccactc ggctaggatc 2160 ttgctcccac ttgataggtg aaggctttag gacgacctgc acgaaattgg cagtcgccgt 2220 gtgcaagatt cggcttcgca ggacctcagt ttcgtcgaca gttttctgcc acgctgcctt 2280 gaaagctggg atgtcaatat gtcgcgaaag cttgaaaact ggagtggcga cgtaagcccc 2340 eggetgetgg attgacgetg ttataageee etettgeage gegetaeaag ggtagatate 2400 gcaaatagag gctttcgaaa cttcgcaagt attggctacc tcgtccagca gttcgtccac 2460 gttggtattg ttgggcaaga gcgagaaggg agacggggtg agcgtctcag tagcaacagt 2520 gacctggcaa cacttgacca tatccgccag cacagggaat tggaaaatat ctgcaacgct 2580 gagagtaagt ccgtcgtcct gagctgcact cacaagactc atggctgtaa aggagtcacc 2640 gccgagaccg aagaagctgt cgtccgcatt caccgagctg ggatcaaccc ccaaaaacctc 2700 gctccataac agttgcagtc tagactgaac ggtaccctgt gtcactgaag tagacttctc 2760 tgccatatca gagtttgaac tgacacttga ccggcagctg agttccgatg tcaagggggt 2820 tgggcctaga ctggggcttg tagactgcga gctgtccgga acggtctctc gcggcacatt 2880 gtcgaagacg gacgaggagt aggccttgag ctggtcgttg gaaaggtcct cggccattgc 2940 gegeagtege egectatega ttttggetga egtgttgeat ggeagetget ttaetgggaa 3000 gaaaaaattg ggaaccatgt agagaggcaa actctcctgg actagtctcc taacatgggc 3060 agcegtgega attegagetg gagttatgte caagageaga teatggettg eggttteaag 3120 ggcgtattca ggagtacaga agaagatggc caggcttcga acagtcttgc tctttggcgc 3180 gataatttcc acgacgacgt ggctgtcttc tggcagagcc tgacgacact ggatctcta 3239

<210> 2076 <211> 1612

<212> DNA

<213> Aspergillus nidulans

<400> 2076

ccaatattt gtattcacat gtaatctact teetattaac caateeetet teateaaact 60

cgtaccgegg tteeegatee tatettgtea gttetatett tteeateate etgtagteat 120

tagatgggga cettacceag taetttttga ageegactee eteacaaace teategtate 180

ccaqqatcat cqqtqqqqqt gcatcctcca gcatacttct cttcagtccc tccagcgcgt cettaatgge etteagette geagegacta gegteeaegg atacgegace geegeaaace 300 ccaagctagc cagctcctta gcagaaagat tctccgtcat ccctccttca atgatatttg 360 caagcatcgg catctgtagt tcctggacgc agcgcttcat tgcgtcgcga tcaggtaatg 420 cctctacaaa cactgcatct gcgccaatcc ctttaaactc tttcgctcga gctagggcct 480 cgtcccatcc atgaatcaat gcgtctgtgc gagcgagaat aaatatatct cgaccctcgt 540 tgcgcgcgtc gcaggctgcc tggatccgag cgtatgcttc gccgcgagat acaacggatt 600 tgcctttggt gtggccgcag ccttttcaca agatcagtat taggcctggt cgaaatcatc 660 agtggaactg tgacagggga cgtacgtttc ggccaggtct ggtcctcaat cataacccc 720 gctgcgcctg ctgcagcgaa actetccacc gtgcgcttga cattcattgc acttccgtac 780 cctgtatcac catcgaccat gatcggtaga cttgttacgc ggactgtctc ctgaatctta 840 tegeacatet eegecattge gatgtageet gtateeggga ggecatgtgt getggagaee 900 gcgaacccgg acaggaagag cattgggaag ccggcttcct cgattagccg cgacgaaaga ccategtage tacatggaaa agegaggatt ttggatetgt eggegtaege tteaageatg 1020 agcgatcgaa gacgcgaggc ttgaagcgag gggatggcc cgcggctgtt ggggggtqat 1080 tgtgacgtca tttctgagtg tgaggtgaaa gagaaagggt agggagatct cgtcgtggct 1140 gtcattgtag aaaaatattg cagtgatttc ggttcttgta attgcgtgag gacatgaagg 1200 atgaggagag ttcacgcggg gtcgcggtgt cgctgggatt tctgtctgta gtctgcaggc 1260 ggggaggcaa gctggagcgc tcatttggta agaacaggat caacagtcga tctctcaggg 1320 cagtcgacgt caaaacttgc ctctttcacc tctcctccta gtccaaagat tttgactaag 1380 ttcagcccac cgtcttacac tgttctcgat atcatgggat gtacacgaaa tttgatatcg 1440 aataacacgg actctggacc aggaaaatgc ttcgggcgat gatgctggca ggctatcttc 1500 aattgtgttg caccattcca tagtgagtgt ggctctccct cttacccacg tggtcattgg 1560 aggtactgcc ttcgactatt gcgaatacaa tctagtgatt acttctcttt gt 1612

<210> 2077 <211> 1806 <212> DNA <213> Aspergillus nidulans

60 gcttgatgcg tccgcaggta accttaatgt agtcgcctgt aggcgtcagc acacttaatt tacttttcac tcaggacaca taccgctgtg agtcgcagag actgtggccg agccgagacc 120 qqaqccaata tqactccctt ttccggaata ctgaaactcg gatccatagt aaacaattga 180 240 tgtgatgtca cagctggact tgttgacagt gaatttcagc gggttgggag agttggcgtc 300 gategtgtag gaactgeegt tgteggtaat gecaaaggee geattageea eectageeea caagacggca gaggaaagaa ggaatgtctt ggacaacatg gtaaaagcga ttgtcgctcg 360 420 aggetgaega egatetetgg caagegtaga gettaaatea tatteaacet tteteaegge 480 ctcaacggac ctctgcccct gtcgctaagg actcttcata acccttcatg aagaggttcc accaatctaa atgagacggc tcgaaaagag ccatacctcc gtgtcgaatt ggtcagtgct 540 600 agcccaataa ggcgagtgaa agcggctgta cccccatgct cttatacgtt cgaacgaggg cttttgccgg gatttgtgca gaattgcgga gatgggctcg aaagtgggct gttggctccg 660 qtqqataqtc tattcctqac aagacccttt tgatatttgg acatcaatct ggaacccttq 720 780 gcgagtcatt cattgttata tcaacctccg caggagctta atttagttta cgaacgctca atggcggacg gacattcata cgcttaacaa gccctgccga aatgtctcct tctaccgcgg acateeggat gaggtegggt egattgaggt etggtgaeeg gaggteaggt tttagtegte 900 cgggggtggc tgattgtgaa ccctgtttaa tatgctggaa gctcgaattt cgcccctgaa tgatatatgt cggtgtgttg tgcggtctgt ggagcggcag ccatctatat gagacagccc 1020 aaaccgccaa gaggcccgaa cgatatctta ctcgcttttc tcccaactag aaatagcgtc 1080 acgetetgtg aaaceataac gagaaaaggg tecagacgge tagggeaaac aagttgaata 1140 cggactggtg aacatgttct cttccgccca atcatgatct taatcgcctg gatctggcgt 1200 tttgtttgtg aaaggaaata acttgttgct ttccgctgag gttcctcaaa tgggattcag 1260 ttgaaacttt ttacaagcet ttgctagaag gcgtcctgca cagtccttgc agagcttggc 1320 tgggctctag tcgggaacag ccacgagaaa ccgccagctc gtgtgcaagg gaaaactttc 1380 actocacctt cgacgcagcc aaccatcgag cgcagcatgc actgctgatg attgatgtcc 1440 atgagettge atggtteagg ggteaacate gattgtgtea cetgggetgt egetteettg 1500 tctcgtcatt ggccaacaga acattccaaa tgattcaatc acattccaat cttcaggttc 1560

gcaacgtgtt cggaaacaag ggctttcggc accgataaga agttggggta ttcatgtccc 1620
atattaaaca tcctgctact ggttgatgaa tccaggcttt cagccgtagg cgtggtcgat 1680
gttcgctttt acgtgccatc tggtacagat gtcgggagac accaatattc tacacgaacc 1740
atggtgcgtc tccatctaga tcagggagcg ttgtgtcgca tgtcggattt tactactatt 1800
cttgtt 1806

<210> 2078 <211> 2229 <212> DNA

<213> Aspergillus nidulans

<400> 2078

gcgcgtqtgt ttttttccta tatacaaagg tcatacactc gaactattac atttgatcat 60 120 acagcaatgc agategtetg gegeggeteg geegateegg eegtetaega agaagegege gtgggccggg tgtttaacaa ccgccgtcct gatcgatacc caatcgcggt cgtcaaggcc 180 agctgcaccg cagatatagt ggcagcagtc aagctcgcca aggagaggaa ttgccgcgtt 240 300 gccgtacgct ctggtggcca ttcctgggct gggtggagtg tccgcgacga gtccatcctc gtcgacctgg gtaactacaa gtacctcggg gtggacgcgg aaaggtgcat agcttctgca 360 tcgcctagca tgacgggcaa agagatcaat ggacggctca tccatgagta cgggctgatg 420 ttccccgggg gccattgtcc ggatgttgga ttgggaggct ttctgctcca gggaggcatg ggatggaatt gtcgggtagg tcatctctgg atctctttga aatcaattga aagtagttca 540 gtcaactaac ccgaggtgta gggctggggc tgggcatgtg agcgagtgaa ggcccatcat 600 gttgtgacgg cagagggcga actgctgcac tgtgaccaga gtcagaacga ggagcttgac 660 tgggcagcga gggggtcggg ttcagttatc aatcacatcc caaaagccct ccctttcac 720 tgccggacga tgggctcatg accgatcttc ttctcgcaat ctgcaggctt tcccqqcatc 780 gtcacacgat tccatttcga aatcctcccg tatccgaagc atggattccg ctcatctggc 840 tacgtctatc cgatcagcaa gtaccatgaa gcgttcagtt gggtccttgc aataaccccc 900 gactttgacc gcgataccga gatcaccgtg gtaagcatgt acccagaagg cagcgagcag 960 atatgcctct tcatcctcct agtgactctc aaacacaccc catcggaggc agaggcagcc 1020 ctcgctccag cccagcagtc gcgtcctcct ggtgcaatcg aggagtggtt ctgccgggaa 1080 gatagtetgg agaaccagta taccaaccaa gecaaggeca accetaaggg ccacegetae 1140 tococagaga acqcctacct ocagaacqaa occgatotcc ccaqcotoct coaagagget 1200 ttcaccacac tcccccatcg caaagccttc gcgctctggt acgcaatgaa tccatgcagt 1260 cgccgccagc tgcccgatat ggcgttgagc atgcaatcgg atcattattt tgctctatat 1320 acagtctggg aggaagagga agatgacgcg cggtgcatgg cctgggtgaa gaacgtcatg 1380 aagagggtgc agcggcactc tgtgggggcg tattttgggtg attctgattt ccaggaacga 1440 cagacaagat actgggctga aagtaatggg cgccggttaa tggatatccg tcgtagatgg 1500 gaccctacag gcaggatctg cggatatctg gaccacggcg atgcttcggg accgcggggg 1560 tttcattatt ataaatacac gacgactaca gacccagttt ggatatatct gatcgtgcct 1680 ccatgaacta gcatatcatc ccatataact aaaccttgga aatatggcta cttagtatca 1740 ttgtccaaag tgacgacaag aattatctat gtccaattgc ccagaaaaaa aatatagaaa 1800 tttagaatat ttgaaaaggg taatcgggaa agtggaggac tgtcgggtag tctccttgag 1860 tecegegegg gggeatggag gagatateta egeateetta gaetggetea egtatetttg 1920 aggteteaat ttggaateta eegetgetta cacagttata tegtatatae tgagaetgge 1980 cactegegte agtettgeca tatecactaa aatttaettt caccatgeee atcacagtga 2040 agtegeteca gggcaaagte gecatagtea gtggetecte eteeggcate ggagcageca 2100 ttgtgcgtga gctctcctct agaggcgcca acacggtcgt caactatccc ttttcaaatc 2160 ttcatgatga agcagccaca ctggtctcct ctctcccttc gcctgcaatt gctgtagagg 2220 2229 cggatatgc

<210> 2079 <211> 3041 <212> DNA

<213> Aspergillus nidulans

<400> 2079

gtacttgtta atcatgataa ccccctccac tgcgtccagc cttccgcgaa ggactcctcg 60 cgccacctga ataaccagcc tcttgaagca tatgagaacc tgtcttctgt tagatgattg 120 gcggtgctaa ggtagatgga aaagggatcc gttctgccaa cccgcatcgc gcagcacggt 180

aattqaqcaq atgttgaaag gtttggctcc tgacgactgg cagtcgaagt ttgtaggaat cccctgaatt cacgagtgat aactcaagct gtcggaaaga aagatgagcc acacccaaga acataactct tggtgaccct atactttcag tccaagctca actcggtccc attccagcac 360 accactctct tcatttgccg gtttgtgctt ttctggtttc cgtatgttcc ttttgttatt 420 ccgttgtagg attttctcca tctgtcatta ccatccaatt tggtcctggc tgtcgtataa 480 agcaatggga tgacatctct accgtagagc ctcagtccta acaaatgccc agtatctcga 540 ccacccaaag tcaaccatag cggtaaggac accatctatt acggacacag actcggtgag 600 aatagtaget egegteetat geagaegegt atgtgegege eggtagagea ggacaatgee 660 cagccaccca gactttaccc caataaatct tgtcgagaac gtttactggt cgatcgagag 720 catgagaaca acgacatcgc ataggaagcg ttgtgacggt acatagtcta gaaaatggtc 780 840 aagtqtattc qagctgtaaa agatgagtgt tctcgatgaa gtttgttttt taaacaaggg agggttcact ctgccaagga acggtgttag tgatcgctct gctgtggacc tggctgtcaa 900 aacqcaqcaa attaaaacta aattaatcac gccaagcaac tctatagggt atagagtatg tettgtetta egtggtette gaetggateg gateggeaga agacaeggee aegegggetg 1020 acceaetgge tagaettatt tggteetage tggeaggaae teaeegetta gteatgatge 1080 gtccaggctg gatccggcta agcttcggag taatccatgg tttgggggcag tggaactgga 1140 ttgatcagga accgaaggcc gaactacacc caggcaaatt tgacagctcc caaggcatca 1200 tgatttccaq tccqqaaaaq qqqttcaccc cgacctcqac tgaqqcatac aagccqtctc 1260 ccactatgtt tcaagatcac ttccatccag tcggctgctt caccaccgcc tcccaatcta 1320 tececeteeg acagegaace gecaggaege categocatg actetgatet taccectetg 1380 gattttgttg accetegece tagtegeaat egeegaegag cagaeegaet geaacecect 1440 caacagcacc tgtcctgctg atcctgcgtt gggcaccgag catacctggt ggttcaactc 1500 cacgetegat gatgetetet ggaacatgac aaceggtace cetgactata catetgaagg 1560 cgccgagttt tcgatcaaga cggagaacgc ttcgaccctg ttgcagtcga acttctacat 1620 ctttttcggc gtggtggagg cgcacgtcaa gatggccaag ggcgccggga tcatcagcag 1680 cgtggttctc cagtccgacg acctggatga gatcgattgg gagtgggttg gatacaatac 1740 gagegaggtg cagtecaact tetttggcaa ggggacacaa cgacaagega tegaggegga 1800

ttccatccgg cggcqgatgc ggataccgag ttccacaact acaccaccta ctgggatgag 1860 aaacgtctgg agtggtggat tgacggggag ctgatgcgga cagtcaacta ctctgagccc 1920 ttgacggtct acggcaagaa ctatccgcag actccatgcc gggtcaagat cagcgtctgc 1980 qccqccqqqc tcccqacqca qtcqataqqa aatattqaat qqqctqqcqq ccttqttqac 2040 tggtctgacc tccctttcac aatgaccgtg caacgggttc gagtcaagga cttccaaagc 2100 gccaaagaat atacctattc tggacactcg ggttcatacg atagtattaa tatcgtcagg 2160 tcagtctctg ctgtacatga caccaatttc agaccgagta gctaacccct acagtggaaa 2220 ctcgaccgcg aaaatagaga ttaataaggc gccttccaag tcactatccg agaagtggga 2280 egagetteet acegeggeee atattggagt atactgeggt getgetgttg eeggegeett 2340 ggctatcgct ggattcgtgc tcttctgcat ccgcaaacgc cggcagggcc gcctggaacg 2400 cgcgcttgcg gaaggatcac agaccacgtc ggccaccgag atggacactc tgaagaaaca 2460 atggaggcag agcgattgga ctgccagcta tagaccgctc aatcaacgac cttaaaggag 2520 tegeettegg cettttettt tttetttteg acaccatgaa tagacatget teataggggt 2580 qaqqatctta ctatqtaqat agacactqta qttqttqqtt qqaccttttq ataqaacact 2640 gggcgaggcg ttcgaattct gatataattt tgcgagcaca ggttaccctg acggcatagg 2700 acattggagt cccttcgagc gcgtgctggt tcagaaaaaa tggaatggac cagataagtt 2760 ggaggacacc ttggctactc tgggctggcg ggttggatag aatgttgcag aacaaaccaa 2820 taatcggctg gacgaagtac gaaatcgaga aactggaatg gacttgtaga ttaccagttg 2880 catgcacccg ggtgaacata caggagactg gcccgtccaa gagcttaaca tgggcaacaa 2940 actgctgcac cacggagcgg ctctctttga acccgaccgc cagactataa acgggcccgc 3000 aaggettttg ggttttggee ceagagaeae tgtgaetgtt e 3041

<210>	2080
Z211~	1363

<212> DNA

<213> Aspergillus nidulans

<400> 2080

accgacgaga caggccttgg acatggcgat tgagatcgtc aagccaggtg tgccgattcg 60 agagtttggc aggattatcg aaaagcacgc agcctcaagg ggccttgccg tcatcaagac 120

atggggggt cacggtatca actcggaatt ccatcctcct ccttggatac cgcactatgc aaagaacaag gctgcgggaa catgtaaacc tgggatgacc ttcacaattg agcctattct 240 300 caccctgggt gccaaccgag agaagtactg gccggatgat tggacgaatg tcacgatgga tgqcaaqcgg acagcacagg tcggtgagta cacctttcca gcaggctgat ccaggcttct 360 420 atactaacat gaatatcgac agagcatact ctgcttgtca cagaaacagg cgtcgaagtc ttgacggcca gacaggagaa ctctccggga ggcccaatcc ccataccgga ggttgtaaat 480 540 ggagttgctg acggagttgc gaacggagat gcgaacagag atgcgaacgg agctgctatt 600 aacgaaagct gaagaatgag cggcgcttga gtagattagc cggtcacaga ggggataccc aggtgataag gatttccatt gtctgcagat tttgaagctc atgcttctgg acctgaacca 660 cataattaac caaggacctt atataactcc ccattcacta cccagtccca gcaacaaaca 720 tgcaatagac agctttaagt cattgggggc gcggtcggcg gtgcaaaatg ggctctatcg 780 agctttgatt gccttaaaga tttcaaaccc ggtgtataaa ctctggtacg gcacacctca 840 ggctccaaca ctaccagatg taatcgtcga gcattttctt ctcgtcttat cctacttctt gtatgcaatg aaactgctct gccaaactgc caaagggtta agagacacct agcccgcgat gaaagagtac tattaatctt gctactagct ctgcacqacg cggatattca caattatgcc 1020 ttctcccttg cctcgatcgc cttgtgctta cccttgtttt tgtgaaagta ctcctggacc 1080 ttggctctcg cgatttgcac tgccatggca tcctccacgg tgcttgggac atcaacttcc 1140 cgatccagat ctccqtaaac cccatactct accaactccc aagcacacqc cgtaaaatca 1200 tgccggacct cgttttcggt atcatgcgtt tgccctgtac tataccttcc aaggacgcaa 1260 atgccccaac ceggeteetg acgagegact geaceteteg egegacagtt tetgetggta 1320 tggcagagtc tggacgatac ggcatggaga gggagatgaa tgc 1363

<210> 2081 <211> 3483

<212> DNA

<213> Aspergillus nidulans

<400> 2081

gggtttgagt gtgggatgaa gccccggggg aagttggaaa tgatgttccg agccgtccag 60 aaccctagtg gagatagtgg gaaaaccttg gaacctatgg cagcagtggt acacaaagcc 120

tttatcgacc ctttccaaat atggttaagg ttttagccag tcccaggttc ccgtaggctc aggaaatccg aatacagggt tgcgccacca gtcaggacct cggttcttgg attacgcagc 240 cgtgacgtta gcgaggctca agcggttccg attcatacag ccccggatta tttgccgata 300 gtacctcacc tgattttcgt cgttccacag tggtcttgta gaggtcaggg tccaaaacgg 360 420 caccggtagt ttaaagttgc tccaaaaagt ccaatagaag cttgggcatc tcctcgtgaa gacaagccgt tcgtcccaag gccttgcatg acagattccc ggttcctgac gtcgtgtcaa 480 tgttatacct tcacgccgct tccctcggca gacatttgtt ggtcactgaa tcagccggct 540 600 tcggtgggtt tagcagggaa tccagctcag ttgacacaga acagcgctac atgtcgaaac cetettgteg etggtettge acagatecat ggeacgtacg acegeggtet ttgtteagae 660 720 gacccgatat tgatatcgtt ggggaatgcg aaacatggga acgtagtcgg gaaagttggc acactgtttt aggtcttcgg ccatgccttt cggaggatag cggtcgagaa ggacgggttc 780 840 gaatctccgc ttcaggggat gcatggtagg ggagatttcc aacggctggg gtgctggaat cacagaattg tagttgctga ggcgtcgcga ggttcgaatc gatgctgcaa attattagct 900 tgcttaacac ctaatctgtc ccacctgaga aactcacctt ggcgcgcaac cgacggctgc ctcttcatac tqttcatqtc tcqqaatqac atatqtcqtc qcacqcttcc qatactcqat 1020 cgaagtaaac cagattgttg tggctcctcg gacacgatct tctgtgtgcg taatctggac 1080 cgaggccggg acgcgggtgt gatcgcaccc gcgctgagac tcaggtccga cagaaacgtc 1140 tetetetegg aggeaaactt gaccaaeget ttateaaagt egaatteete eagacetagg 1200 aattgagaag cccgcggtga cgcagcactg ccgttgccgc ctcccttgat tgtcatgcta 1260 ctgcggttgc tgtgcgtacc gttggcattg ccattggcgt tctggtctgc atcttcggac 1320 cggaaggaga gacgctggaa ggagccgcga gggccaatga ccgaggagct tcgagagagc 1380 aggccgtcga agcgatcgtg agcatcttcg gcgtcggcat cttcctcaat gatatcggtg 1440 accgcggggc cgggcgcagt ggtactgctg gcgattcggt attcgtcgcc tagcttgcgg 1500 aatgtgtcga gaatctccga gccgtcaaca ccagcgatcc agaagtagtc tgcgagcggg 1560 ctggctgacg tcgtctcggc ggcagaagag gatgtgggaa agggcatgtt gaggtgagat 1620 ggtcgggtcg qgtctqcggg gttgagatca tgaatcgttc aaggaaagtc gtgggcttcg 1680 tcacagcatt gagtcgggaa accaatcaac agatgaatcg ggcggctcgg caacgacgga 1740

ggggagaggt tcgaaagtga gttcaacgat cagggggcga aaagaacgga caggaccagc 1800 ataagtgtgg gattgcgacg ggatcgcgca gtcgggctgg cggctggtgg ctgcaagtag 1860 tgcaagtggg caaatctaca aggcagatag ataattggaa aggagagaag gtaaaaatag 1920 caaagggaaa aggataggac ggccacagag ataaaggcgg agggggcgag aagtggtggt 1980 ggaggagaag agacgttggt gggcgccgat ctggatggag agaaaaagga ggtggagggc 2040 tttccctaca cagtagtagt agtactacta gtacctaggt caccttcttg aaccggctgc 2100 acactaccga taaatatagc tcatgatttt cttttgactt tctctattct tcttcgcttc 2160 tttgctcggt gccctgttta ctctccagca ttttcatcct gctgggaatt gctttttcgg 2220 cgacagecet ggecgagteg cacgageaag gaceteetgg eggeetgget taetggatag 2340 atgctacgac agagetegte tettgcagte etgactggta etgtgcgaca gtttcagate 2400 cgatgcagga agaaaagcaa ccgtggccag cgtgtccatg cagtaccctg ccctgtaatc 2460 atggcccgg gcccacggac ggggtatcag aagcaaaagc aaaaaagcaa gcaaaagcaa 2520 agccaaagca gagcaaaagc agagcagaag cgttctggac accttagcac cgctcttgtt 2580 gaggeegact actgeaagtg tgegteecta geetgeagee aceaaceace cetetgqteq 2640 ggaacctaag gaacctgcct cegectttea ceaegttgag tetgtgaeta agtaegtaet 2700 cegtataact ggtgtgttat aacctecate actageacea cecegteeca teagecagtg 2760 cteggaegge ccaacttega agtggggtet aetgetagag tggaetetgg agattgaaeg 2820 actgttcgag ccaaccatgg atcgatcgtt tcgaacaata tggaacaaat tatggtctcc 2880 teteageega egaageggaa aataagtaeg aatgaegaeg atgaeegagt caaceagtet 2940 atgagcgagc cgtccaatgc cgtccgcgtc acagagagtc aagagtcaag agtcaagccc 3000 agatgccgag gcagcccgtt tgtctccaac ccgtccacgg agaccccatc gatgatgcct 3060 gcctaaaaca gccgctccat atccagctct tggcgaccgc gtcgaccggc ggcgaccagc 3120 gtcgacaaga acacgtctgc ggcactcttg ccgaagacgc agcatacgga gtatgctttc 3180 gattecetae accegettit attetgaeat atttegagea gaaageatet aaccggggtt 3240 gegatetgtg atetggagte ggtteeggae ttgetggeaa ateaceaega teaetggget 3300 ggatcatgaa cacttgactg tagctttctc atagagaacc ccacttttag cgtgttggat 3360 acactccggt tttttttac cgagtttta taaatcacgc cccccttaa aaaggaaaaa 3420 ttggactgcc ccatctttgg gtggaccttt ttttattcat cacatcctgg tttgttcata 3480 tat 3483

<210> 2082 <211> 2196 <212> DNA <213> Aspergillus nidulans <223> unsure at all n locations <400> 2082

agtcgcgagt tgtatttttg accatcccga ccgacacctg caggcaccac agttagtccg 60 accttagctg ggtctggtgc atcgttcgat tggtcccgga ctcggtggtg ttgagtaacg gagagccgcg atcgagaacg ggcgacataa ccaatgcagc gatcgagacg ataaagacga 180 actggctggg gatcggtcgg gagcggggta attccgaata cttcaccact ccagattaga 240 300 cgattaccaa gacctgaaaa gggaaatcca atactcactc gctatgtgaa agcgtcacac 360 cgctttcgaa tggtttcctt ggacgctcgg ctgcactgct gataaaagcc tgttctggtc 420 gtaccgagtg ccggcagatt aaacaggcga ggaacaggta tagctcagaa tgatctgcgt tgtatgtatc atggataaca cttgattaag caccccatgt cgatagtcga ctttgccaac 480 540 cagagccagt cgtcttggga aagccttgcg cgttcagcgt tatcttcaac tcactaaaga 600 gaaggcaaac aagccaagaa atagcatcat ggactcgccc tggctccccg caaacccaga acacattgcg ggaccgctct tctgatccgg ggttggctgg agattcagcg tacgggatgt 660 cgtgcacatg tgcgttcgtg gtcgccgagg ttatgcgaag atctgaaaca cgttggagat 720 ccagaatcca gggaattttc tgtatatcat cccaagcctc tccagactat gatggttaat 780 aacgtcagtc acgatcaatc gggaaagagt cgcgagttgc gagtcgccag tggtagcagt 840 gtggcggggg ctaggtacct gacgttggag gtaagatcgc acataattcc cgctccacca 900 ctccctcga gtcgtccaac aaattcggtc ttctggccaa aatttcctgt gtggaagttt 960 caagaaacca gattgttccc taaagtagcc taaaagtagc tattgcgctg agcagaagca 1020 gagacagtgt gtgatcagac aaggttagac atcggaatag gataggaccg atagatagaa 1080 actaccetta tegtaageea gegttgeece geeateecaa tteggttaeg attetteece 1140 agagtccagt gacccatctt cttctggggt aagggtggat taccaatatc cagtggacat 1200 aaaaaatgtc tcttactggc tcatccatgg aagccggtcg accttagcgc tggctcagac 1260 cgtcccaaat tcccagttcg actcagttcc cctgaggcgt gttaatcgat tgcgggctgc 1320 cettgtgccg tcgaagagcc cgaggttcgt cgatcctgtc ggcgggggac ttgatttcat 1380 atgctttgga ctcttaggag ggtcagcttt caccaggcga ggcgtgaggt taaatcgacc 1440 gggtcgccct ggtcctcacc ctcccaacaa ctcactcctt tctaacattt tctctggaac 1500 actttggtct tttatttacg atggcttacg tcggtcacac ccctccagga tggctcggca 1560 acctgtcggc ggagcaggaa acgaagctgc agcagatgtg gaatatcgtc ctcgtcctct 1620 tggacgctgc ctcgctgggc gcccccgagc aaccgattga gaaccagagc ggagaggccg 1680 ggaaatcgcc gtcaacactg gcccgcaccg atacctttgt ctcagccagc ggcaagagcg 1740 ccttcacgac gcacttgtcc cagaccctca aagaaaccgg cctgaccagt aacgagatca 1800 agtcgatcaa ggagattctg cacgatacca cggcggagga gctgcgggcc ggcctgctga 1860 gcaccgccaa aaacgataac ccagacgctt tattgctgcg gttcctgcgc gctcgtaaat 1920 tcgatgtcgc caagtcgttc gatatgatgc tgcggtcgat gttgtggcgg atcaagcagg 1980 tttgcgtcga tgaaaaggtc ctgctcaata ccgagttgca cgctctccgg gagtccaagg 2040 ataagtcgaa accccatgaa gccaaggagg ccgaagggtt cttatcccag atgcgcatgg 2100 gcaagtgcta ccagcacggc acggacatgc atggccngcc ggtgggcgtc ttgcgggtga 2160 2196 agctgcacaa gccttcngct tagagcactg aggctt

<210> 2083 <211> 532

<212> DNA

<213> Aspergillus nidulans

<400> 2083

cacttggcag actccggatc ctccagagcg cgttgtcctg aaacgcgatc tctcccatgc 60
atcctccccg gcagctccgg aaacgtcctg gcagctttcg agaacaatgt cgcagacgga 120
caacacacat ccaacctccg gtcctggatc cgcctccaa ccgccagcta tggttcgttc 180
gcagagtcaa caggttccag tatcgtacca acatcctacg gcgtccatgg cccaatatcg 240
acactctcct ggataccatc gtcgcactt gcagaacgtc agcgagtact caccggccga 300
gttcacgaag caatatttgg gcagttttga gggtcagtcg agcgtatctc caagtactat 360

ggcgtttcca gcgagtcctg tgcaggttgg ggggtcaaat ccgggttcat ttgccagtca gttctttcag gggcagatga gcggtaagac tctctgacta cggcacccgc tcaatccgtc 480 532 cctatgaccc gcagcggtac aacagactct ctatgtggac ctatgggtat ga <210> 2084 4123 <211> <212> DNA Aspergillus nidulans <213> 2084 <400> 60 ggtataggat taaggtgaac cctatgaagt aacgcccagc agcagggaac aagaatgatg ttgggtgcac ggaggagtag ccaaccgata aagatttaag cacggaaaag aacaggtaaa 120 tagtgatggg ccaaaaagag gagccccgaa agggtgacaa aagacacggg agaataaggt 180 gggggtagat taaccgagag accaaaaaag aaaaagtctg ggggtggaga gttagaccag 240 accaatcctg agacaaagga agcccggccg ggcagtggag acgctcatga ttccagggga 300 ccaggccctg aaggctttct tgggccaccg aacggacgcc ctcgcactgc agttcgtgta ctcactcttc gggcatttgt cttcttccga agttgcgact ccatgttccc tgggcttgcg 420 cggcctcctc cccaatgtga aacctatctt tcaggtagct cgtctctcca ggacgtgccc 480 gagaccagaa acgggtaaag ttgtctttcg acccagaagc aagaatatga ccaagagggt 540 gccagtccaa agtccagata gttgcggcgt gcgcatactg tatccggtgg gctgggtaga tgacttgagc gggcgtgttt gctgggtcag ggctgtcata tggagcgaca gtaggtatct ggcccgctgg cagattaggt tcatccagca ggtaatggta taaggatcca tcttcgctac 720 cggtcgaaat caaagagcaa tggactggat gccatgtaag cgtagatata ggtttttcat ggccgcggag aatgcaaatg tcccgcatca ttcggagatc aaacacccgc gccgtctggt cacgcgatga cgttgcgaga aggttgttgt ttacccgcga gaatttggta gcggtcacgg 900 tgttcttgtg gctatggagt gttgtcaagc aacgggcggt acgggggtcc cagaatttga cctggtggtc cttcgatccc gaaaccagga gaccctttgt cggatgccag tcgcacgatt 1020 tgacatccca gttatggccg gtcaggacgg tatcgcatgt ccttgctgtg aaatcgtaaa 1080 tettgagagt egtgteateg gaageegaaa ggaattttgt ategetaggt gaeeaegeta 1140

gatcgcgcac ggcgtcatga tgtgcgtcgt ctatcgtctc gacgttattg aaatttggtc 1200

tccagtattt cacatcgcct ttctgtccac cagagatcaa ccagtcatta ctgtgcgacc 1260 atgctaagga cgtgaccccc gcttgcaatt gatcatagtg tgcctagatg attagcctcc 1320 qaatccccaa caagaaactt cgacctacat ccatgaccgt ctcaaaatta aaggctgtcc 1380 cattccatag cataaactcg ccagtgtgtc cgccagtcaa caagcgcctt ccttccggtg 1440 tccacctgac gaccqtgatt ggctttttgg actttccgat ggattgatgc agatgtcgta 1500 cggggatcga gtctaccggg gagtgtattc gtgccagcgg agggagcatc tgcgatagca 1560 aaactgttag ctttgtgcct tttcaatgta gacaacagac actcacatcc accatgtaac 1620 tgqcqcttgq tctttcagtc tccatccgat ggccgccctg gtatttcgga cgccggttgc 1680 qcatccattq taccatcgat gatccataat cggttacgag ccctgcgagc ttttagcgat 1740 gtccaggggg agcggcttcg gtaacatact aggtcgacga gggccttgaa tgccgccctg 1800 qqctctqccq aacqqctgcg agtcattccc accqtcqtca taataggcca ttgcgataag 1860 aggttgggtt agcagacaaa acgatggacg aagtctgcga ccatggcagg gtggaggcgg 1920 agagettgae gggeegaegg gteaeggaeg eactgataag gegaggtegg tetagteage 1980 tttqqcaqcc aaqattaatt tcqaataqca acgtcqtcaa atgtagctag gatgcttgga 2040 ataatgctag aacagttgca gcgatttgag acgcgagacc aggccgcaag aatgattggg 2100 tegggacaca getgeeteeg aegetaagee gegttggeea egaeggeeea aggeetegaa 2160 agtccccggc caaatgtgcc aactctcagt cgctggaaga ctggatccag aggtccaggc 2220 atgeagatgg aacaacgget ettetetee etgtetettt agtetegece ettgaggeet 2280 atgetegaae titaegaeag tattatgaga ageetagata acceegeegt acteaagite 2340 ttctcctctt ctcattgtcc aactctgctc tcctgctgta aacttgcgcg ccaaaccatc 2400 tectattgte aattgaeeta tegtggtetg teaatetgaa tegtgatate tateegatge 2460 ttcgtcatcc ccactttatc cgcagggctg agtagatgcc acagcacgtt ctcgcatttg 2520 atatteggte geatetatte ateatttate titateetta etgtetegta tatteaacet 2580 gcatcgttaa cacgtttata gagggagatg gccgtcgagg gttcgtcgcc tgtggccgtg 2640 tccaccaacg gcactggcac tgctaataat accaatcatc ttaatggcca ttcctctaat 2700 gggtcaaaga aaatggctac cagaaagaca gccatttatc gacatgctgt ggctgttcac 2760 tegeaagtee ageacteatg ceteageagg gactegacea aggetaegag tittatigga 2820

ttccqqaacc tgatggtggt cgtgttgggt gaggatatcg tcgtcttgac tacattgata 2880 ctatgctgac tctcgatagt ggccatgaat cttcgcctag tgattgaaaa cttccttaag 2940 gtgagettet tgeatatgae geaatggttg ggetegttta acaageegta gtatggtgtt 3000 ttgatttgca tcagatgtca tgactatcgc aaacaagacg ttgtgatcgg agcgattctc 3060 ttcgccctgg tcccttgcca gttgctatgt tcgtacttca tcgagttggc tgcttctagg 3120 catgctcaac gcgttatcgg tcgagcaaag aaacaggaca aggacaggat cctgaacgag 3180 tctaaaagga cttggttcgc cattgcgctg ctgcattcta ttatcagctt ctttggtctg 3240 gctgcaacaa gctatgtcat cttctactac gtcaaccacc ccgggatcgg cactgtctgt 3300 gaagtccagg tgatcatcgt gtcgctaaag tcgtactcgt acgcactgac gaatcgcgac 3360 ctacgtcgcg ctatgctcgg ctctccgtcg gcggactctg atatcccaga actctaccgg 3420 tettgteeat ateegeggaa cateaecetg ggeaatetag catattteet ttgggeecea 3480 acgetegtat accageeggt etateeeega acgeetegea ttegetggte ttttgttgga 3540 aagcqtttat tcgagtttgt ttgtctctca gtggttatgt ggctactttc cgcgcaatat 3600 gctgccccc tcctgcgcaa cgcgacccag aaaattgcca cattagacat tgcatctatt 3660 ttggagagag gactgaagct ctccactatc tctctcgtga tctggcttgc tgggttctat 3720 geoetettee agteactget gaaeggaetg getgagatea tgeggtttgg agaeegegag 3780 ttctacacgg actggtggaa cagcccaagt tttggcgtgt actggcgatc ctggaatcgc 3840 cctgtgtata tattcatgaa gcggcatgtt tacatgccgc tcgttacccg gggctggaac 3900 ccaacgttgg caggtaccgt cgtcttcgcg gtttccgccg tgctgcacga gatcctggta 3960 ggagteecta cacataatet gattggtatg ttteetegga cacaateeta aggetettge 4020 tgacgatgtt aggtgtcgcg tccatagcga tgatgttcca gctcccgttg attcttctga 4080 4123 ctgcgccttt cgagaggttc aaatcccctc tgggaaaagc tat

<210> 2085 <211> 3605 <212> DNA

<213> Aspergillus nidulans

<400> 2085

gcccaagtaa ttgcatctga tctctttgac gaagcgattc acctggccag cacgtttcaa 60

gtggcgggat ccagctaaca tattggcatt ctagatgtca ttgctgatat ctgcttggtt 180 ttatatccaa attctctttc aggaagacgc tcgaagtaca agtcttcgtc ggtttgtgtc ctgagctgtc ttactgtttc tgatatcgcc attcatcttt ctcgatgtca atataactct 240 300 ctcggaggac agagtcttgg ggcagggaat ggagagagca ggccagttta ggccaatatc taaataagtg gtgtctaaat aagtggtgct gtgtgggtaa ttctaacggg cagatcttcc 360 catgcgctgc cataggcctg atcgttcgac aaaaggcaca aagacaacta atcagggata 420 tccttttctt gcccacggac tctattcgaa gttgccggcg gatgacctta acggacggat 480 540 ttctggcaat gatgggcctt cgggtgctgg ggatgagatc ctagaggctg gaaatcagct 600 gtaattatta gttcacaaat gcctcacccg ttccttggga gcatagatga atgttccagt tccacccggg cagactttat ttatatactt atacttacta tcttcaatgt aagtaacaac 660 ctgttgattg agaaattcga atggggttag ggtcgatata gggctttgtc tgcaagaaaa 720 tcgagagtct ggtgagagat cgctataagg cagaggagga gagcgatcag gtgaatgaga 780 catggtgaag attgttaaca aaaaggacga attagctgac aaacttcaag gtcaattttc 840 taactaaact ggatcctgga cgttgcaggt gtagccaggt aagccgttct atagctgagt 900 tctcagcaat tcgagagaaa aagtatcata tttcacgcca taccaggaca acattttcac ctgtaataaa atctacaggt caggaaaatt tgtcaaataa agaacaatac gaaagagaac 1020 attgattgag tgcgagctta cgaacttaga gaacaaagcc atgttaaatg tctcaactta 1080 tatageette egetagtgga attecaatea eteceacace aagtgetegg ceatateegt 1140 tacatgttca agactcaatt attaattaac ctagcctggg aaggttagtc caggtctgct 1200 ggctcggggt cactgcctat tactgactag gtagacgaac cgcgaactgg acataaaagg 1260 acagaaaccc tccttgcatt tgccctaata tcagattcag ttcactatat gctagacgac 1320 ccaactcagc atacttcaat ttccaagccg aaggcaacga ctatcagaac gatgccatcc 1380 ctggagcacc taccgaacga aatcatagac tccattgcgt tccatcttga attgaacgac 1440 attcgcaatc ttcatcttac tagccgatgt ttagccctag ttctttcagt tttctcccaa 1500 cagtctgccg tacctaggat cagcggggag ccacttcaag tccttcttcc gacgcaaaca 1560 agtegacete acegaacatg caettegega ttttgaaaca aaaactgate geeetggteg 1620 ccctggtcgc cctggtcgcc ttcttcaaga cctggtcctc gtttgggttg tgaacaacac 1680 aaagtggctt gcaaagcggc ttaaggactc gaaaaatgag ggaacagaag acacgccatt 1740 ggccagaaga acaagcgaaa gcacaattgg acctaagcat ccttatgcag cggcaaatat 1800 aatctgagag aatgcgcgag tcaggaacag acgtgaaact gctcaccaaa gcattttgca 1860 acctcattgc agacggccgc aaccctgggc ttcaatcact gtcgctaaaa gtggtagtat 1920 atcgagtaga tgccgagcaa agacctcctc ctgatactgg gggcagctgg atgcttattt 1980 ggcgagctgc gggtgacgca ttccacaccg caccgggggc tttggttgcg agtagaacgc 2040 tggttgaaag actcgatatc tataattgcc agcaaagctg tagcttggcc tgcaccgagc 2100 taagtgccat tgatttcgag tgcaaaggcc tggcagaaga cactatcaat cagctactca 2160 gaccgcatca taaacgtacg gaaagaggac attggtgata cgggcaactc tgcagacgaa 2220 atcgaccatg atgcatctgc cctcgatgat ttcagagaag atgatgatat cgaggtggag 2280 gcgtgcgatg agataaactt tcttagtctt gcacgactgt tgaagctctg cagtggtctc 2340 gggaatccgg aactgcatca ttacgcaatc ccattggatg attaccctta ctctgattta 2400 catggtgacg tgttcctgca gcacatagtt gcgacggttc agctgcccaa gctacagcgc 2460 tatacacttc gaagactgcg tgttcgggaa gtggacctgc tggaattctt gaaagaaaac 2520 cacgcctgcc atcgaagttt ccagatggac atggtcaggc tggctttggg aacattcagc 2580 tccatttttg actactgcac gagcgagcac gccgggctgg aaaggctcta ttttaacgac 2640 tcgttcgctc cgggtagttg ggtcatgcgt attatgatag ggaccctagg aagcctagac 2700 tgataaattt tgacgacccg tgtagcaata ttttggatag gataggacct gaggtcagac 2760 ggccaattgt gattctttcc taggtatggg cgcatgactt gagatcagtc tgggatccgg 2820 aggtggaggg gcagcgacgt gtagaatatg ggccgtttaa tctgttgaaa tatggtcagt 2880 aacatcatta cctaggttgt tcatgatagc tacatagata gttaagttca ctgcagttct 2940 gtataaattt tcagttgtag atcatatttc tcttggcgta tatgtgttta gccgcagtca 3000 ttccattact gctagctatg tagaagttct gcattttcca ttgctatgga ccaagggaag 3060 tgtccagagg ttgcaatgca atttcgcgac agtatctccc ttctacgccc aatttggtga 3120 agaatccaag gctcctaaat ctgtttccac tgtaacccat gaatttagta gactcaaggc 3180 atgtgccact atctaatatg ctactcactt ctcgcgatgc tattgaaggg tcagtactta 3240 ggtatttact tttaggttgg acaatcctct aatgtctaat ccatttgaat tcaaggcagt 3300 atatgctcat tagagaagtg gcgcataatt actgagcaac tactcgtgct agacgcgtcg 3360
tcgactttta taagggcggt tggtcttgaa cttcctgctg gacaaccctt attcgcacat 3420
gtaccttcat ctccatgtca agcacacctt ttgaattcct agctgaggtc atcagtacct 3480
atcctgcata ggcaaaagga tgaatagaat tggggagttg agagaagtgc ggtacggcgt 3540
gacattcaac cactcaagcg gataataaaa aaaaaaaaa cgaaagagga aagggaggca 3600
aagaa

<210> 2086

<211> 4689

<212> DNA

<213> Aspergillus nidulans

<400> 2086

gcagcccgag gataaatgtt ttcgggatat cggagactac atgacaaaac gctatagaga 60 tttgggcata caagggagcc atgagagtat atgactgggc agactaccta gatcaagcaa 120 ccttcccaac gccattgagc gtcaagtaca catccgttcc ccacccccac agggtctgaa 180 cggcaatact accaccaaag tactccgcat aggcgcggct caacgggaga ccatatccaa 240 ggccagcaat gctgctcagc tggccactat tggaagaaat cgtgtttagc gcgtctatcc 300 cgcctgcttc gcccatatcc aggtcagaaa acgtggtgaa gctgtatgac cagatctggg 360 gcaagacgtc cggggatatg ccgccgccgc ggtctcgaat tcggagggta atgctttgcg aggatggagt ggagaatttg atggactcgt ttgcgtctgc agtaccaaca actgtatcga 480 540 cgtggaatcc gacgtcgctg tcggattgag cgcctgtgtc tagggcgtct gctggtttac cgttggtgac tggctcatgt gcttgtaaat gattgccagg tacatctggt gcggcggcga 600 ttgtcacttc aatcggctcc tgctcgtttc cactctcgat gacggccctg aatgcattct 660 tcaatagctc ggtgaggatg tactccacat gcacagggac atgcgcgaaa gtcgcgtccg 720 gttgtccgtg aatctccagc cgtgggcgca ccccatattt cagttcgcaa atttctccaa 780 cgaattcctc gcacgaccgt acaatacgag ccggttgcaa agcggtatcg attaccccga 840 tatagtttga cggcggcgca tccttccgcg gctgctctcg tccttcggct gatccgtccc 900 cagcaggccg cgacgcaaaa tgaagcgcca ggtgttgctc tgctattaac cgcgtaccaa 960 tccgcgctcg caaatgtgta tccaggaacc gcgtcacctc agcgggatcg atgtacttac 1020 gacattcaag aaagccgcgt gctaggatgg ggatcgtgtt ggaatgcgtg tggacgaggt 1080 ctgctagtac ctcagcaaat tgattctctt cctccagggt cgtgacctgc cgcttttgcc 1140 aggggagtag cgttgacagc gaatgaacgt aattgccgta aatcttggag acatgcgggt 1200 ttgcgacgac aataaatggg aggtttcgaa gagcttcaat acgggaagcc agtcgggctg 1260 ggagaagaga gagggtgaag ttggcggagg caaggagggc ttcttttgat agtggcggac 1320 ggccgtatct agaaagacat cgtcagatcg cgctctcaat gggtatctcg ccgattcctc 1380 acttcagcaa atcagctaga gtcaagggtc gacgccgact agctgcaaga cgagcgacct 1440 catcatttgc ccggggtgta agattttgtg tggtagtagc ggtggctgtg gtggtgagtt 1500 tgggatgact ggatgtcgca aaaagacgtg ctgctaccat ccgactacgg tggcgaaggg 1560 cgcttctccg aaggtcacga cctatagaca gtgtcagaaa tgggatcgtt gccgccatag 1620 caagcacaag ccatgctggg ttttaggtca agagcagttc ggaaagcttg tgaaattcat 1680 ttgtcgcccg cggtgaggat ggactcacgt gccggcgctc agtgcggatt gatcatccac 1740 tcgacacgaa tgtttctcag caacattcca acctacgttt tcaatctgga atcatgcgtt 1800 gttctcatta ttctccacca cgaagacgat gtttggatgt cttagcttcc ctaggatact 1860 atagcggtgc ttgggaacat aacctagcct ccagctccag ctagtatctg tgtttaccta 1920 tcacggctag aacgtcctag ataagataac ccaatggcac gatagtgggg attttgaatg 1980 tgatagcgtt tatataagag agaggagggg cagcgatcac attacaatca acagaacggt 2040 actogocatt tootacatot caggiaccaa giacgotoca actgatogoa togigatica 2100 gttatcggca cctcaataaa caggcgcttc aacattgcat aaaaactatt ctcgatgaat 2160 teggtgtatt etettgteat aaageataaa agteagatee gtaaeteata eattagetea 2220 gtgatggttc gaaacagctc agaaggcagc gtatttgctc tattgctcag agtccatgaa 2280 gagcgctaga cccccatcac tgagtcttaa cctccccatc ctgctcaaca tgaatgtgtt 2340 cgcttgattc gaagactgaa acgaggtcgt cggggtattc aacgctagta gatatgtcag 2400 ccggaatttg ttctggagac aggacgacaa caaggagctc actcacgtga aacccttgat 2460 cagggtgtac tcgtgcttga tggttcctcc cttctccttt gcagcctcct tggctctgtt 2520 gtgcaaaaag caggtttagc gaatgctttc gatgatgcgg cggaagggag gctcacttgt 2580 gaagctcctc gatgggggag tctttcttca gggtaaccta ggatagggag gttagtggtg 2640 agcctggacg agtgcacgac agggcgacga acgttgtaga gaggcatcgt gattttgagt 2700 tgtgggatga gtggacaggg agcagcgttc gagagatatt ctaatgagag caagtgtagg 2760 ggaggctgga gagtggtgga tcgtagattg aaaagggtcc ttcagccgaa ggtggggaga 2820 ccgggcttat atgtatgtct ttcccgggga ggggtgactc gagaggtaat ttccctcatt 2880 gtaagccctg aagataaggt gaaacaccaa gttactgcca ctaataaagc gtggctatgg 2940 ccataggtag ttgttgccta ctctatctag gtggtatcgg cgacgttctt atgcctgatg 3000 taatgataat aattetgeet gaageeatet aegtggtage agaaggteat ggaaceeggt 3060 taaagatcag acgggcttca aggatgctgc tataatgctc atattattcc cgtctaacca 3120 atttcatacc aggcgctata acaaagtgac gactgccaac gcttgccagg actgtatcag 3180 tgtcgtgatc accettgeeg etcgaggete ecetgeagea geagatgaeg tacgageggg 3240 cgctgcaagc aaagcaaatg cgggacacac acgtgactga tgaacaagca tatgtgcaaa 3300 atgacgacga ttgtatagtc aagtaacccg gctgaggcta aacttaagtg acttagaatg 3360 cataaccctc tctggccaga attttgcttt cagttaaaca gcagacaatc tcgtaaacct 3420 ttgatttcga gatgaaaggg aggtccagag cagcagtcta gtggaatgat aatgaataga 3480 acgcaggaca gcagtagcgc acctgaaata aacaggcagt gcagcccagt ctctacccac 3540 tttggccacg gccttgccgc ttgtgggctt cattgccttg ggcttgtgca actacaaatg 3600 ctgcggtccc tgagctctat caaggtacct gatctacgcc cagtccacgc ctatcatctt 3660 tgcgagagga atttgcacag tagaatgaac atcgacccca ctgacccgct ggcgccactc 3720 agaacatagt gtggccgtca cgtacgcccg ctgtacaaat tatcttgggc gcggtgctgc 3780 cacaagcgac aatgtcataa gccgcggcta tatctactgc tgttttactg cgcgcgacct 3840 tcttgccggg gatcaggact cgggtagtat aactcgggca tgagaatagc tgcatagtac 3900 tgacttgcag tgatcctgag acgaggatca ggcattggac gacaggccgg ttggtacagt 3960 ttgaaagccg ttgcgcttag gtgcgctgcc tgcagagccg cctcgttggc gtacccaagc 4020 gctcatggtc ggcgagatgg ccagatctgt tgctgattcc atctcctgca gagcgtggac 4080 ggatagtcga taagaagagc agatggccga caagagctga tatcaagcgg tctggactgt 4140 gatcattgcc gaatttgaag ggggttgatt gttttatgcg ccgtactgcc cctgaatttc 4200 acteggteag gteettaaag etgetgetge tgeegetgtt tgtetgeate ttagageagt 4260 taattcagat ggtaacggct aaaatcctag cacaatggca cgatagacaa tatataccgg 4320 gcgatggacg aagagagggt tcaccgctga tatttagagt cataatctac caagattcgg 4380 tgatgtgcaa gttgttcgg cgttgaggca ggcgatcatc atgaattcct tgtgcttaga 4440 cttgtcttcg tctatccaaa gcagtaatgt tgacgcggag acgccatggc gcttcccaag 4500 aacttggaag cggctttcat attggcatgc agtcttccat cttcgagata gcaagagttt 4560 gggtccagca gtaccttata atatgaagca ggtagagag ctgattttgt aggaggtgag 4620 gggtggctt gacaacctcc gaggtcgtcc tccgccaaaa gaatgtcaga tgactgaatc 4680 caggagata

<210> 2087 <211> 3401 <212> DNA

<213> Aspergillus nidulans

<400> 2087

aaaagtacgg ggtcacaatt tcaggttaac ctatggaaag attaaagaat ttccaaggtt 60 gggccgccac acgtgaccca aattaggtag ttttccagga atttccgggc gcaaaaggca 180 tgttaactta acttaccaag ctccacccct ggtccaagca acgtgtaatc gagaagtatt gcaaaaagca tggaatcatt gtcgaggcct attcgccaat tgttcggaat tataaggcca 240 acgatectae cettgtegag attgecaaga agtacaagaa gtegacacaa caagteetga tacgctacgc attgcagaag ggatgggtcc cgttaccgaa gactgataat tcagagcgca 360 ttgtgtcaaa tgccgacgta ttcgacttca acatcaccga tgaggatatt tctgtgctgg 420 acggactgga ccagggaagt gctggagcca ttgtggaggc tgttgagaat gagtagatcg 480 tttgtccaat actataataa tgcaattaaa gagtttaata gtccggtcgt tgcataagaa 540 acgcattgac agactgcagc gtgctgcgtg atgggttcac gtcatgtttc gatgacacga 600 tccaagcaag acgttgtcgg atgaactgtt tacttatcgg ttgcgtttga ggtccgacaa 660 720 actcacctac aacagtcaga gtaaggttgg aatagtgctg gtagcgattc aacttacccg catcattata gaacaggcag attatagtga gcaaggtgcc agcagaaagg tccttcccag 780 actcgcacat aacaagcaga gactgtgacg gactcgaggc caggtgcaga ttaacgaaat 840 900 cccgaacctt gtctaaatga ttccggaggt cccggccgcc ctgctttgag gatatacagc

ctagattcag acgcttgggt ttctcttccg tagtctctgc gctgctattg caatcaataa ccaggtcata gagaccattg gcagccaagc taggatccgt tcggctgaca tataggttct 1020 gagacggcgg cgataagtgt cgcttcctgc cccgaaccct gcttacggct ctcctgcatc 1080 aaatccgcaa tcacctcggg caggtcttct tctgcccgtg tcaagagcgt gaatttgtca 1140 gcccaaaata cagctggtgt aagaccgtgg gcccaagctt cgctgtcatc ccctgcacct 1200 tggatatagc caccttcgga tatttcagcc ccatggaccc gtttcgaagc cgagcaaaga 1260 acgaaaagat tgtacgcttc tcctttgctc aggtctgttg ggtggaagta tgtccggttt 1320 gcccaagcaa tgcgtattgg cttccccagc tgctgcttga gatcatccag atcaagttta 1380 agactetaca actegateag eccaectegg eggetggtge tettttegta eatacettga 1440 gtgaatggac aaaaccgtcg atcctttgct caatctgcga ctcctcagag gcacctaagt 1500 agttcggcgg caattcgacg gaatgatatg cagtctctga agggaacaac gctctgttaa 1560 agacggcaca ccagataggt atagtctttg acaaggcatc aggcatcact ggtggtccgt 1620 taagatagag cgaaagagtg gctaacggca gcaatatgcc aataacgagg taaattactt 1680 acatttgcca cgacgagtgg agtccactat aatgcacctg catgggtcaa accgcgatgg 1740 ttagtttgag agtcgaatta acaccgcagc tcgttaagaa ggcatggatg gctcactgac 1800 ccccgtggt ggcgggcaat tggtagaatc tgcaggttta gtctacgaaa gctgaaatcc 1860 cactggccag tatgtccgtc ggtgctcttg aagtaagcgc tcccagactt gacatcgggc 1920 gggatatacc aactcccgca tctttcgttg gcgatcaagg gtaggccgta atggtcagca 1980 acctcacgga caaatgcagc gtcagcctcg atagagcgga gtcggttgtt gacggaaagt 2040 gcagatcgtc gcaaggaggc tagtgtctgg gatacagata gctgctcaga ggaggggaag 2100 tgaagcgccg atacggacac ggggaagtct gaattggcga cactacccat gtcgagtctg 2160 cttgtcttgc tgcagaagag gaatcaaggg ataggagaca gagccatagg ataacaggta 2220 aggagtgtat gtagttagag tctgtccacg gccggttgta taaaatggct gaactaggat 2280 tattctgtcc gagtcaaagc gtccaagtcc tgccaggctg cgcaaggcct ggcgcctggt 2340 gattcgaacc aatagaatgc acacagtgtc agcctgtaaa gtggaccaca ggactgggtc 2400 cagattgagg catcgaccaa tatttgatcc gcatcgtgaa gtatgccccc tacttcgtcc 2460 aatggtgtac tacgaaacga aggagacgac tgctgcaagg aatgtatcag aagaacctga 2520 tgcgtaccga ctctcagccg ccaacgaggg atctggccag acctgaagaa cgcagggttg 2580 gcgtcgaagg aacggttgca ttgtccatcg actctcgata attacgacgg ctacgtagaa 2640 ccaagactta agagctccct tacaccggaa gatagtgcat aagatcaagc gctgattcgt 2700 ggctcagcct gggctcaaca ctacggggac gcttctaggg tctgaggtat atactgagtc 2760 caaccaggcg tcgctggaac actgtactcc gcatagcagt agtttgtcag ggataactgc 2820 tttgtcttat aacgacgcgg cggtttcagt caccaatttt cttcgttttc ggcggacatt 2880 gatgctattc aggaccaatt ggttcggatg ccaacccgac tataacgaga accgcctatg 2940 acaaagacac ggcccggtag actgaacaga cggactatcc acaatatcca gaagtacaaa 3000 aagaagaaaa agaagaaaaa aacataaagg aaaaggagta tggtgaatga tgaaagtgat 3120 tcgatttggt tctccccatg aacaagcggt tttctgcgcc tttccatatc ggctgcggga 3180 ccagtctcag gctcccattc aaacagcgct aatcccaatt tgtattgcat gaactttacc 3240 agaatcggcg tgctaaggaa ggcagtcttt gataggccta gcggtgcgat tttctgcgcc 3300 agtggagtcc cgaggcccgc cgtctctaga tgagctgcgt tgcggtcatc aagttctcaa 3360 3401 cgtcacagta tgaccgcagg ccccgctgat ccgcccacgt a

<210> 2088 <211> 1853

<212> DNA

<213> Aspergillus nidulans

<400> 2088

ctetetttgg aaaatgggat tggtgccaag ggcatatage tgcaagatgg eggtacgatg 60 gtcgaacttt attgtteeeg eeeggtteae egttttggae gggaaatttt gaagageeeg 120 eggtataact agetattata gaetggttta eeegaactta eatgttetet etgttetett 180 ecateegeta gtgtaeegga eaeteateag ggeaeegeae gtgggggaae aegtetttea 240 egggetatea eteaetgtt eateeattga gegggegaga ggtgcaacaa ateteegetg 300 aagtageatt gategatge tegagattgt teaggaettg eegteeetge atgeeeagaa 360 geeegeetee eggaggaaae egtggtgggt ggategaett aetggteagt tggaetgata 420 aegaegaete agaeeeetgt ettteatgt geeegaaage eggeggtegt teeagaataa 480

gcaggggtgg cgcggcgttg attcctcctg tcttagtatg cccatggctg ttgtgtcgag 540 tcaaatcgag tggtcgatgc ccgttagcat agcgggctga acagactgtg gtaatttgac 600 catcettcag tattetcacg cgcaaaatgt ettttattaa eeegatgtgt caacgaatat 660 acaaaggttg cgtcgaccaa aattgatgct gctcgagtaa ccatcaattt tctctgcctg 720 ctggggagcg gcaatcttgc acaacctcac actcaatatg tcgagatatc ccctagacag 780 ccaagcacca gcagtaattg tgctgactcg cttcttgttg gtaaccttga tcctgggaac 840 900 gctcgctcgg ctagcgacga aatggtggaa attccgcacc ttctttcggg acgactacta cagcctaggg gcgatggtga gtcaacctgg gaagtacagg atgtgtgatt gacagtcgcg 960 tagctagcct ccatcggcca ggcaatagct gtctcgatcg cagtgaacga gggatatgga 1020 acacatatca aacagctcag tgaaggccaa gtagctggta ttctcaaggt gagcacccct 1080 attttcatat cgcaagcagt cctgtctcct ggctttccgc taattgacaa ttgcccaact 1140 aaggcccaat acactgccaa tttcttttac atctttggga tcgccttctc acagctttcc 1200 tttcttgttt tcatccagca gctggcacac catagtcgtc gagtttttta cgccctgcag 1260 attgcgatcg ctctctggac cgtatccagc atcttcgcgt ccgcattcca atgccatccg 1320 cgtcaatggg attacattca tgaccggtgt ttcaatcgcg tatggatcaa accgtattta 1380 aatggatatt gggggcgggc taacgattga ccaggaggca tggtttatct acctggctgc 1440 gtcgaacatc gtcaccgagg tcgccattat tgtccaaagc atacacataa tgataaaagt 1500 ccaaacgaca tggaagcgga aatcgaacgt aatggccgtc ttcttattca gagtcctgta 1560 ggaccetece atettgtegt egeteagaac agagaaaaac gaaactgace ataategtet 1620 cgacagcgtc cccgcgactc taattgccca gtgcgttcta acccataaca ccattaattc 1680 ctccgaccca actctagcga catggtcgat agctgtctgc gcgcaactag ccctctgcct 1740 aagcgtcgtc acagccagca cgccacaatt cgtccccgtg ctcagacgcc tacaatccag 1800 1853 tgggatgaga ctcgatggaa tgacccggta caacacctcc agcaacccgc agt

<210> 2089 <211> 2979

<212> DNA

<213> Aspergillus nidulans

<400> 2089

ttgtgccttt cgcgctgttt gtccgctttt gctcttgctt ccccttccac tcttccctgc 60 aacgagcttt tcactaagtg tcgttgtcac tgtggactac cggccggcaa tttgagcgag acgattctga ttcccctaac ggattcaact cttgctcgca ttctccaaac cgcgtccacg 180 accetetetg teeggttage aattggtetg geatecaaag accetetetg gtgetettag 240 aaaaaagttc gtctcgtgtc cgctttccga ccatcgcaac gtacacggaa gaaacacgcc 300 tcaccaccaa aatcgtccgc agagaaggaa caacccggaa aacgccagtt gcgaccgctc 360 tttttcgctc tctttgtgtt cgtttccgct tgtgtccctg atacagtgct gttgatttgt 420 480 cccctcatgc ttttcaacta agagacatca actgcattaa aaccagagcc gcggctcgtt gagcaacgct cttcctcccc cccaggctca gggtgtggcg gacgcgtaga cggttcgttt 540 ctttactttg ccttccgtca ctctatctga tttggttgct gactggggtt gtctactgtt 600 tttagcattc accgtctacc gccccgtccc tgaactggtt ccattccccc ctcttcttca 660 ccatgccgtc tttctacaac accggcctcc cggcctaccc tcttaccccc cctcacatca 720 ccggtgccgg taggatggag aacgaacccc ccttctacgt cctcggtcac tcggccgctt 780 teceteceeg ttataceeag ageggetgtg aatteatega geaatattee eageagteae 840 actgttacgc caagccaccg atgaatgccc aacagcccat gcactcgatg cgcaccggca 900 gagacatgac cgcgttaagt caatccatgt tcggccccgt tcctgctgcc aacgtgctgc ccccgatccg caacaacgtc caactgccgc cgatggacca cgccgttccg ccgcagtatc 1020 gccgacaaga cccgattgct cagcctgaac aggccctcaa ggaggagaaa cctaccggtg 1080 gcgttgccgc ttatctggac tatgagatgg atcagatgtc cgactttgtg gctgagatgg 1140 cccagggaat gtatgacttg tacatcacca agatcaacct atcagatatt gacttcgcgc 1200 gaagcgtcta cccaggatca tctgtcccgc cccagttccg gaaatacgtc ttccagattt 1260 tgtcctcaac acgcctgccg agttccacca tccttctggg tctctactac ctgtcttgtc 1320 ggatgcgtat gctctcttct gccaagattt acaacgctgg cagtggccag gtctaccgca 1380 tgctcacggt ggctttgctt ctaggcagca agttcttgga tgacaatacc ttccagaaca 1440 agtcttgggc tgaggttagc aacatttccg tgagtgatct gaactctatg gagctcgaat 1500 ggctcttcgc ttttgagtgg aagatccatg atcgcatcta tgaccagcag gacggattcg 1560 cttcatggct ttctcactgg gagaaatggc gtgccaagtc ttccatcagg gctcacgaac 1620 ctcgacgctc cctcgctccc atcgatacca acatcacccg cagcaaccgg gtttcgaagc 1680 cgcttctctc tcccgaaggg ccgattcccc cacagtatca gcgaaacaac caatacgaga 1740 actcttggct taacccagca gcatcagagt attccccgcc atctgctcct cacagtggac 1800 cgacaactcc ggactactac tcagttggcc catgggggta ctcttctaac cctccaccgc 1860 catattcgag tacctggatg cctcatcatc agtacatgcc gcccctcgt tcgcagccgc 1920 catectacea ceacacteea tectaeggtt tecegtttee geaeggtggt tggaegaetg 1980 gccatggtgc ctcctgcggt tgctcgtact gcgccaaaca catggaacat tacatgtgtg 2040 ctaacctcgg ctccatgcaa ccaattctcg ctgcttgatt aacgttacgc tgcatacgat 2100 acaatgctgt tttcgtcatc ttgttctgtc tagattttcc ttcctttgcg tcttccgatt 2160 cgttcgatga taccgtctta tccttttcag tcccattcgc gttgacagtc cggctttttt 2220 tcggtctcag ttacatgcag aaaagcaccc tggttatctt gtctcttggt ccgcctgaac 2280 ggaaagaaaa gtcaaaacag aaaaaaaaaa gtgtcaagca gcgatattgg aacgactgcc 2340 acatcttctg ttctgagatt ccgcatgcat ttacgatatg acaccttttt ctttttatac 2400 ccgatttgat atgatttcgt tttcgagaga tctcgtcaag tcaaaagcag cgagatccag 2460 cggcttctct tgggtcttgg agtcgagaag tcacgataat ttatgatttt cgttcatcgc 2520 tttctgctaa tgccccttgt tctcgatctt cacctatttc gattcttctc ttcatatttt 2580 ctggattttg gcatttcatc tggcagatgt tactcataga tcgattcact tccccatcat 2640 aaacaaccat tccccattta cccggcgttg caatcatgtc ttccgtttta cgttttgcat 2700 tgccgcatcc ctccgtttcg gttggtttat attctctttt tctgccctca gtcgatcaag 2760 gttatgcttt tccgctgcat gtactctgac ccttgcactt tcaaaatcaa gggttgggct 2820 gatcggacac ggaggacctt tcttggcggt aacattattc ttttttgtct cttttattct 2880 acgaccette atgeatgttt tataceggtt etttttegat eeacceacaa aaaaagtgat 2940 actcccctta ttcccggttg tgatcttttt gtcccctgt 2979

<210> 2090 <211> 3480 <212> DNA

<213> Aspergillus nidulans

<400> 2090

ctgcagaatg tccgccaaac catctgcgcg cgtcaggttc ttcactatct ctggcaggga 60 gggaagacat gctgggaccc ttaatttttc tacagggttg caggtggcgg agtcgcgggt 120 180 ttcaggaccc gcgactagtt gaactcctta tttcgggaaa cacccttgca aagtcacagt cctgagtctc taagtgggtc cagaaagcat ccctaagtca atgtacggag acctcgtgtg 240 ggtatagata ataatgccaa gtgaatgcct gcgtggtttt tcctgcacgg gccaggagga 300 tgaaaccgag cgcttataga acgtttggta tacgtttccg cccctagatg gaagcaccta 360 420 cggagtttaa cagatcaact ataactctcg agacaaaggg aacttgtacg cactgataca taaggtcgac ggctaccagt aaaagaggaa caagtcgata agtccatctt tctatcgttc 480 gettegeage tettttegte atgeegttet teaaacgage etcegtggtg tacettetet 540 600 gctctttgac gccatctctt gccttcttca aagtgccatg tagcacgccg ctcgtcatac aacgggccga tcctatcgtg caacccggcg ttgcatcagg ccatgtgcat acaataatgg 660 gcggatccgg cttcggcttc acgatggact ataacatgac ccaaacatcc cagtgcaatt 720 cttgctcggc cgtcgaggat aagtccaact actggatctc ctcgctctat taccacgctg 780 840 agaatgggag tttcatacca gtgccccaga atggtggagc tctcatctac tatttgtgag ttggggttct ctgcccaagc ttacccccgc agatcacatc agtctaacag acagtgaaga 900 cagcgtcctg acccgacgac tgacggcaca atcgtcgcac cacccgctgg cttccgcatg gttgcaggga atcccttcga ccgccgcaac aagggcaaca tcgcagctca agcgcgcagc 1020 tttgcttgcc tggactatga tggccccggc acccctcaga cccatgggtt tccaaccacc 1080 aattgcccga atgggctgcg cgcacaggta ttcttccctt cgtgctggga cggggtgaac 1140 ctggatagcc ctgaccacag gtcccatgtg gcctatccga cccaagagta cgacagcggg 1200 ccctgccctg catctcaccc agtccggatc atctcgatct tcatcgaggt tacctggcac 1260 actgagcagt ttgccgatat gtggtatggc gataagcagc cctttgtgtt ttcctatggt 1320 gatcccactg gctatggctt gcatgcggac tttgtaagtg tcctaaaagc cgctgccaac 1380 gaaccacaac cactaatctt gagccatgat acagatcaac ggttgggaca tcgacgttct 1440 ccaagacgcg atcaacactt gccatgacga gggcggtgat attcgacagt gcgagccaat 1500 caccttgcag gaggactggg tgacagacgg gtgcatcctt gagcgctcaa tccacgagca 1560 gatcgacggc tggctcgatg cgctccccgg ttgaaacccg atccagcccg ggcccgaaga 1620 tgcgaagcct gtcacaggtt gccgtgcacc cactgctatt ggcgagcctc tgcattacta 1680 cactgacete acgageagee acggatggga gtgggttgga tgeacacagg acaacgttgg 1740 cggggagcgc attctgaccg gttcgtccgc cgggacctca gatatgacgc cggcgacctg 1800 cgttgagaaa tgccttgccg atggctacag cttcgccggc gtagagaatt ccaatgagtg 1860 cttctgtggg gatagcgttg gggaggataa aatgccgaaa gttacaccga tggggaaatg 1920 tttacagect tgcgctggcg acggtctgca gaattgcggc gggtatgggt tcattggatt 1980 gtataggaaa tgcgagggcg agtgcggcaa tctgcagtac cctgtggttc ctcactaggg 2040 ggcagcccgt ccagatgccc aggatagtag ccgactctga tcgtatggcg atggccacca 2100 acaagttgca tataagcttg aacttcatgg gcattaatct gattctacgg atactctatt 2160 tagccaaagt tgccattttt tgctttttgt ttcagcggaa aagaccattc aatataaccg 2220 ccccatttcc tttttttctt attccatacc tacagatact gtgtacagtc agagcccttg 2280 ctttattaaa caccagcagg gtgctctgtt gaattggcta ccattggctt catcttagga 2340 ccccgaacca ttgagtacaa tagagatcct tggagcccag tatttcccat ttcttaactt 2400 gtctaaacaa aagatacccc tcccctggca cgccaagcgc gagtgaatac cccgcaatgt 2460 ggctttcttt atgccggcaa cagctccatc ccctgtagct ctcccagcga tactgacatg 2520 gcgggtaata cggcaggctt tctgatagaa ggagttctga gccgttggcg aaacatactt 2580 gatatcaaca ctggctagaa ataccgatag acataacact gggtaatcaa aaccgaccaa 2640 ataggtccgt gcctatatta gtggtttggg ggggtttgga aagttggggg ggtaaaaaac 2700 ccactaggaa tatgaaatcg caaatgctcg cattattgta ccagaccgct gcaatcttaa 2760 agtecttete agttaattgt taaagaacae getacaaaee taatatgaaa egttggaatt 2820 aaacctccta aatgtcatac ttctgttaca cagcatatat ctattaaata aatcctctac 2880 ccatccaatt atttactaaa tcaaaccatc tttccctcaa atccatacta aaagatagtc 2940 ccatgactta accattttcc ttaataccat tgtccactta taataaaaca ctttaaacct 3000 ccttaaacaa tattctaata ttatcatatt cataaatcat atcttcggat atcaacttac 3060 ctccatctca tactacaccc caaatccttc tataaaactc attaatactt ctacccttta 3120 acactcacca taataacccc caccctgcaa ctctctctat aaaatcatca ccctattaag 3180 ctttatctct accatttact cttatacatc tttaccacat ttttttattc catttacata 3240 atacttatt caacaatct tctacaaatc cacttctaa ctatatacta atctaattaa 3300 aattccttca ccattaatgc aacacactcc acatcttca atctaataaa atcctattaa 3360 ttcattacat caaatcttac tcctctact tctgataaac cacttctcta actcttttaa 3420 tatatattat tttatgatat acatctattt ctagaataat gttcttacta acatatccac 3480

<210> 2091 <211> 2388 <212> DNA

<213> Aspergillus nidulans

<400> 2091

tgatctcggc gtgtcgttag tcgacccggc ccgcctcatt cctgtcacta ggcagctaca 60 tgacctatgc tagtcttctt cggatgcgct cagagttttt ccccaacatg ttcccaatgg 120 ttgttcggtc ggacatgttc tcgctagaga cacagctgtg agggaatctt tgagtctagt 180 acagggtaaa ccgatcgaag gccaaggaga tcagcgccat gtagggttct tggtgccctg 240 300 ctcagcgtat cacgcggctt gtgtcgtgac ccatttgttt gtggaggacg aggaggcgct caacggcacg ggattgctgc atatctttct ggatgactgc gggaatgtag tgaggcagtg 360 420 gcggacagat aatgagggag gggactatga ttttgatggg acgtggaagg agggtgtttg gagggaggat ttttatgctg ggaggggaga gttggggcct gcttatcgtg ctggagggat 480 aagggggccg ccgtattcag ttttggggta gtgctggtgg tatctgcggg ttcgggggtt 600 ctgcttggtt aattgaccct ttacaggtta ggcatgctgg ggtctggaac tgctacgtat 660 atactcacca ttaggtgctc tatcgagagg ccatagagca attttatact gttatgatgc atgaaaacag aaaaggaaag ttttcgtgct acacaaatgc cctcttaacc ctgcttcata 720 tcttccagat tgagcctagc atcgcgtccc aatcaatatc ttcagggaga ggccaccaca 780 840 tatcctcgtc aggatccatc tcaacgcctg cgtatgtatt agcataagct tttatggaat 900 ttttcatggc aaagaaaaga taatggaaaa catactctca atctcccacc ctccatgctc attattagta ggctcctctc tactacgctt actccacctc cccggagtcg gatggtcggc gtactgattg ctgacgaagt tcactttgca cctggagtac cccgggcgcc ttctaaaacc 1020 tgccaaataa agtcagcttg atcctgctca acccacttga aagctgaaga ggggaacaca 1080 taccaatact cagcaacatc ctgttctgcc ccttgctcgt gtcgaagcag tacccaattg 1140 taggtgccaa agtggtagat atcaggctgg ttgaagaggt ttacagcgca gaagacatgc 1200 aacgctgtcg tgcctgtagt agtgcccagc tcaaagttgt tcagcgccat gctgccctac 1260 tggtctggta tgctgttgac actggttgct tatgctagag cgaaggtgaa gttgcgcttg 1320 aagttgtggc tgagggtgcg gccagaattt tcccattcct gcaaataatg atgtcagcat 1380 gtgagtgagc ttgttattac cctggagagg tatagcttga acaaatgctc tgggtactca 1440 cggtttcatc aataccctcc gagtgaggca cagcgtgggg gtagcgagct aggcgtccga 1500 atacagacgc gttgggatca ccttcgcgtc tacctggtgt ccatcgctcg tcagagggct 1560 ggcttttgag tatccgtttc gaccagagct tccagtcctc cgtcatcgat ccggagtctt 1620 ggtcgaaata cgccacgttg gtgtagagag tgctcagtat gcctaacact gttagtcatg 1680 tgctgcctga gagacaacag acttgcataa ttagcttacc attgcaaatt ccccgagagt 1740 ctgaaaccac tgaggcatgc aattggccat tggcggtctt ttccgcctct cgtactcatt 1800 ggaggtttct gtgggggtca tgggcttcgg gcaccctacg aattcgccaa ctcttgcgac 1860 ttggtcccac ggcatctcac tctttcatta tttagcccta gggctgctgg cccgggccct 1920 ttaatggccg gggagtgggc ttttggggac tgtgcccgcc tccctctggg ggtcctctag 1980 ggttcccatt tacttcgacg acttgtacgg gttaggaatt cttttccgtt gtcttatcac 2040 ggcctcggtt cttttaagac ttaccgcttg tctcttcagt gtccggcggg attacctatt 2100 gtctgtccca ggtccttata tgttagcttc tcaattattt aacgttttcc gcccttcgat 2160 acaaaataaa gaccggcatg ttcttccccc tttcggtaaa tgtgtttggt tgtagtgttt 2220 ggaattttga ctatatctct tatatatctt gctttttgtt ctctcaacat cccccctatc 2280 taccctcttt catctattgt tataatttta tatgttgtaa attattttt tgattgtgtt 2340 2388 tgttgtgttt ggagttttaa tatatattag gtggtgggtc ccctcccc

cctaccagga tatgaccacg ttcaaagttc gcctcggagt ttttcttcgt tccgatgact 60 cgggctgtat gcaatagctc accacagcat gcagctgcat gctgacggcc caggaccgtg 120

<210> 2092 <211> 2216 <212> DNA

<213> Aspergillus nidulans

<400> 2092

ctcgccttaa ctcaaccgca cgttcagtga ggggcatttc acgtcttaca tctgcatata agacccgtcc ctccctcgac ggtctcagaa gaccctgcgg tacgaatatt gctccttgac 240 agegeaataa egaaateaaa ateeagagae caaaettega aaatgaeete aeegaateea 300 ggccaactct ctgcgggctc ccttccccca ataacccggt atattacggg tcacgacgct 360 teeggaaaag eeategteea gtetteeaac eetgeegaat ggtetteett tgageacaac 420 accatggcat tcactgtagc ctacacgacc tcgtccttcc cggtggacct agtcgacgac 480 accgatatca aggcacacga gcgcatcatg acttccgata aactggggct agtgaatccc 540 ggcggaacag tctgcagagt cgtggacttt gcgccaaagt ccccgccgct tatgcatcgg 600 660 acgcagagct tggattacgg tattgtcctg gagggagaga ttgagatgca cttggattct ggggagaaga ggttgctcaa gaaaggggat attgcagtgc agagagggac aatgcatgct 720 tggtataatc cgagtgagac gcagtggacg aggatggttt ttgttttgca ggagtgtaag 780 ccgcttgttg ttgcggggca ggagctcggt gaggatttga cccaggcgaa gacagatgat 840 attaagccga gtcgttagtt ctgctcgtct gctagtgcgc acggtcgact attagcagac 900 ttaacatgac gtacgatttg gactatgata gtgggaatgc tccagcaaaa agcatgaatg tgtttactga gatagtacgt tggtgcgttc tatttgagat atatacatta tccagctatg 1020 caatcttgat gacaatcttc ccaaagtgct gtccattcgc caagtacttg aaggcttctg 1080 gggcatcctt gaaggagaaa accttgttca ctactggctt gatgctgtgc ttctcgtaga 1140 aagcaatcat ctcctcgaac cggtccttgg gaccgttgat gatacccttt agcgtcacat 1200 tgcgagatag agcgaggaga ttcacattcg ttcggtcctc gggggcgtca accttcccgc 1260 tcaggtatcc cacacagtcg atgaggccgc cccaggcaat gcagttaaag ctctttttta 1320 atgtaccege accacegace teaataataa tateagetee gtggttgtea gteagettta 1380 atacttcttc ctcccagtta ggagtcttgc ggtagttgat cgtgtagtcg gcgccgagct 1440 ccttagcctg cttcagcttg tcgtccgacg acgaggtgat gattgctaga aacatagtgg 1500 ttagtttcca tctgcccacc agaacgaagt gaggaactta ctctttgctc ctgaagcttt 1560 ggcaatctgc aaacccgaaa cagatactcc gccagtccct tgaagaagga tatactcccc 1620 ctcgccgcca ttctgaccct tagggcgcat accgttgatt gacatccaag ccgtcaccgc 1680 cgcgatggga agagtggccg cctcttcatc ggagaggtag ctcggtgccc ggacgagacc 1740 gtgggcggga aacgcacgat actccgccaa gaccccgggt tggggaagac caagaccact 1800 ggccatcatc ttctcaacga cctggccagt ctggtggtca gggaggaaag tcgagggtac 1860 cctgtcgccc ttctgccaac ctgtcacacc ttcccctacc tcaacaattt ctccgcacat 1920 atccgagcat ggtacgagtg atgccttgtc ctggctgacg gatttgtggt ggccatatag 1980 tccgcagcaa actgtggttc attcaattag cctgagactt tttgtatctt gctcctgagc 2040 ttcgacggac cttcatagtc gcggtagtta agtgacacgg cggaaatgcg cacaagtacc 2100 gggacgtcgt cactgctgaa ttgaagacat cgtgtagttc tcttggggat aatggt 2216

<210> 2093 <211> 3110 <212> DNA

<213> Aspergillus nidulans

<400> 2093

60 tttttgactg ccccttgtgc tctaaaggag ctaaacaggg taccctcttt ggcaatggcg aagttgagca gaagcccaac cctgaacccg atggactagc gatgaagagt ttaagaggca 120 ccaaaggttc agggtaagat cctgctctgt catgaacgaa ttctatatac cccaagctat 180 240 ccactatcta ccaaggtage tgtgttatgt atatetttgg ttegteetae teeegtgeeg 300 tcattatccc gatcctaggc ctagattctg ggccgaggct cagatcctgt gcaacagcta cggaaaggtc ttgaactcgc gatgcaaaga agtaattaca tcaccacctt tagtacacta 360 420 aggcacggta cgagatgctg gcttatagtg tctgggctga ttttagtgat aaagctagac gacctctata acaggaatga ggccaagcta atgctgttgg actctattag attcttcttc 480 cgaccgaggg tcactatggc ttcgcaagga atttacactt gattgatagc tctaacggcc 540 ttctcagata attatatgaa tcttattccg ggccattttc tatccagaat attgtgttcg 600 ttcatgtgtg atatgagaag agtagataaa aagcgaaaca acgtcatcgt ttgctaccct 660 gcttagtacc ttttcacgct ggatctttaa ttcagttcac tccccacttt ccttcgactg 720 aaccacacct acgcggtcat ttgctagaac ctcatagtta ctgtatttct ttgttcgcct 780 tgggccagcg gcttcacccc accgcagcat tatcatactg gaacctcaac tcttcccttc 840 gtcggtttcc acgcacagta atcggcccac ggtcccggcg cctgctaata ggcggtcatt 900 cttttctcac tactgcagca accggttgca gggagaaaat tctgaccagc gtttcaactc 960 agagtctggt tttggaggag ggtgcacata gaaatcagat ctcgtctttc ctccgcgcgg 1020 gctcttcgcc actcggacgg tgcctgtgac ctcttggggc agctgctcac ttcggcctcc 1080 gttagccacc agacttctga ccttgcgtct ctcactcctt ttgacgctga tagcgcagct 1140 aaatccagtt ctctctattc gatcatttcc ctccagttta tccagtcgcc tctgcgcacc 1200 aatttacgcg agcccgaatc ctaaaaagac aaaagatcgc gaaaccgagc ctccgcaccg 1260 tgcagtcaaa ccgcgagaat acagcaaaga atacccgggg tatagatctc tatgtcgaca 1320 gccacggcgc ccctctgatg ttcgaccgtc ccatgtagca cgaaccatcg tcgttcccac 1380 ttagcctcat cttcactccg tactcaaggt tgcgccgttt aaagcagtcg ctcctaaacg 1440 gccgactggt actggccgct gggccgttga ttgcttggga aactatgggg gctgcttcat 1500 ataatcccga tggttagtta tatgccgtta ttctttcctt cccctggact tctcctattg 1560 ttccatttgc ggggcagcaa caaacatcag acttgtatgg gtgcgagacc gagacgaacg 1620 aaacgacatt acaggaatca aagctagagc gcaataacat aagatggaag cagatgctgc 1680 ccggctctcg tctttgcttc aagcttgctt tctgcctgca cgttcgattg agactcggaa 1740 caatcctgag caccgcgttg catatttcgt gatttggctg gaacagtcga aagatgctaa 1800 cgatattttg aatcgcaggc gaaccaagtc ctttatcgtc cccgttggga cgattgtcag 1860 aatctccgga ggacgagtct ttcatgacac ctctttcgga cgaccaaacc aactcgtcaa 1920 aatactctgt ggaaaacact tcagctgggt ttgatgtcct tccaaggtgg gtaaatcacc 1980 atcagcggta tccccttgca ttatgggccg gcaccataat gctattgtat gaaccataat 2040 cgagactaaa aaccacgatt tgatatcttt ttcaggtccc cgctccttga gcagcatgaa 2100 catggacttg gcccatccgg tctagatcgt atacgctccc aaccgccgtc tcgggtcttt 2160 acacttccaa acatgtccac ctcttctatt ggcgcgttga gtccccgaac cctctcccct 2220 tcaccgcgat ctctttcatc atcgagagcc aactcaatgg ctgtttcgtc tagccaagat 2280 ataaatacgc tggaagatct tcatcggttt ccctccgaat cattacattc tttttctttt 2340 gcgcaacaat ctgaggagct attacacact cgccagaaca tcctgaagag atctatagac 2400 tttatgcgcg accgcttcaa atggggcccc ggtagcacga cgggggtcgc cagccccccg 2460 aaccgtatgc gcggcgatac ggacacgcag gcgatggtgg atcttatgtc ccagtccagc 2520 atcttcgggg cttcgttcgg acccatgacc ggacctgccg atttgggaag cgacaatgtt 2580 tttgacagaa catttaccga tcttcagcga ccactgccag aagccaagga cttcgggcag 2640 ccgccatcgc aactcccagc gcaacctcat ttaacctcca gtcagcaact acctcacgaa 2700 agaagagggt taaagtccgc acctgcatcc aggcggtaa gcttaaaacg tacattcacg 2760 gacgtcagtt ctgctatacc tcagcgtcaa ctgatagaac ctctagcaca accatatccg 2820 acagcagacc ccttttcccc gctaggtacc ccgatcattg gctctgttt tccaactcca 2880 gccttgcaca cccatagcag caaatggaac cctgtctcaa ggccgtttc cgaactgaat 2940 ccaaggcacc ctggaccatc ttagcggcga atgacttatc atgtctcgta tttggcggta 3000 cacaggctga agttcgcaag ctgagtact tagaggtcgt acaagggat cgacggcaat 3060 gggtcgagtc aaaactgcga aatccaccac cgatgctgca gccaaagctg

<210> 2094 <211> 3017

<212> DNA

<213> Aspergillus nidulans

<400> 2094

60 aaqaatcgcg tttgactacc gcaccacgcg aatgagacct ccaaatcaag ccttatagcc cgagcgtttg ttttcagggt atatcggtgt gccaaaagtt agcgttaagg ggcctttcgt cggttcaagc gtcaatgcct cgacgtgcga cagcctcaac actgagacgc gatcaacgcg 180 tttctcttca gccagcgggg ttctgccggg cggtcaagac aatcaagtcc acccacagct 240 cgtccaatca gcagctcgga accgataagg cactttttcc tacctaaatt tcttgagcac 300 aatcgatcca tattgatccc tcttctatca tcggccagga agtaatcgga ctctaccgtt 360 atcatgtcct cagattcgac tactcaggcc gcttccccag ccgaaggctt aaacccatct 420 cacacatacg tececaacaa gggetatgee aacgaagaeg gegeegteee egetatggeg 480 gggcaagacc taacacctga agacgaagat tacgaaggcg atgaatacta tgatgatatc 540 ttcgaggagg agctagatga aggagacttc aactcttcaa accctgcaga cctcacaaaa 600 660 qcctacaatc qtcaaaqqaq agtcaacqaq ctcgcggccg atccgaacgc cccaaagtgg 720 acatatecea aaaegaaeae acaaaageet aeegteaaea egtatgeate egtegatgat gagataaaat ctctgactcg acatgccgct aaaatcaagc ttgacaatgt gcagtccggg 780 ctggcagtac gcggtggcag cggcaccgat agggcggata gagccacctc cgagcaggtg ctggatcccc ggacgcgcat gattcttctg caaatgatta accgcaacat tgtttctgaa 900 attcatggat gtctgtcaac cggaaaagag gccaatgtat accacgccat gctacagccc 960 gaggacgatt tcgacgcagc gccaatccac cgtgctatca aagtctacaa gacgagcatt 1020 ctggttttca aggacagaga caagtacgtt actggagagt tcagattccg ttcagggtac 1080 aacaagagca acaaccgagc gatggtcaag ctgtgggccg agaaggaaat gcgcaacctg 1140 cggaggatat acgcgctggc attccttgcc ctgagcccat caacctgcga ctccatgttc 1200 tagttatggg cttcgtcgga aactctaagg gcattctgcc ccacgcttga aagttgttga 1260 cttcaatatt tecgaceegg aaagcaaatg gegtgagete taaategaca tgctagggta 1320 tatgcgtgtg atgtaccaga cttgtcactt ggtccatgct gaccttagcg agttcaatac 1380 tctctaccat aacgataaat tatacgttat cgatgtcagt caaagtgtgg agcacgatca 1440 cccgcgcagt ctcgaattcc tgcgtatgga tataaagaac gtcagcgatt ttttccgccg 1500 gaaaggcgtc ccaaccatct ccgagcgggt tattttcgag ttcatcattt ctgccgaagg 1560 cccggccact gtgacggatg aactgcgtga tgctgtagag aagcttttct cactcgaacc 1620 cgaggctgct gacgaggtcg atactgctgt cttccgtcaa cagtacattc cccagacact 1680 agatcaagtc tacgactatg agcgtgatgc ggaaaaggta aacgctggtg aaggtgatga 1740 tcttgtgtat cgggatcttc tagctcggga gaaaccctca gctcccccgg acgacgaggc 1800 cgagaccggc tccgaagtta gcggcggcgt ctctattgca gagtctggct ctgaagatga 1860 ggaagaacgg gatcctttcg agaagaaacc tccgcgagga aagcgtttcg aggacaaaga 1920 gtctaaaaag gagcataaga acaaggtaaa agaggagaag cgcgagaagc gggccaacaa 1980 gatgccgaag cacctgaaga agcgtctcgt ctcgtcgtcc tctaggaagc gcaagtgggc 2040 aactggacct tatcactcaa tccatgcatc ttgaccgtgc gtcaactctg tctctcagct 2100 gcgtctggtc ccattctggt gacattcgca tctcaagcac atgaaccgct acactacccc 2160 aaacaagtag atcggttccc cattcggcgc atgccatcag tccccggcag aggacaatag 2220 cgccctcgac gcttgtctag gcgcccgcaa aatatattag atctcaagat ctccagttta 2280 gagccacaaa aactaaatca gccatagaag gtattcatcc gtacggatct tccgagtgta 2340 gaagcgtatt cttatttctc ccacacagct ccatcatatc cctccatcaa tgccgtatac 2400

<210>	2095	
<211>	1073	
<212>	DNA	
<213>	Aspergillus	nidulans

<400> 2095

ccactgttat ggtccactga aaacagatcc ttcttttgat tttctcggct gacgatcttt 60 gtacccggtt tcggggctga tgtttgagat gggcccggtg ggaactcgtc tccccgccat 180 qacctctaca gcgcccgcac actacagcta ccactctccc acctccagcg acagaggccg gtcaaggcag aactcggatg ccatggacat ccagtccatc actgaacgag agccggcgac 240 cagatacgcg gttgcgggcg gccctgcgcc ctggaatcgc aacgggtctc cgagcatgag 300 ccctatgtat agcaagtaca tctctcttac ccctccgttt ctttctgctt ttctaccacc 360 420 ccatccctct ttccagtctg agtccaggct tgttccgctt gaagtggcta atgtgatcct cgtcttctct ctttctgtgt tttagcaatt ccgagcgaaa ccagtttcat gaagagaacg 480 qacqcaccta ccatggcttt cgcaggggaa tgtattttct tccgtgcgat gagcaagaac 540 aggatcgcct cgacatcttc cataagctat tcacggtagc gcgggtatcg gagagtctga 600 tctacgcgcc ccatccaacc aacggccggt ttctggacct aggatgtgga actggtatct 660 gggcgatcga ggtagcgaac aagtaccctg atgcgtttgt cgctggtgtg gatttggctc 720 ctattcagcc tccgaaccac ccgaagaact gcgagttcta cgcgccttc gacttcgaag 780
cgccatgggc catggggag gattcctggg atctaatcca tctgcagatg ggttgcggta 840
gtgtcatggg ctggccaaac ttgtatcgaa ggatattcgc acatctccgt cccggtgcct 900
ggtttgagca ggttgagatc gatttcgagc ctcgatgtga tgatcggtca ctagatggaa 960
cggcattgcg gcattggtac gactgtcta cacaggcgac acgagcgagc catgcgagcc 1020
aatcgcccta tagctcccgc gatacaatac aagacctgca ggacgctggg ttc 1073
<210>
2096
<211>
2160

<212> DNA

<213> Aspergillus nidulans

<400> 2096

60 tacgcttttc tttgtctcag gcatcctctg tggagtcgct tcctttgttt gccctctggc ccatcgtatc tcgttttgtc tgtccagacc cgcggcttaa gaacccgtct ctagactgtc 120 tccagagtgt ccagagtctc cagactgagc gctgcaacaa gggactgaca gggactggag acggctgtca tagaactcta atctccagct gctacgtctc gcgactccat ctggaacgag 240 300 qaaaqqtqqq ctctgaatgt aacatcctca gttagatctt gaggccagaa tctggcggta attttgcctg ttccagaaag ggaaaaataa ataaaaatca aaaatcaaaa aaatttatta 360 aaaaaacaaa acagaaaaaa gtcctggaac tgatttgctg ccaggccggg agcgtgcctg 420 gggatttcca atcgaccctg cggtgtccca gagagccagg ctaaactgtc tccggattag 480 540 ggactctgcc agcctcgggt tcaaccgtcg ctgattgggc tcagtcgcct ctctgaagtt tggaagtttg gccaggcact gcaggagcct ggagggtggg gggatgtgtc ccctcctcgt 600 ctggcttttg ccagtcactg gtggtgacca agtggtacag ctcggcctct cccttagcct 660 ttccgtctac cccgggcacg tcccacttgc tttcccactc cgtgagtttt tctctggccc 720 780 ccaggcccag ctgtcagttt gagagtcaga gatagcgtta ttagcctgga atctctgaat 840 qqqaccatct gcgcctagca tttaggtaca agcactaatt ttcgctctcc gctaataata tggctcgttt cttttcgtgc gagtgagcgc ccccctctct cagattcgcc atactcagga 900 gtttccctcc atcaaccgac cctactccgt cctcagccag gaataataat aataatatta atcctgacca tttcgagtcc ggtaaattac cagtccgctt ggtgtttacc ttcgtttctt 1020 ctttcttttt ccccttctcc acctctgtcc tctggagtta gccaaggcta gccagtgaag 1080 cgggctattg ttctggcctg aggatcacct cacaaccgac tgaccagact ccctcaacac 1140 cacttactta tactactgag ctcctctgca gttctgaaca tacacggcat atgcttcttc 1200 ctacctagag cagagteega gtettteeac gateteteaa ggteeeteta tttatactaa 1260 ctgctcgcct cggctccggt cttgactgtc gtatcaccaa gtcgcacctt gaccagctta 1320 ctaggcatat atattacccc tcctctatta ttcttcctgg cgttctatta ttattattcc 1380 tecegtegee tegetagtga tatattatgt tecageetea aagteageae caacageaee 1440 gtgactcccg tcgatccgtc attcctcgac ctcgtttctg tccgtccaga ctgcagacca 1500 gaccagaccg teceaacceg eegcateetg geettaaett teetgtgata acettgteet 1560 tgtcacctcc gatcctgtct gtgattcctt tttcctgtgg ctctcttctc ttcccctcaa 1620 ctttcttccc tcgtctcatc tcaaccctcg tccgaccctt tctctctcgc gtctgctgct 1680 gtggccattg agttggccac tcgaacgcaa ctcttttctc atcagcctct gcttctctta 1740 teeggeteae tgeeetttt ceaacggate etagaetetg gttettgtgt eeegtteete 1800 gggccatatt cttgagttct tcgtcgctgt ctgggcccat ccccacaatt tctaaacttc 1860 ccgatctcca gtcctcccgc gccctctaat ccgccatggc tcctggcagc ggccgcgatt 1920 tcagctgtcc ttgggatgag cctcattgtg gaaaggtaat ccgctccctc ttggtaattt 1980 cgccactcgc taattgtttt cagtcgttca atcgcaagtc agatcttggc aggcactatc 2040 gtatacacac caacgagcga ccgtaccaat gtacctacaa ggactgtcat aagagcttca 2100 tccagcagag cgtattgacg gtacattccc gaacgcacac gggagagaag cctcatgtct 2160

<210> 2097

<211> 2333

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2097

ggggaatttt aattccatgg taaaacggta aggatttcct taacaggtaa agccattacg 60 ggtcttttga aggctgggaa ggctcaaacg ctgggattac gggtcgagcc ggcctcatgc 120 attacgcagc ccttccaggt ctcctgggta gggctggccc gtggttggat ccgtgtgctg 180

gtgcccgagc ataaattccc gtaatgcgac attcatgggc taaggctcag gagcaaattc aggtaacaag tgttcgacaa gttcttcaga ttatttaacc ctccggagat cggatgagtt tctgtctctc aaaagaccaa ccgggttgat atgtatgatc tatagaacga ttgtcagcca 360 420 ggcaaaattt ggtagggtgg atcatttctg tacggacctt gcggtatgat atcctcaagt cgcgttatga gctgattgta gttgtcaccg tactttgaaa gtaagccaac tatggtgtag 480 540 agttcttgcc gcgtttgagt gtgcatcaca gggatttgcg ggactataga gtcgtgcgaa ggcattgaaa gatctggaaa gaggtaatta tcgaagagct gttctgtgag gttgctgtgg 600 660 atgaatattg ttaactacat agacagcata tgagagaagt gccgactcac aaggtatcga 720 gagtgatgtt agctgaggca gaaatatcca agcaggactt caagagccga gaaaaaccga ggataatgtg atctacaggc tctctaccaa caaactgcaa caggttagcg aagtatatcc tgaaaaacaa caatcatgca acaaacctcg ttcgttctgt ggctgagcat aatgccgctc 840 cattgcctga gatattcact gaaaatcaag tcatgagggg atttctccgc gaccgatgtg 900 aatacgatat aagcggcctc gaaaaactcc tgagactgcg ttgggaattc tagcacacgt gagaaagtac ggacaaaagc atcccatatc gttgcgagta tatcgatcct ggtggggttc 1020 tcagagagcg caacttctcg tgcttcttgt gcttgcgggg cggggaattt tggtttcttg 1080 aactgctttg aaggactaca gataagaaaa ataatgtccg atattccctt tcgaataggc 1140 tgatgggact cctcaatgag tagagagaac aagagccggt cgaacttggc ttggtgcttt 1200 gttgcatccc agaagctggg gtctctaaga gacccttcga ggaaaatagc aaaaatgcag 1260 cagacaagtc tttgtatcgt gagttccgac atttgggggt tgcgcaagcc ctgcccgacc 1320 tccaggatac gaactaactg agtaaccaaa gctgtagaat ctggaattac gggcacatca 1380 ccagacacag gcgctttcac tgattttagt tagccataag gctgatcgaa aatagaggtt 1440 tgggtgcgat ggcttacccg tcagagcaga gagcagacat tcaatcaagc tggcagcaag 1500 ctgaatgctt ataggtgagg ttcccaacgt ctccaacaat tcaccgcgag tcagggcagt 1560 gatcacagac tgaacactat gagacaccat tgattcgctc ggggttggct gttgaatatc 1620 attattagta agtgatagtt cgacaaaaca taaggtcaca tacctcaaga gcttcttgtc 1680 gaagagattc agaaagtgca ttgacagagt acagaaattt atacggcctg tccatgggaa 1740 acatattttg gtcggtttca ctaggagact tgaccatatc cataaccttc tcctggggcg 1800 gaaagacaat aagaaactca tatatctgtc acaatgatca gccatacttc attggtaaga 1860 gcaacaacgg tattaagacg cacctcccga gcgagatggt cgtcaagatt aagaagctcg 1920 tataaatcgt caaagtgctt caacacctca ttatcaaccg aagtcaaggg ctggaatttc 1980 cgtccaggcg tgccacggca gctcgggtct ctccggacga tcatcaatcc tgatgagagc 2040 ttcaaatccc gaagtacctg gtcaggtttc tcgagaaggt ccatcctttg tcccgagaat 2100 atgatcataa gcttggagaa accggtcatt tttacgagcg ttcatggag ttcagaagcc 2160 gttgacaaat ctccaatgcg tagcgagcga accttggatc gtgaaccacc atcaaacgcc 2220 tggtaccgta tatcgatcaa ttcgcctttc tccggctgga aaaatatact gggaggtgaa 2280 ttttgtggtg ggctatactg gggtcgagaa cgtaaggctt taaaaattnc gaa 2333

- <210> 2098
- <211> 2981
- <212> DNA
- <213> Aspergillus nidulans
- <223> unsure at all n locations
- <400> 2098

atcctatcac gaacgtactt tttccaccaa tttactatca caatttgcga tctgcaatta 60 accgacaagg ccacagtatc caaggatggc agatcttgcg aagactccct ttgtacggga 120 gctcgcctca agcggtacat aaccttctct ctgttagatg cgaatgctga cttacaaact 180 gcagacaaaa aaatccgcga caaagccacc gactctctca tcctcttcct tcaatctaag 240 300 accaacctct ccctcctcga gcttctcaaa ctttggaaag gcttgttttt ctgtacgtcc tcgctataca atccttctag gaatcgttgt tgattgatgt ttatctgaaa caggcttcta 360 ccactccgac cgccccctta cgcaacaagc cctcgcccgc aacctctcct atacgctcgt 420 tccctctctg cctcgaacaa cagtgcatca gttcctccgc gcattctgga taaccattgg 480 540 gcgcgagttc cactctatcg atcgcctccg tttagacaaa tacctacttt tgattcgctc gtatgttggc gttgcgttcc agatcttctt gaagaacccc agctcggcct ccactaccac 600 aaacggtact ggtaccggta ccgacaccgt taacaagaag cgcaagagag aggactctac 660 gaagtccaag aaacgctcaa agtccaagtc taagagcgcg caaccggcct ctgacaatga 720 agacgaagaa aaaaacaccc atcccaactc agaatctccc tccacaacct ccaacagcga 780 ctggacagac cttcagtcct atatagaaat cctcagcgaa ggtcccctcc atcccttaaa 840 tttcgatccc tcgcagccca aaccggatga ggagaagggc atcatcccga tgccccacgg ccccgacggt ctgcgctatc acctgttgga catctacgtc gacgagctgg aaaaggctct 960 tgagtttgac acggaatctg gaaagcctgt gggcgaggtc cccgctgaga ttctgatggc 1020 gccgattgaa aggttgaagg ctgagagccc gcacaaaccg gtcagggtaa gggctgcgga 1080 gacgctggct gatgagagaa tggttacttg gggccttagg gagaaggaga agaaggagga 1140 attagagcca gtcattcgac ttagatcatg tgtatgtgtc tatgtattta tatcctttgt 1260 taaaagcagt catttttggg acgtctctcg ggttattgaa agataacact agacggctta 1320 acaaacccag taactgagat caaaacgatg tatatgtata tatacgtcta tgcgcgtcgt 1380 gtcttaggat gtaggataca cagtacacaa tacacaatga atccacgcct agcagctcgg 1440 aaccgaaagc cctaccgaag ccaaaattga cgtcaaataa gaatataaca gttaaaccta 1500 acagaaccat gggaatacgt caagtcaatc acaaaagacg ttgtcaggtt gggtatcatc 1560 acaaggaaag acagcggtag cggcgggcga acatgtagcg tctatgccag acgaaaggcg 1620 acgattaggt agctaggtga cgagggtata tctgctcgcg tgcttcagct tgatccggca 1680 tcaacagtca caaaagtcaa ggccttgggc agccgcttca tataggtggc cagtcttgga 1740 gaggactgtg cctagaccct tgtggatttc gacctggaaa gcttcgaagg ggattttttc 1800 tccatcgacg ctgatatacc cctcttttc ccttggggtg agtcggaaag cgagtgcctt 1860 gcggatctcg acttccggca tatcgaagaa tgtgccctcc gggacttcgg acatcatttt 1920 caagatgcgg gtacgaggag tttttccgtc aattgtgacg atgtccataa ggccatcgtt 1980 gggcacggac gccgggaaga agttggtatc cttcgatact atggccatgt ttcccgcaaa 2040 gaagttgcca attgtgtctg ctggtacgac ggcccagtct ttgggaagct catcgagaac 2100 ggttccatac tcaagcttgg gaagaccttc ggtgtattcg gagtcctgac gcgagggatc 2160 tggtgggggg ctgttcacat atgcattata atgatgcttt atagagcttt tgtcgtccat 2220 taccactttt atagcaaggt cacaagggta tattgctcgg gacataaggc gcattaaaaa 2280 gccgtaggta aagcggtgag cccccatcca gcgaatgtgt tccgtgccca gatctgagtc 2340 tgcgatgatg ccgaaagact gtgataagaa ggacagagtg cgagtgcttc cctgcgtaac 2400 ggacatgaga tcgatgggca tgcgcactcc cttgatgatg gtcagagctg cgatggaaac 2460 getgeegtt eegeaaagat teeaggeeat tgeatteece gaacegeacg gtaacatgge 2520
aacggetage tttetaaggg etteecegge gtteggette etegeggee egttgaagae 2580
tteataeggt ageecateec etgageagea tacagatgge gteaaacgea ttgacatega 2640
tttgetetge aateteagtg geatgteece caatgtgteg tttettgeac atecagetea 2700
cagtgtgeag eegeaaagae aggeteegeg tatgttegat acatttage egeatgteece 2760
ttgeegeea eggggttgat eagggaettt aagtegetta taacgetgeg eatgnegtat 2820
geanagetag taagtttgae atecattget egaceetega tntetettea geggegatgg 2880
ggtattgeag ageggtaaeg egatgteatt ttgeetgggg etegegtang tatggteaeg 2940
eeactgacat acetgtttea geegtataea agaagatgag g

<210> 2099

<211> 3082 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2099

60 ccttggaaaa tgcgccttga cagattgcag tcgaggggcg cttcccacca gactgtagga ttatgattcc cgcactagag tgccgctctt tgagatgttc atagaggtac gggctggcgc cgagaccgcc aacgaggatg ataccctgct cttgttagag atgctgttaa gatgggtaag 240 gtatatacct tgacgtcgag gccttggctc cttgctttgt agacttggcc gtcgacgagt 300 ttgtcgattc cagcaaaaga ctcagtaaat gcatcttgaa tatgggagct agatcgcgtt agacagagac acaatcagga gatttgagcg taccctgaga aatggattcg tcccttcttg 420 atgaacggct cacgactcat gtcgtccaag ctgtttttcc caaatgcttc tgctggtata ctcacaatat actccttttt ggagctttgt ggtttaaact gtggcttaat ggcgtgttcc 480 540 catteteet tgaggatete tttaatacca geettgetga gatgateeca gegaegteeg 600 agtcgtgatt tgcatgcgtg ttcgaaggct tcatcgataa agataccacc acacagacca cctagaaagt ttagaaagaa taagagtaaa gggttgatat acttaccagt tccttcgacg 660 gcttcgtgca ttgcgatggg actgaccgag gctatctcgt aactgatcaa gtcctacgac 720 cgtgagctag gaggtgaagt tggagagaag caacctacaa cggtgccacc acccgcatcg

cagataacat agacatcacc tggctgagtc ctacgaccag gctcacaaag cgtagataat 840 gctgcagcct ccggctcggg aacaaagcta agcatagtct ccccagcggg ccgactgctc 900 aagattccag cttgtcgagc agcttcctcc attccctgtc ttgcataacc cttccagatg 960 gcaggcactg taattacgac atggaaccgc aacgcatcaa tgacatactc accacgagac 1020 ttcttcaccg actccaagat atgcgcccac aagaggcgga gataatcggc gatcaagcca 1080 actgcagtct tgccagtctc cttgagcatc ttgcgtccac gaagaaggaa ctcggacgaa 1140 cgagtctctt cactcaggtc ctcgtctttg acaagaagga gcttgaacca gcggactgga 1200 tetgcatcat caggaatete atageeccag aaaatetggt egtettegta aaataaetea 1260 gttggcgctt tgccctcttc tctgccggtc cccggccaac tggtgatgag attgatttga 1320 tegetagega aatetgegae egttgeecat gegaegeeag aataaettta caattagaat 1380 cagegegtgt agagtgeett gggaeteaeg ttgtgeeaaa gtegatteea atgaeeatga 1440 catcgtcttc gtcatcttcg cttggggtcg caatcttagg gcgataggct agaatcccgt 1500 cagaaggcgt aaatgtcatc ttggatctga atgatgtggt ttgaagaagg caatcacgga 1560 agaaggtagc gtgaactcct taagtgcttc tggaagaaat ctggctgcac ggccgtgtta 1620 tatggaagcg cgctcctaac cccggccgtt cagcctcgtg cagcaaattc caccttgcag 1680 cegggaatte ttaccaagtt tgatgettet ecatgetaaa gatgeatgeg teeaeggatg 1740 gtccgccagt ggtaggccca tgtgcagcat gagcagtctg aggagtacag cctttcgctc 1800 accttggcta gacgatgcga tggccgctgg ttggtcgctc aaacacgctg ataccgtacg 1860 acaaggctga agcaatggta accaggatac gagggctaag gcaatgcagg ttggtgcttt 1920 gtgcaatatt taccgacgag tggcaccaat gattgagctt gccattgtga ggccggagct 1980 caaacttctt caaggctgcc ctggccgtca ttataatcta tttgacggga tacacaacat 2040 aaggctacta gtcgattggt tctcgattcc tgcacagctg agcagtcagc cactggtaat 2100 atattctatc ccctccttga ttcctaatct gggacagttc agtggaaatg gccaaacctc 2160 gtcgcaatca gctgagacaa ggctgagggg tctcgcaatt gtctaacaga tttcaccctc 2220 atcaaactca ccacattacc aattccacca gcgccaaacg taaaacttca cggtaactcg 2280 ategectege geaacatgae geaacacca cetteceaca gegttgaega eggeeagagg 2340 cctgataacc aagatacaga gatgccagac gcagactccc cacgaggcct cgcagatcgg 2400 cgaacagata tatcggggcg agttcatcat ccagcccaca cggccgtatc gcggccacag 2460
caattagtga aaagttcgcc gcgacgtttg ggggaagcct gaggtgaaag cctcttgcgc 2520
gccnccgcct ccaccacac gcatcctgcg gatgccagac ccggcgcaga acccgaccga 2580
cgaatactcg gacacaacgc aaccagtggg aaatgccgag gttgacccat cttttaaaga 2640
cgatgaggcg gcatgtcgag tacttgcaga ggaaatgagg cagaggatcg aacagcttga 2700
gagtgatctt gcaaatgcgc cgtcgccgga ttctgtccgc gcgctagaac gttcgcttca 2760
ggcagaaagc gcccagcgag aacgactgca gcaagagctc cgccagaagc acagcgaatt 2820
agaccgtgctg cggaagcact ggaagcaagc tgcgctagaa ctggacaaagg cgcggtccca 2880
gagccagggg ttctatcaag tgaccgacaa ctatctcatt gagctgacaa cccgcttgcg 2940
ctataatatc aagaattttg cgtttcaata tttcgacggt gaaatgaagg ggcagagacc 3000
gagattcgac aaaccgaaaa tatgggataa gtacatgcaa acaatcactt cggatccctt 3060
ggactgtgag gttctcatgt ta

<210> 2100 <211> 2785

<212> DNA

<213> Aspergillus nidulans

<400> 2100

60 tacgagtcat ggctattgct agcagccagc cagtatccca ggcttaaggc cacctaggaa gcctgctgaa actatggatt gcaaaccagg cttgtccaag tatcttgctg gggtaaacag 120 tcttcacact tgacctccgg atattgactg cggagagtat ggatagggac atttacacgg 180 tcgaaaaggc aaattgacaa aaatattgcc agttatgctt aatggcaaac ccttggtgga 240 gtggcgatca acgaagtact aaagattcgt gccctgattt cactgttaca actataaagc 300 caacttcgat ctcaactaaa ttatctcctc cccaaccctt gtccaaacct cgacgtcctg 360 gaagtteetg aeggtteeeg tgeegeeaaa eetgteetga gtgteeetee agteeetgtg 420 gactgccgtc tccggcctcc accgaaacgc atacttcagc ttctcctcaa gcacgccctc 480 cagectetgt ttaatggcaa teeccacage eggeateate ataaagecat tgecagaace 540 tcccactgca actgtgagag acttgtactt cggatgctga tcaataagga attggcggtc 600 660 cggcgtgtcg gcgtcccagc agattcgcgc aaaggcaaag gggcgatccg ctatctgggg

gaccgtatcg cgaaggaact gccgtgccgc gtgctcggac tgtagtggga tctgatgttt 720 ggcgaatgga atggacttag ggaagtcatt caagacctcg gaggtgggaa tgttgcagta 780 gcccgggtgt tcgtcgacga attttagctg ccccgtcgag tcgggttcct agcagccata cggtcagtag cgtctttgtg aaaggcagtt ggctaggaac gtacgataaa gaaaccggaa ttgacgttga atagtacagg cagatccttc caaagcttcc tctcctcctc cgtcatctgg 960 atatgcgcaa gtgtccaagc cgtcgggcgc aactgtttct caaagtcaag taactggtca 1020 cttccagcgc cagcacagag aatgacgcgg tctgcacgat gctctttttc gtcggcggtc 1080 tttgcgccga cgatgtcgct ttggtcatcc gtgtagagaa ggctcttgac acccccttcg 1140 tcacccgtaa caaacttcac gcccagccgc gaagcctctt tgtaggccgc ttctagcgcc 1200 cccetcgcaa atacccatcc agcgccagcc tcgcggaaga aacctttcca gccggaaaag 1260 tecectgtea ggacgeecaa eggeattgta getetgaaat eegeggeega gttgagtaae 1320 cggagtttat ctctgcaggt gctaatgtac ttgtcaacat gaggcattgc atcgtcctgg 1380 ctcgcggcca taataaaacc tgttgggtgg tagaaggggc gaaatacggg gtcggtcttc 1440 caggcattgg cggtgatctg gtgcatccgg ttccagacgt attgctcggg ggtgtctgtg 1500 teggaeggtg egectagete aagtttagae egggageget tggattgaag tatetgeaga 1560 taaacgcacc ctcctccatg attttgttta catcatttcc ggcagcagag ggtgacggta 1620 teggaetgeg etcaaggaeg gtgaegtttt tgtageegge tegegeaage tggagagegg 1680 tgctgcagcc ccaggtaccg ccaccgatga tgagaataga tgagtctttg gtgagttgag 1740 acatagtgta tgtctgttat tacctgaccc tctgagtcgg gaggggaggt gacgaggtgg 1800 tatttaaccc tcagcgcttt gcagaggtcc actgcccatc tgtgcgggcg cctatcggct 1860 ggcactgtgg gccaaaggaa ggtcctgccg agacttgata gggcttatca gggcagctca 1920 cagtatcccc aagcgacaat gttggaggta tgtcgcggat gccatgcatc caaaccggag 1980 ctcttggcct gtaagagacg accacgcgag gtcaacggcg atatttcata gataggtagg 2040 tcaatggctc ggctctaacc gtgtgatctc ccccacttcc ccgcactgac gacctgccat 2100 gcaggcgtta tcgctgatcc caccctccaa gccttctgga tggctggatc aagctctaga 2160 aagagettag cetetetett ggacetteet tgeaaatate etttateget etateattet 2220 ccttctccgc attgctgata cgggatactc gtggctgatg ctcctcggtt gaagtatggg 2280 ggtatttaat ccagctacgg ctcctgttag aaggggactt aagatgcttc aggatagttc 2340 ttttaaagtc aaataaatat cgatcatgga cgacatttcg cagtcggaag ttccaggaac 2400 catctttatt gtggggagtg agtggcacca tacatatcac caagcaagcg acggcccacc 2460 ctaattccaa tactaacgcc tcacagcgga tgcgacaaag ctgggagaag cagatgtcac 2520 cacatcgaac gatatcgtgc tcgttcctcg cccactcgag acaccacggg accccctggt 2580 acgctgcgtc ctacccctg tctcaacttg ttggtagctc tgtcactgca gactgacaag 2640 caaatcagaa ctggccgaag tcaaaggaac tatggacgct cttcttagcg acctctctcg 2700 cgaccgtcgt cgcctatgcg aaaacaatct tggcgcgcc tggacggagg tcgccgaaga 2760 tattgacggg acaatgaaag catga

<210> 2101 <211> 3682 <212> DNA

<212> DNA <213> Aspergillus nidulans

<400> 2101

tggttaaagc tcgggttacg tatagaacaa agaggaactc cggggagaat ttaaaacatg 60 tttcaaaggt gaagcgggtc cttccaggtg ttttaaaaaa gggttacgtt tttccttcga 120 agagtattcg caaaagaata cgctgtcgag gaaaaacctc tgaagacccg aattaggatc 180 gaaaatgatt taaaagagcc agtttagcta aatgcgggat ccctagaaga agggatcttt 240 caggtggtct gctgaagtca tcccataaaa agtgtgccga atcatgcctg accaaccaca 300 tgcttgactc cccgccggtc ggaacaacgt tatcccgtcc aagtatatgc ggcttcagta 360 420 agcaagaggt ccggcaaaac tagcattgga atgctagaag tcaataattt agtttatgca 480 atagttgtaa aggaatagtc tgtagaagcg gtatgtagct gatcgttttc atgtttgtgc gggtggggca cgaaatctat gtgtggtagt tttgtaaata atctggctac ccaatcgaga 540 ctatgtacac acatcgaaag agagcatacg gtatctacat ctataaagat atttcttgaa 600 cccttgcacg tccggcatac cagctgtggt ctccctgcag agacgcttga cggatagcgt 660 720 acaactcgtc gatgaaagtc gtagcaaagc ttccagggcc gcggacggag tctcttgcag cggcgttctc ggcagcaatc tcatacatca gaagagctga gagaaccgca aggaacttgt 780 cagttggatt ggccgcgatg aaacatccag ccactgtgcc gacagcgcaa ccagtctgaa 840 ttaagttaga tatgtgtttc agcagatagg gcaaatgcaa acatactcca gtgacctggc 900 cgagaagttc atgtccgttc tcaacggcaa caatcctttc gccatcgcta aggtaatcca cggcgccggt caagagaacg atgttttctg gtcaaagtta ggggcgattt gtagacatgt 1020 gcaggaatgc atactttctc gccgagcaag gtcacgggcc aaccgtgcct taccctggtg 1080 gtcaagcgta ctaggtccgc tgtcaacacc tcgttgctga acgctagtgc tgcccgcgac 1140 ctggcggatt tctccttcgt tgcctttgat gagatcgaag tatcccccgg ccatgagctc 1200 cttgacaacc cctcgtcgaa tctgggtcgc accggcgcct actggatcat acaccaccgg 1260 gttgccgcgt tggttgtacg ctcgaatagc cttgaggtac tcggaaggac tctggctagt 1320 cagagtgccc atgttgataa gcaaggcacc gtcaaactgg cacaagtccg tggcctcgtc 1380 gccatacggc gacataatcg gcgatgcacc gctacactgg ttagtaagcc attaactcga 1440 tgctagcgta actcacatag ctaacgtgac attggcgacg aagttggcga cgacgaagtt 1500 gatcatgttg tggaccaacg ggtggatttc aaccattttt tgaacaatat gcggtacctt 1560 ctcgagcaac cctgcaacat tgcgaaccaa aggtccgtcc gccttgcgta caaatggcgg 1620 cggagtcgcg atggcccggg caagctctgc cgccgccgct ctgggatcat ctgcggccat 1680 gatagcgctg acaatagcag caccattcaa gctcttccgg ggagaggcag actggtacag 1740 tacccgttga acgttggaga ggttgatccc accaatacaa acagttccca catcgcggcc 1800 agattcggca atggagtcaa ggatagcctg cgtgccagct gtgccaatga tgtgcttggt 1860 gtttgttttc ctgctagata agcatatatt ccattttcta ggcacggaac tcacgttggt 1920 gtagcgaata acgtcccgat accaaggtag tccgcgcccg ccgcaacggc cgcctgcgcc 1980 tcttcaatag atgaggcgct aatgccaata attgcatttt ccggtagaag cttctttgct 2040 tccgaaatca ctgggaatct cagcttatta atccaattta gcagaaggga acatacccat 2100 atcatcctgg ccgagatgca cccctcagc tcccacagca agagcaacat caacccggtc 2160 gttgatgatc aagggcacac cgtgggcctg agtaatccgg tgaagctttc gggcagtttc 2220 gatctgagcc cctgtgtcgc tctttttgtc ccggtattgg acgaccgtta cacctgcatt 2280 gccaagcgtc aatagagtac aacaggaggg gaggtgtcgt acctcctttg acggcttctt 2340 ctactacagc acacagatcc cgccccttga ggattggggg ggtggagtct gtgacgaggt 2400 agacggaaag atcgagcttc attttgtctt ctgacctatt acccaggctg caattgccct 2460

cattgatagg aatgtgtagt gacgttaaac catcatgcct gtttaggaaa ggcgtctcgc 2520 gtgcccgcga atgatcgtca catgaccaga taacggaaga aaaaatagtc cgagcgggac 2580 gacgacttcg ctcttgcgtt gacttcattc cggactcgag aatactcgcc ggtcctcgaa 2640 gttctccaac cactccgacc aggctgtaag tatactccgt gcagaacgcc agtctcctca 2700 ctcttttata cggtgagtca ttttattgct ttgtttcgct gctctactct ctctacgttg 2760 tetectgeag taagggatea tttetggaae caattateee categtetea eegageagta 2820 tgaacgctgc gcggtagtcc tgaccacact aatgcggtaa gcagtcccgt gaccgccaca 2880 georgeatea gggtataget cetetteace atgccagetg geoacggega tetgacagee 2940 atggacgacg agtcttctag agatatcgct cctcgtcagc tcacgctgcg agaccgggtc 3000 actgtcgcga ccttggtgcc gttccattcg tatgcgcata ttcccaagtc gctgattgtg 3060 tacttatgcg accaattgaa ccgggagatt gaaaagggcg acacttatgc tatggtcgac 3120 ccgatcccag tacggcattt tgcgccgtac tggttctcga actttggcgc gatcatgcta 3180 attggggaca tcaaaaatgt caatgatgtc caggagatgg acggcaatgt gaattgggcc 3240 aaagtctgtc ttgggagttt caacgtcagg ccaaactacc cggggcgaag tagccatgtc 3300 tgtaacggca tgtttcttgt cacggatgct gcgagaaata agggtgtagg tcggttaatg 3360 ggagaggcct atctagattg ggccgctcgg ctggtttgtg ttatgtcgcc caaaaccgaa 3420 gtgctgtgtt gacaagccag ggatacacat atgccgtctt caacctcatc tatgaaagca 3480 atgttgcctc atgccgactt tgggaaggtc tcggcttcaa gcggattggt agagtgccca 3540 atgcaggccg agtgttgtcg agccctggag aatttgtcga cgccattatc tacgggcgag 3600 acttgggatc tgacggcgaa gaccccgtta cgcaagaccg gttcgataaa atccgctact 3660 3682 atctcaaaca ctctaaatac cc

<210> 2102 <211> 2829

<212> DNA

<213> Aspergillus nidulans

<400> 2102

gggatgatat agggcagaga tcgagaccgg gccgagacga cggcgttgag cgtggaatcg 60 gcggaagaat gctgggcgag acggtcgtca gatcggtcct aggactcggt ctgcggtacg 120

180 atgccaggaa tagaacgata tggaggaata ttgggtttca ggaagagcgg tggtcccgac tgcaaggcgc acagggatgc agcggttctt atggctcgtc aggggcgcat gatagagtct 240 300 gcctagttga ttgggagacg agttgaatga gcatgctgat tgtctgacag aagaagaaag 360 gaagcgaaga ggacggtcag ccttaaaaaa ccagctgagg agcggtctga gtctaaggtc 420 ttggaaaacg aaaggtgagg tccgttgtgg cttggtggag agtaaaaatt tgttagggag ctagactagc tcggccagtt ccaccgtctc agctagtcaa tcagcgggag gccaatccga 480 540 egggaagtee eteageagae caeggeaget ecaeteteeg gtateaggaa teeaagaate 600 aagtgtttac tgtttggget gatgcctagt cgagagaccc cgtacctcct atgagggtac 660 tragtettge caagtetgtt gagteacece tattgtggea aacateeegt tttettgtee 720 tgcgctgatc tgacgttgag gatgctgtta gttcttgcgt tatctgccac agctgtcgcc atgtgccagt cgtcgccgat caattggctg gccaaggcag aagtatcgtt cgggccttag 780 840 gagtecagge tgaeggggtt eetgetacaa gaaegagega tggegagaee aaeecagegg 900 gttgaaagaa gaatccttgg ccccttggcg ccccttcttg ctgcaggaat gggtatgcat ctagccagct taatcgctat tctggttgtc tcgtcgtctc atcgtctcaa gccgctcgtc caacaccgtg accgctagtc gtgcccaggc cggtttttta tctacgtcga ttgtggaatc 1020 gcaagtccaa ctttaccaag gccgtcacac ccgagatcgt cgatgcgcat atacattcgg 1080 attgcgttcg ggattgcgtt gggacttgaa ggtgaggact ctaggttatt ggacggagca 1140 ctggcgaccg gtgatatccc gaagagaggc ctggtcattt cgcaacttga agacaggggg 1200 aatgagctct acacaaagaa tgggtcgaaa acttgcaggt caagttttct aggatggatc 1260 cctaatctag tacaacatgc gatagagcac ccttgcataa accagctgca gtttctgatc 1320 tgtttcttga tctgtttctt gatatcaatg gttatggcgc agggtctctg atcgctgagc 1380 cagtcgctga tactttaccg cttcccgtaa caccatgcct tcgttcaact ggctagtctc 1440 cttcctgaag agctcctgcc atggtgtttg gctctccggg atactgtaac cccctgcggc 1500 ctccaatgcc gctcgtctct cgtctagttc ttttcgcgag acaaggatat ccacgcggcg 1560 tttgttgagg tcgacgcgga gcctgtctcc gtcgcgaacg agtgcaagat tgcctccagc 1620 ageggettea gggetggegt teaggatgga eggegateeg gaagtteeeg attgtegace 1680 atcccctatg catggcagcg acttgatccc ctgtcgcaac aaatgcccag gagggtgcat 1740 attgaccacc tctgcggcgc caggataacc tagtggccca gtcccgcgca tcactaagat 1800 actcttgtca ttgataggag cctcctccaa tcggcgatgg tagtcctctg gcccgtcgaa 1860 aacgacaacg gccccttcaa aggcattggg gtcgtctggg ttttccagga aatgctgccg 1920 gaactgctct gatatgacgc aagttttcat aatggcagac tcgaataggg taccctggag 1980 gtgcacgaat cctgcgtctt tcataagggg ctcgctgtac ggcttgatga cccgtcggtc 2040 ccagctgtga tgccctttca cattctcagc gacggtatgt ccgttgcatg taagaatgtc 2100 tgggtgcaac ttcccagcat ctaacagctc cgccatgata gccggaaggc ctcccgctcg 2160 gtagtactcc tcgccaagaa attctcctgc tggttgcata ttgagcagaa gtggaatgtt 2220 aaaccctagt tggtcccagt cgtccaggga gatatcaacg cccatatgct ttgcgatagc 2280 attgatatgg ataggggcgt tggtgctacc gccaatggcc agtattacag caattaccat 2340 ttcaaaagcc tcccgcgtca taatatcgct agggttcccg gtcgcgtgca ccaatttcac 2400 aatttgtaaa cctgtttata ccccactgag ctcgttccaa taggcgccgg atgccgccga 2460 teettgeaga gecateeaag getttgteeg egegteatgg tegaggttgg eccattatae 2520 aggccctacc gtgggccttt tgcgtagtaa aaacttgatg actgtttcca atcctttaaa 2580 aaagtcctat cctaattata ttgcccctgg gttattttcc gcaaaaattc tcgcccttgt 2640 gttttttgcc cttttaaggc ctttccataa tcggtttttt gtaaaaaaaa aatattttgt 2700 tetettgtge caactaeget gttgtttata ateceetate tataettate tttattattt 2760 actttattaa taacttttcc tttatcactt aaactttttt ctctttttct cttcctctct 2820 2829 aattatata

<210> 2103 <211> 3213 <212> DNA

<213> Aspergillus nidulans

<400> 2103

cetetggaat etggateagg tittgaetet tigacaagaa aagaggeeae geteeggtea 60 gattigeteg gieectaaat tiggggeegte geaggegeeg eeeggetigga ettgaaagae 120 eetgetggaa ggieegegge atceatggga titteattage eeaceaggea eaaaagaggg 180 teateteatg eateeaetge geeteegeea tiaeggeeat ggitigtiett ggetgiegae 240

300 cattgggcga gacgccaatt ggattatttc gggtccattg aaggaatgtg ccgctcagct 360 ttacgagcat cggccgattg attctcgttt cggcagcggt ggatgtatat tccgttgctt acataattgc ccctaccgct gattgcagga gcgtagccac agtttgcaat ctacgcgaga 480 cgagggcaat aagatattt gagatactgt caatcttagt cgagattact ttttagattt 540 taqtcagtgc ataagctctc catgcgccat ggaatcataa aactgtgcgc aagttcgtgg ttgggcacgt gccagcctca cgctatccca attaggaaat catgaaacat tcaggcaacg 600 acatcacaaa aacagctggc cagcttggct gctcttgtcg acacttggcg agaaaacctt 660 gtatgaatga cactgctgct catgttttcc ccctcttgag gttcttcctc agctccaatg 720 cgcccttctc cgccctaaga tagagtcctg cgggtagcaa cagcattcct gcttctgaca 780 840 cgagacacca cattetteae caaacaggat tgeatgeeca gecaateeeg cagtegggae cgatatggtc gcgacagtga tcgcgatcgt tcccgcgtcc aaccacgcag aagataccac 900 gtatccgagg acgatgacga tgacgacgat ttcgacgaca acccacgcga ccgccgttac agacgagatg gctaccggcg cgcgcctgtt gattcacgag cttacgattc tcacgacgat 1020 tacgaagtag ttgatgtgga ggaggaacca cggagatacc gatcggatac agagcgacgg 1080 cgggaacggg ccagggcgtc accgggcacg tcacctcgca aacgagaacg cacacgggac 1140 tcaggcggtg ggcacagacg acggcgaaca gaagagagcg atggcagcca ggcgccgcaa 1200 gcccaccggg ataggaggtc acgcacaaga cgggatcgcg gcctggacga tgaggattta 1260 gaagacgctg cacgaagact ccgtcgccgg gaacgagaac gcgagcgaga acgacgcgct 1320 gaaacctcta agcacaagag tacggactct tcgaatagtt cggccgggtt gttgaatgca 1380 aacgccttgg ctaaactcag agcgcagcat gaagagttgg accgtcagga acagcgtcgg 1440 gcagaaaaag aagctaaagc ggaaaggaaa agaaggcgca aacgacccgc agtcgaaggg 1500 cagatgcgca ccctcgatcc gtttcctgat gaagtccctc ggggtcaatc caaaggtcgc 1560 atcgtatcgg gggcctacct tgaagaaggc agggctccag atatggaagt cagactgcgt 1620 gggggcggaa gagggccacc gagggagaga cgatgggaga aagatagtga tggtcagccc 1680 cactgacacc gttctggaag cggaagaaat ggtggtggat tggagccatt gtgctcgtta 1740 tcgtggtcat aattattgtt gtcgcggtcg ttgtatcgaa taataagaaa agcgactcag 1800 attccgactc agattccaat tcaggttcat cagattcttg gggtggtgat aaatcgtcct 1860 taaatggact tgatcacgac agtatcccgg taagcctgac ctgccactcg tttgcgaaag 1920 accepttatac taacatectc tagaaatcce cccaaegecac aetectteac ccategacat 1980 ggtacgaaac aacagacttc aatgtaacct atacagacga gactgttggt gggctctctg 2040 ttatgggctt gaactccacc tgggacgatt ctgttgcgcc gaacgaaaat gtaccgccac 2100 ttaacaagcc atttccgtat gggtcacagc caattcgtgg tgtaaacatc ggaggattgc 2160 tgtctctcga gcccttcatc acgccctccc tatttgaagg ctactcatca gatgtcgttg 2220 atgagtacac gctaaccaca aaactaggcg acaacgccgc cagaaagctt gaagagcact 2280 acgcaacctt tatcacagaa caagattttg ccgacatggc tgaggctggg atcgaccatg 2340 ttcgaatccc attttcctac tgggcagtaa accccaggga agatgagccc tatgttgcca 2400 aaatctcgtg gcgttatcta cttcgcgtca tcgagtactg ccgcaaatac ggactacgag 2460 taaacctcga cccgcacggt atgccgggca gccaaaatgg catgaatcac agcggacggc 2520 aaggcagcat tcgctggcta aatggtgatg atggcgacac atacgcccag cgctcgctcg 2580 aatttcatga aaagatatcc aagttcttcg cccaggaccg ctacaaaaac atcatcacca 2640 tctatggcct aatcaatgag ccgtacatgc tttccctgga tgtcgagaaa gttctcaatt 2700 ggaccgtcac agccgccgaa ttggttcaga agaacggcat taccgccaaa attgccttcc 2760 acgacggttt cctcaatctc agcaaatgga agacaatgct gaagaatgga ccctcgaacc 2820 ttcttcttga cacccatcag tatactatct ataatgttgc ccagatcgtt cttaaccaca 2880 ccgcaaaggt caacttcgtc tgcaatgatt gggttggcat gattggtgaa atcaattcca 2940 cttctgaagg gtacgttcct ttcctttctc cattcgtgta cgtcgcagat tatataagat 3000 actgacaaga acaaagctgg ggtcccacaa tctgcggtga attcacacaa gccgacaccg 3060 actgtgcgaa aaacctcaac aatgtcggcc gcggcacccg ctgggaaggc acctattctg 3120 agggcgactc gactatgtac tgcccacggc cgaacagagg acatgcagct gtaccgaagc 3180 3213 caacgcagac ccgtcagaat actcagatga cta

<210> 2104 <211> 1318 <212> DNA

<213> Aspergillus nidulans

<400> 2104

tccgctgttt tcattcctcc ggcactttac cgaccctggc cgggaaaagg atagactcgc 60 cattgggacg acggcagaat gttctgtccg aagaaatcta gaaacgctct attctcatat 120 ccaagatgca ctcataccgc tcgattccat ggccgcttgg tttggtgacc tctctggttc 180 tggctctttc ttttcccctc ctttcagcac ggatgatttt atctctgcgg actttctggc 240 300 ctccggtccc gggcctacta aactctcggg acaattaaat gagctcatga tggaagttgt tgaaacctcc aggtccatgg agctggaggg ctctagcact atgcagttgc cgctcgacac 360 tacgcagctt gttccccttt ttacggtctc taatgttggc atattcgtct cagtcttctt 420 ccactccctt tactggcatc tgccagtcgt gcattttccc acgtttgacc cgggcaatat 480 atccaatccg ctcttactct caactttttt gacaggcgca acgtacagca attcactcaa 540 cgaagcagcc ctattaccca gacttctcga tgtcgctgaa gagtatatct tccgaaaggt 600 660 caccgccttg tcaactcagt ctggtccacc gattctcgat cctacgagca actggagtac gatacaactc attcaagcag gtttgatcat tgaaatgctt caattcggtc aagaaagagt 720 ggaaactaga cgccgcattc gagtcattcg tcatcctagc ctagtttctc tcatgcgttg 780 840 cttgggcatt ttcaatctga agcgatcaaa gccttctaca gttgttgatg gtgatgatac 900 tttgcggaaa tcattgatcg cagaggaagt ctgtatacgt cttgcatcgt ggacctttct tgctgatgga ttcctcacgc tctgtttcaa aaaccgcccc gcgatttcca tcttcgagct cgactgtccc tttccctgga agacagggct atgggaggca gagaatgcat ccgccttcag 1020 ccaggtcgct atggaccatg aagaggagct tccgctgcct tctgtaagag aagcagttcg 1080 attactactt gaaagtccga accccggccc cgtaccttct agattctcac tgtcagcaga 1140 acatctgcta atcataatct atggtaagct ctcatgcaat cgcttcttcg ataccatgct 1200 aataacccaa atcccagcgc tgaattctct cgctttcatg gctagagttg atttctttga 1260 ggctgtatcc gttggagaaa ataaggcgtg ctgccagtaa ctggaaacaa atatggga 1318

tacatagctg tttcatagtt ccagtgttgc tgtttccatc gcattggatg gcccgcagtt 60

<210> 2105

<211> 555

<212> DNA

<213> Aspergillus nidulans

<400> 2105

gtgcaatcta tgtgaggatg ataccagtga agactcatcc gcgcgttttg cgactttcgt tgattgttat cgtacaatag cccttgctta atcccagcac caccgcgtac ctcacggtct 180 ccgagatcgt ggtaacattc atgcaggtac caagagtgcg cggatcagtc tggaccctgg 240 cccaggctga acatgccgtc caagctggca agctcagcat gacatcaagc ccccacgtg 300 tgcatcgggc gtatcatagg cacttcgttg ataaacagag gacagctggg catcgcttct 360 cccggatgcc aaccgacagg ctggcggcct gggtctctcc actccagcgc agagctgcta 420 aggtccttga tccaataccg gcgctgaaac gataccccct tgcgaccttc acccgcggct 480 540 tttccgctga cgtacccgat cgaaggaccc attccactaa gactccggat gtcttgcgga 555 tgtctcaagg acata 2106 <210> <211> 1102 DNA <212> Aspergillus nidulans <213> 2106 <400> gacattataa aaagcagcag aggtgaggag aagcgctccg tcaacacagc tgataataat 60 ggccagtgtc tgggccaagc aggcgctgat caaccaagta gtgtctccgc ttctgctttc 120 cgagttgtcg caaaaagagg ctccagcctt tgagcactct caccaatgat gttgtttcct aatcttctga agaaatgtct catataagac caatagctgg ttcttcgttt tcaggcctca 240

ggattttcac gtcgtggtcg gtggggtgtt cttgtgccag atacgcgaca agttcgcggg 300 gaggaaaggc agcagacaaa ttaagcagtt aatcgtgttc gaatgatcga catatgaaat 360 gaagcagttg tagaggatat atgtcatata taatggacta ggacagacta gtaaatgtga 420 acgtctgctg ttgctgtgaa gagaaaagag tggcgagcag gagaagttcg aaccccgaaa 480 540 tatgttttgg tcacgtccaa gttcactaaa gatacaacat tgccattgat atattgccca cttggccccc ttgttttatc tataagcaga caaatctcag tagtccaatc gcatcaatgt 600 gcgcgagact tcagttaccg ccataaggat ataaaataga gacatatttg cctaactaac 660 720 taggggttgg tttctacgta tcccaactgg ttcgcgtcct caaaaaacca cacttgggtt cccgatatgt cggtcatgga cacaaatcga gaatctcctg tcagtaaacg acggtgatga 780 cccatgagag gagtctcgtc tggcggagct ctcggaaggt caaactccaa gccccgagaa 840 gcacagagag gagtcacagc gtagggatta gagatccaga tactttgctt gccatcatca 900 tetetegacce agtagagaat gccattatca acgttggcca tagacaaaga gtcagccacc 960 cgaagatcga gcaatgcgtg tatacaaact tgttctgttt gtgggtgata agtaattggt 1020 agaacgaacg aaagagcaga tgaggacgag acatagagga accccatgtt tttgtagtac 1080 tgtggtaagt ccctcgccaa gt 1102

<210> 2107

<211> 1407

<212> DNA

<213> Aspergillus nidulans

<400> 2107

gtgatatatc gtatatacct gcgaggaggc caagatactg atagcaggtg aagtagcatt 60 tttgaatggt atcatatata gtatagtcat acatgggttg gccgttaagg tgtcattaga 120 aacggtattg cgactgtcca gcccgctgga cgcacttatt taacttagca tcagcacctc 180 tgcttgtgac atgggatcca cagtgcggca cgctactgtg ccgttggtcg cgacgtccag 240 tatcacgatc tgacatgagg gtgctcaaag aagcgacatc acacactact caacctccat 300 aagaacatca ctcatgatat gcagaacata cgaaaacttg cgtacgctcc acttccccgc 360 atccttcagg aggcctgcat aatccagcag gatacgtctt gcagactgat acccaccttg 420 aaacggtaca ccacggaaat aaacagtgcc tgcattccga atgaagttca ctgccggatc 480 atccgacggc gtgaatgtct gagtcccgcg tggttccata aaactggtga atccctctgt 540 cccgacacgc tcccagtcga tgtcatcaag gagttcgatt gacgtcccgc cgacttgtag 600 ctcactgggg ttcggtacca tgaagatgta gaggccgagg acgagggctg ctgaaaacag 660 agagaaaacc gagtggaaca ttgtgtgatc tgatgctttg cggttggtca tcgccttgta 720 gatgtgtgcg gcgtgaaggc atgctcgtct ggcagctggt gtctgtgacc aggttgcaat 780 gtcatctagg gctttcttgg cgggtcctgg tcctgcgcgg ccggcagcta gatcgaatat 840 ttgagtatct gcggttaagg tcatgcatat gttgtgccac atgacggcgg cgttaggatt gageegeteg agaacetege egtatttgte tgeaatttge agetggagtg agggtaaaea tctggcgcgt ccatccatgg catacgtatg gcaaggtgca aaaggatagc ttgccctatt 1020 cgaaagaagg cggtgataag cttctgataa gcggagctgg accattgcta gaacgccgtg 1080

aatacaaaaa	tcgtcgacag	ggctttccaa	gacgggcacg	gtgacgttct	ccgaaggtgc	1140
catgactgtt	ggcattagta	gacgtttgcc	gctacggacc	aattgaatcc	atcgcatgga	1200
gccgttggcc	cggaagagac	cttcgttgca	gggtagaatg	agttggattg	agtcgggaac	1260
gataatggga	ctggtcgaga	ggaaagagga	ataccaggaa	tccaataaga	gaagcccagt	1320
aatcaacctg	actggtcagt	atttggtaga	ataaattgat	cagtcgacat	accgcttgac	1380
ggattcaact	ttgctccagg	tttgccc				1407
<210> <211> <212> <213>	2108 439 DNA Aspergillus	s nidulans				
<400>		L	21.002.21.11.2	gaaagatta	tgaagatgaa	60
				gaaaacatta		
				tagttcggtc		
acgtgagaag	cgaagtatga	attgggcgaa	ctccggccaa	cagctttagc	acgtgattcg	180
tatcgccgct	gtcggaagcg	ctattcccag	tacggtacac	cccgcgatta	ttctttctgg	240
atagaggcaa	gaacttgact	cactgctgct	caattaaagt	gaagactcct	ttctttttga	300
atgtccgtga	aatcacaaca	gaagtaatat	cgatacttaa	aaatctgctc	cttttataca	360
cggtatagcc	gttctttacc	tatctcaatc	gaccatgtcg	catacgctgt	cccaaaagta	420
cctcagtacg	cgggggtgg					439
<210> <211> <212> <213>	2109 607 DNA Aspergillu	s nidulans				
<400>	2109					
aatgacgagt	tccggctago	gtggggtaca	agccctaaag	g tggaggccct	cgcttagago	60
acagtggctt	agctaatcat	cegeeeegat	ctcaaactco	c tcactttggg	aattcaatco	120
gttgtcgagt	gcaacgaaca	tcatccgcca	acgaccgtcq	g atacgccgac	: atcaagatgt	180
gagttcatct	cccgaagtc	g atactcttat	cctgcgaacq	g aaatactgct	ctttgatgga	a 240
cgtctaaggc	gtgttaagco	g tgccatgga	tgttgagct	c gaagcgatgo	tgcttcgtct	300

cctccgggat	agaatttctc	gaaaggcctc	atgctgactg	cgtgtgtttt	ttctcgcatt	360
acagggtcaa	ccttcgcacc	cagaagcgcc	tcgccgcctc	cgtggttggc	tgcggcaagc	420
gcaagatttg	gctcgacccc	aacgagatga	gcgaaatctc	caatgccaac	tcccgccaga	480
ccatccgcaa	gctcgtcaag	gacggcctca	tcatccgcaa	gcccgtcacc	atgcactccc	540
gttcccgtgc	ccgtgagctc	aacgccgccc	gccggatcgg	tegteacege	ggtctgggta	600
agcgcaa						607
<210> <211> <212> <213> <400>	2110 2319 DNA Aspergillus 2110	s nidulans				
aagcctggaa	tagatttcgg	caaggtatga	cattctgttc	aaagtatcag	gatgttctga	60
ttgctgtttc	ccaccaactg	ccgttggaat	tcttctgctt	cgctgagcca	tagctccacg	120
ccagattttg	catgcggatc	aaagtttcag	ggtgttcagg	cccaagaaca	cggttgctgg	180
cctccaccac	cgcccctcca	aactcctctg	ctttgtttag	atttccaagc	tttttgtaga	240
ttgaagaaag	gagggcgata	ctgcctaatg	tatctgaatg	ttctggcccg	agcacacgct	300
tgctgatctc	tacaacctgt	agccccagtt	cttctgcttc	ggtcagtctc	ccaacctcag	360
tgtaggtgct	ggccaagtcg	tgcatgctgt	ttatagtaag	ttgatgctct	gagccctgca	420
ttcgtttgcc	agttccaaca	gctgggccca	aatctcttca	gcttctttgt	actttccaag	480
cccttcgtag	gccagggcca	tgttgttcat	agtttccaga	gtcatcagat	gatctggccc	540
cagcttctct	ttgtgaattc	ttaacactgg	tgtctgtagc	ttttctggtt	ccgtccaccg	600
tccttggtag	caatatataa	gtgctaggtt	tcccatagcc	cgtaccgtag	tttcgatatc	66
agtttcatcg	tgtagagacc	tttgtatttc	cagatgtcct	caaataaaag	aactgcttca	72
ttaaatcgtc	cgtctgcatt	cagacaccag	ccaactctct	ggaccatctt	aggtattcct	78
cctcggaaag	cctacttcac	tgataaatga	gagaacgtgt	ggcagatatt	cccgccaaat	84
cgctcggttg	gtataagtat	gagttgggaa	gacctcatca	aagcgaaaag	ccgttgtgga	90
taactgctga	cgaaagcggg	actgtgttct	tagccagttt	ctagtcgaaa	ggtggaccag	96

tcgatggaga cttagcctgc caccttgttc attgatgaag gaaaaggcct tcagaagacc 1020

aactgcatcg gtggatttct tcttggaaac tctctcgggg agtagggatt tcggatgtcg 1080 cgaggattaa tgcaagccat gaatagcaga caatcaggct gttgaacttg ctgaaatgaa 1140 atcaaccacg ttgtagccac cgggttctgt atctcattat acctccagtc atcccccaag 1200 tcttcactta acaacttaat catttctgat tcctggtctt gcaagagctc gaggtaatca 1260 gagaagtcga tgctgttctc attgatgtat gctgctgctg ggtgatcgtc aaaggaagaa 1320 aagctagctg ctcaataagt ttaagtgcca ctgcttcacc gtcgttgagg agggttttgt 1380 caatcagtga cttctctaag atttgtaccg ctgcctgtgg atctggtttg gagacatgga 1440 tcacattagc ggaacgcaat agcacagcta cctttcgatt ccgcgtagtg aataggatat 1500 ggccttgttc atgctggggc agataatcgg tcagcggtat tgatccgact acagtgctgc 1560 gaggccacat atccaagcta tcagcgttgt caaaaatcaa tagccacttt gctgctcctc 1620 tctgactcag gtgggctttc actttactct ttgcatctgt tgccttcact ccgtgtactc 1680 caagettttg tgctatgcat atatacgeet getegaeget eteatggete gtgcaeggga 1740 cccaaaaata tggaataaaa tctctttcac gcatgcggta ggcagtctcg agtgctatct 1800 gcgtctttcc aacttccgcc gagtccgcag atcgcgactt tcgatggtcg tgaagtcata 1860 agttcttcaa tcttggcgat ttccgcttcc cgaccaacga atctcaggtt tttgtgaaag 1920 ggaaccatcc agcgacgttc gtcttctttc ttggttggtc ttaattcggg ctgcttgtcg 1980 tgcttaggga tcaattcqag aaaagctttc gcatacgcgg cggcagcaag agctgaataa 2040 ccttgccatt gtttgttctt gtgcgagtca cagtagtcgc agatacctcg aataaccaag 2100 catgggaact ggcccataag tccagcggct tccatctcga atcaaagtat gtccatctct 2160 tggaaaagcg cgtctcgtct cgccgtgtcc ttgatgactt ggtttccgga ggcaatcaag 2220 ccgtagtgag gatacggtcc tgattctctc gcggcaggcg tttcaccaat ctggtctgat 2280 2319 cacattgaga gcaatcgggg ccagcctcat gagcgtacg

<210> 2111 <211> 1524 <212> DNA

<213> Aspergillus nidulans

<400> 2111

tcgcacactg agttcctggc acaccttcct gagattcctt accagtaccc acagtcgaac

60

tggcacctat tgacgcccta tcgttggcac ctccatttgc tctgtcatcc tcgaccaacc agacaagcca tttcaccaga gagaccgcct tctcgacatc ccgttcttca gcaacaacgc gcttcaagta aatcgcaaga gcggtaacat cttcgcggaa cggcccttct tgagcaaatg 240 tggcgtgcca agctgttgct tcgtcacgta ggtcggaggg gttagagagg cgcttggagg 300 tgaatgtagg tctcggcggg aggtttggaa ggttgatgtg tttttcttga tgttgagaat 360 420 ggcctcggtc tgctggaacc gttctgggtg cggttgtgga tgcggttcgt tggtgaagta atcgggagcg cttctgcttt tgctcttcga ggacttcgca gcgtatatct tctggaaggg 480 cagcaaggaa gtcggcggaa atttcggggt ctgaagtaag ttcatggtct tggaatggcg 540 agaggcggca gggacgggta tctgacttgg gaaatgcgaa ttttgcttga gttagagttg 600 agggttggga tggtttgaga ggagggcggc cacggcgttt cttcggtggg gttgttggtt 660 720 tgcqtaqttt gagagtcgat ccagagggtc tgggttgcgg tgatgactct gtttgtggct ttgtcgagcc ggtgttattg acagacggct ggttgtaata gcctagtacc tcggcgagga 780 catcttctgg cacgtccgct agggtttccg gatctaattg ggactgcgga ggcagagccg gcgcgggctg ctggcgaacg gcagggcctg gacccattgg tgacccagcg cgagacgtgg 900 ttcgtggttt accttgcgca acgagcttgg atcggatgtc atctgggagc tcagcaacga ctgcagggtc cggctgggag ggcataatga actgggttcc agatgtattg agcaatttct 1020 gtgtggtgtc gtttagttgc ggaccatgcc gtattgactc cgattcacct ttgcgagggc 1080 tgtccagtag gtctggatca tcaataggtt gtgcacgctt aggcgctgtg gatgccttga 1140 aagccaactg ttgctgactg ccatcagatt tctcggatgt cgactttagc ggctcgagct 1200 tggtcatttg aacgcccaac ccccttaaat caccagggga gatagcgagg cttcgaagca 1260 tagcaatggc ctcttttcca agaacatctg ctgcgttcgt ggctatccca agaatgacgc 1320 tcttgttgaa aacatcgcat ttcccatgac ccagatgttt gacggcttcc aacggggcat 1380 cgagagccct tcgcatgacc ttgagtgtga gctgctggcc cttcattaga ttctcgacga 1440 gtcttcggtg tagctcctcg cacagggacc gcatgaaatc ttccgcttga tcttgagtga 1500 1524 caaaacgaat gccccagtta acct

<210> 2112 <211> 642 <212> DNA

<213> Aspergillus nidulans 2112 <400> cttccggctt ggacaattac cagaggtatt caatggatga gtatgaaggg ggacatgggt 60 actacgatat gacgggccag gatccgatgg aaggggattc acgcatgcgt gagcgcaaca 120 gcatactgag tatgggcggc gggctcatgg gcagggcgaa acacatgttg ggaatgaagc ctgagtactc tgaaatggac cttcccttga ccgaagcagg ggcacgagct gcgcgagccg 240 atagcacggt ttctgaagat ggccccccgc atgcgaagaa atcgagcaag ccatcattca 300 agtttgggtt tggccgtagg acagtcgact cgtctaccct cggtcctcgt ataatccagt 360 taaacaaccc accagccaac gcagtgcaca agtttgtcga taaccacgtg tccacggcaa 420 480 agtacaacat cgtcacattc cttccgaaat tcttatacga gcagttctcc aagtacgcca acttgttctt tttgtttacc gcggtgctgc agcagattcc aaatgtttcc ccgacgaatc 540 gatatacgac gattggcccg ttagtgattg tattgttggt gtctgccatc aaggaattgg 600 642 ttgaggatta taaacgaagg tcatcggaca agtccttgaa ct <210> 2113 <211> 993 <212> DNA Aspergillus nidulans <213> <400> 2113 acgtttcccg ccgtctggat acatcggatc tcgtttggca caccgacaga cggtcttcaa 60 gcgcgaaatt cgtgaaaccg atctcttggc cacatagcta gccttctccg gatgaggtac 120 ggcaaatctc ttcaaataaa tgattgaagc ttcatggcgt gctaactgct cggtggtagc 180 tggcgcacgc gggcttcttc tacaacccct acgagacgaa ccctgacaac acaacatgtt 240 300 ttctctgcgg aagagcactc gacggatggg aggaagatga caacccgatc acggagcact 360 tgaaacacgc aaaggattgt ggctgggccg ttatgatgga tattcagcag cgtagctcga 420 atccagccga gatagaagac cctacaagtg agccgatagt ccaggcaaga ctagcaacct tcggcgactc atggccacat gatggcaaga aaggctggat atgccaatca gacaaggtaa 480 540 ggcagctttt ttgcaatcct aaggcttgta tgtctaatgg tatatttctt gatggtagat 600 ggttgaaggc ggatggtact tttgtcccaa cgaagaaagc gccgacctcg cgagctgcgc

ctactgcaaa ttgtccctag acggctggga gcccaaagac aatccttagt aagtatagct 660 cagttccttc cttactttct tcgactaact gagcagcgac gaacactacc gccgttcttc 720 cgactgctcg ttcttcgtgt ttgcaaagcc tgccaaagga aagggctcgc ggtcaaagag 780 agctcgtact tctaaatcct cccgccaatc aacacagtct acgacatccg aagttctggc 840 ttcagacacg gaggatatgg accagagcgc actcacccag ccagccagaa ccaagtcaac 900 gaagaaatcg tccaaatcaa aatcgaaaaa ctcaaaaact aagaaagccg agcctcaaga 960 ggtcccaagc catatggatg tggatgagac aga

<210> 2114 <211> 3090 <212> DNA

<213> Aspergillus nidulans

<400> 2114

cgagctetea gaccageegg tgegatgaaa aaacegggea egeegagaga teegegeatt 60 gggcccattc gccgcgccgt tttcatcgag aagactgttg atcgagagaa catggaaaga 120 ttttcatccc cagacgcagc gatccgcgag agcagcgcgt gcacgaggtt agcgttctcc 180 gtcatcgtcg cgacggtgcg gaggtcctca aacggcgagg tttccatgga ccagtcgaac 240 gaaatcttgg acccggtctc tccatcccac acttccatag cctggtaggg ctgcgtccgt 300 gagacatcca agtgatccca agcaccgatc ttctgcagaa atgacacgga cgagggcgtg 360 aggctgctga cgcggttgga aaactggtgc ggatcgagct tccacgagcg ggctttgtct 420 480 aggtcctgcg attccacgag ggcgaccttt aacttcgacg ttgctgggga tgcgcctgtc cgtcttatca gtatatcgtg agcccattct atagtaaaaa tactagatga tcgagcaatg 540 600 acatacggag agcagccagc agtgccagac cggcaggacc acctccaaca cagactacat cgtatatatc cgttaccggc gcatgttccg agccgaatct ccgccgattc aggatacgcg 660 720 cagatcggca ctaaggacag acgttcggcc gcagggcata agcagataat ggccgcataa 780 tgagtggatg gttggggtca attcggtcca agattcccgg atacagtatt tcatgctcgg 840 gcgatcatga gataactgca aacaggacaa acacacatta ctcgacgctc aaacctcctc 900 cctacacgct acactactcg tgtcccaacc ggcctgtatg gatcgctatt cttagcatct gagctaccat cagcctgctc gagagtgccg cctaggctct ggtgccggcg gcgtcgctcg

tacaaggeta tatteeettt ggagttegga egateaeagg atgegegeee agteageete 1020 ctactgcgtg cattgggatc tgcttatcca tcgcctcaaa cagacctctg cagctggagc 1080 tgcaaaaaac aagtcgtcgg tgctctattc agaccaccct acctagatat gctccgatat 1140 tegecatege tagtecegta acatggecae cagecteagt tacactacat agaggtaggt 1200 acatatttgc cagaactgcc caggaaacaa gcgataatac agcacaccct aattatagat 1260 catectectg catgatgeat atgtatttea cagggeaagg getateagge actagaatga 1320 ctgtatgcag gtcactgcca ccgtcggtaa gacacgaaag tcgctgcgcc acgctcccat 1380 caatcggtca ttcgcttgcg gaactcaaga gttttatctt tgcggcgctg tgatctccct 1440 tgtgaattgc tgcgtgggat actaggtacc tatgtatgta ccagctaagc aatccagctg 1500 agctgcaatt gccttatgag tggcaagtcc atggccacca cgtctatcca gattcagata 1560 atggcgtatt tgcaagtaga cttaataggt gtctgggccc tgtaggtgtt gctgttccga 1620 ttactataca eccaeactge aaaeggtggt ttggtgtegt ggeetggaee etcaaageet 1680 gggtacctct tacctatagt tacctacact gcctacatta tcttcgtctg atatctataa 1740 ccctccgtta cccacccacg aaccatccct cctccgcatc cttacgatcc taccaggcac 1800 aggcagacaa gcaggcaagg taggcatcaa ccatgacaga caccaagacc tcagatcctc 1860 gagatcgttc tgtttcagca ttggcttcag cctcaacctc ggcctccaac ccagcagact 1920 ccaccactac ctctgcccaa acaaagaaac aaacgcagtc caactctcaa tcctcttcgc 1980 tctaccccgg tctcggcgct aacttcgccc atgaccctaa ggccccattt tccgtcaatt 2040 acgaccaaga ggtctatttc cagtttatgg ctggggaaga aggtactgac acggggtcac 2100 ctgatgcaaa caaaaacaag aataagaata agacgctcaa ccaaatctat cgggaggtgt 2160 gtatatttta tttctcatta aatgatctct tcaatcttcc ctatcccgca aagacgggct 2220 ttgcgggtca agcggtatat gcttaccaga cttaaaagga atgggtgcgt cgtgcattaa 2280 atcccgcgat ttcagaccca aggggtgacc cgagtccgat cgattttgag tgcgcggaga 2340 gtcagaggat tagggagagg ttttgattgt ttagggttgc aggaacaggg gtagacgaag 2400 gctttcctct aggatacaga gctagagcca ctaccttcca ctcgagaata tacctttgaa 2460 tgatagttat atccagaatt tctttttcgg atggcgcgag agcttgaaca aagcaggaag 2520 actgggaccc aggtgtgaaa tcatagggac ctgtcagggg tgtcaagaat tggcttcggg 2580 cgttctgcca gcatactgta aggcagattc caggtgggaa tgatatctag gtctaaaggt 2640 caagggaact tgatataaac ttccaaaggt gatgaaggta cgccttttga gtagcagatg 2700 gtatgagaca aatagcatat agtccgtact actaaatata gccttgagga caaggaaatc 2760 agacaatgta ggttatgcgt ttgggtgagc gtccccgta ctctgttcct cctccatctc 2820 agccacaaat cgttcccaag tatttagtac accctgataa aactcaatgt gttgttctgc 2880 gagcgcgccc aaggagtctc ggaattcgat tgctttgatt ctttcaaagt cagccacttc 2940 ccggacgacc tcttcgtcaa acatctccga agtggtctt gctgattcga cttctcgtgt 3000 gagctcgtcg atccgtagct cgagtttacg catgcgctcc cggcggaca gctcgtggtc 3060 cactccgcgc atgcttcca tcttcggtga

<210> 2115

<211> 1582 <212> DNA

<213> Aspergillus nidulans

<400> 2115

tactgtacat gacgagtcga cctcagtccg caaagtgccc gatcttctca tgtctacgaa 60 aatcgagatg gaaatcaaga actggcagct aactgggcta cctccgtttc ctgaactgat 120 gcactttccg cgcgattgct ggagcaagct atcgcggacg gacctccgtc tgatccacca 180 tatcatcggg ctctcgatcg acctccaccg gcgggggctc agtagctgca ctatctgggc 240 ccagaagatg ccactgtaag tacccgatct ggattcgagt ctgggggtcat tgctgacggt 300 360 gtagctttct gtctattgct atgtccaacg actttgtaat gagctccatt ttaaccttat ctgcgactca tcttgcctgg atcacccaca accaggaaac caaacagcta gccttccacc atcggggtat ttccattcaa ggcctccaga aagcgatcag cactttctcc aaagataact 480 gtgatgggat cctcgctgca tcgatcctcc tgtcatggca agatagcgaa tggtcgagct 540 gggtatcttt gcagcagggt gtgacttctg tattggactc gatgcctcag ctatggaggc 600 aggagtccga gcttgccatg ttcctggaaa atcaacggtt tttagcaagc gcgaactctt 660 tggtcgtttc tggtctccgc ttccaagaag aggatctggc cagtctcgac cacactatca 720 tcaccctcca gaccatccaa aagcgagtcg cacacaacca cgaacacttt cgtcgactcg 780 gggaattget egagttegtg egacatttge agegtgatat eetgteettg acteeegete 840 aagcettega aegegtgeag eetetgegge agtggetatt ettteteeeg eeageeatge ttcgtggagg agatggtgat atcggagcct tggctatttt ggcgcagttc tttggcgtcg gagtagctct ggatagtctt ttacccgacc taggaggcgc ctatctgggt ccgatgtccg 1020 taggacccat cgaagaaatc taccgcacta tctacgcaag gaatgccacc acccccttta 1080 accetgacgt acaactggct acttccatca tggatetece tegacateta geegetaaat 1140 acagageceg tetacaatgg teeceeegaa egtetgtega gtactaeteg eegeegeege 1200 cgagtccctt ccaaacggtg caggactttc gtccagcagc gtctccatca ccttcatctg 1260 teteggette ttatacegea tataceceae cactgeagte teeceeggeg gtgacgattg 1320 cgagctcacc ctatgaggtt tccgcgtcgt atgcaacggc gccagctcag cgagcctcta 1380 tececetgee caacttetet eggacaegeg ggaagaaeee tetgattgeg geeateeggg 1440 gtetetacag cacteceege catatectee etegtatete gaagacatag titgegggge 1500 tcgggtggat gggggccttg ctctgagccc tttggagctc tacgaagacc acgcactccg 1560 1582 ttqtccatga ctacggcaca cc

2116 <210> 2410 <211> DNA

<212>

Aspergillus nidulans <213>

<400> 2116

gggactgtgt gcccggaccc caaacaggcc tttccgcggc acacgtggat gaacgaaggc 60 cttcacgatg cttccagtcg tcgcttatca gccatagggg aagaggatac cacgtcgccc 120 tateggtetg gaaggaatte acaaggeteg geggtggaae gaeatagteg egttttggae 180 tcgccagtat cgatgcgcga gaaaggcgat ttcgaaggtg ctgaatcccg agcgcacagc agctcgtcaa gctcgacgat cagcggagcg agtgagactt cgtcatggga tgagacaaaa 300 gcgcgcgcag actacgtgtc tgcaaaagag attcgtggat cgagagaaga ccgccgcgca 360 geeectgege egteaaacag tgeacagteg aceteaaacg egeeggegge caatgagaaa 420 gacgatccgg acgaggactt gtccgcgatc attttggaga gtgaggcaga gcggatttta gagaacgcga agagacgatt gtcggtatgt tgcttgctac ctggattcgc ctctgcgtgc 540 gaaagctaac ttttgcagct tatggaggga aacttaacac gagctcgctc cacaatgcgc 600 tcaactactc cgtcgctttc atcctcaccg gtgccttccg ctccctcgcc tggtctagga 660 cagcccgttg gtggcttgta ccagtcgatt caccgcgcag ctgaccgcag gtcctccaat 720 ctccggccac gacagacata taagtcgcag gttacaagta acaataggca ttcgcgagtt 780 tatagcgaga ccaacctgcc gtccaaccca cgggatgttg ggaagactat gtcccgatct gtgagcgcga tgggctctag cacgagctcc gacttccata atgatgagcg ctcttttcat 900 tacgcgccca ctcgggcgta tcttactcac cgcgcgtcgg tctcgtctat acagcagaat 960 cacttagttc catctgtgaa ggaacgcgca tcctctaatt cgccttcgat tgaaggagta 1020 gaggaagagg aggcgaaaat ctcgaatatg gaagaattca atactgctta tccagttcat 1080 gacccccctt ctcgctccca atcccagctc caggtgcgcg acctgcagga tcagatgaaa 1140 gggcttcaca tcaagatctc gactctgaag gtgaaggcac aggaggatgg tctgcggcgc 1200 cgcagcctac agagtttgcg cacgcccagc cctttgacag ccgcaaacca ttggtacgcc 1260 aatcctcttg agcacactgc acgccgcagt cctctacatt tgagctcaga atatgaccaa 1320 tacatgaact cccccatcaa cagccattcc agcggcagcg ggcagacgtc aagtagcaat 1380 accgattcga ctgtccttgt cccggagagt aggccttccg aggctctgca gtcgtcggac 1440 ggcgctatcg ttgcagcctt tgaactaacc gaccatgaga gcgatcactc gaccgcggaa 1500 agcetetacg aagatgeaga ggaggaeate gaeegtgagg egttagagga gattetaega 1560 gaacctctgg atgatgacct cgctgatggc gagctggagt cgcttccagc ggttgacgat 1620 acteegeacg aagaacgtga ggaegetttt gaetaegage aetttattet geatagegea 1680 ttgggcaatt acacacagac gcgactccgt cggcaaagca atgcgtcgga aacgtcagtt 1740 gagaccaccc ggccaatcaa caagcgccgc tctatgcgtt ctataaagca ttccaggtcc 1800 aacagcaaca actctatatc cacgatcgca acctttgcaa cagccgcgga aggcagggac 1860 gacatcgaaa gtgttctgta ctgggaccgg aaatttaatg atggtacgct ttttactctc 1920 actatttctg accaccaaaa actaataacc ctagaactca aacaccgcta cgtagaaccc 1980 gaggatgaac aaacagacat cgaccctgaa ccagaacgca accctcgcaa atcgctcgca 2040 gtcgaatcgg tcgcctcaca gcgtcctgac tctgcagcaa ccggctccgc aacaccaacg 2100 tegettgeet egtegettgt etegacagtg egtgeggeag caageecaca tecaaactee 2160 acgaacagcc acctaggtat taatgaagac gacactcggt tgctcgaaca gctgttcaaa 2220 agtctaggcg acgtttgcat gaacttgcag gaacttacga cgtcaccgga ctatgacgag 2280 aagcaagcga agctactcag gcgacggtta caggccgcga ggcgcgtgct tgatgaaaag 2340 attgattgat cgacggaatt tccttatcta taattaactg gcggtgcatt tttgtgatgc 2400 2410 ccatactata

2117 <210> 4198 <211> <212> DNA Aspergillus nidulans <213> unsure at all n locations

<223>

<400> 2117

cgggcgtgac gacgggctat tccgcgctgc tatcatcaga gtgggggtat ggcaggaagt 60 120 ggccttcgac atcaaagacc ctgaggtcta catcaaggaa ctgtatatga atctgaccat cacgacgggg tgcgcggata gtgccagcgc acttgaatgc ctacgcgcat tgcccgccgc 180 gctgaacatc atcagcactc ccgtctactc aggtactggc ttgggccctt ggctcaccca 240 300 ggtggatggt gatttcctgc tcgacgggcc gactgagtca ctcgacaagc aacatttcgt 360 ccttgtgccc atcatgtaca cgaccacttc ggacgatgcc acggccttca gtttcgtcga ttccgtgata ccgatgctga ctttcggaat ttcatcggag ctggcgggcc tgacgaggcg 420 atttcggtga ttgaagcgct atatccgaaa gatttggggt tgccagccgg ctggacatca 480 gcagctaaag aagaagcgac atatggtgca cagtggaagc gagctgtcgc cttcatactg 540 atgtggtaga gacaagttca cgtcgacgaa cggtagacgc ctgaggtgca gcgaatggaa 600 cggcagctta gactccagat gctatgtaga ggtggacgga tatcggcttg agcagacgag 660 atatattaac agtaatatgc aaagtcgaat gtattactga ggtctctagc agcagacaac 720 caagctaaga aaggccttat gacctttttc gaatctatgt cgtacgtgca gtagatgctc 780 accetttatt tttcaaacac ctaaatgcat tatatatcaa geteagagaa accaaacaga 840 agtgctagtt cgcaaccgta tctctcaaac aaaaagccaa gcggctcgat agcatatgaa 900 tcttcagaag cagatgtcct ctgtatataa aagcctgttc atgatataaa tacaagaaat atgagtcgaa atctgtgttg ttcaggcaat atgttaataa cgccaagacc tgaagtatac 1020 cacagtacgg taaacatgca catcacgtgg atgatatccc cgcacgggac ctcactgttt 1080 ctctgcttgt tgacacaagt cagttcaagt cccaactcca aaacgatcaa caatgaatcc 1140 caacctccac gccgatacac caccaccccc accgccgaaa ccaggcagtc atgaggccag 1200 tegeggegge acaceacaag teggetegee ateaceaacg geagegeage teeegeagea 1260 gggccagtac ggattggacg taacgaacca atacctcaac ccaagcacag tcaatccgac 1320 cgcgaatggc ccccggcctc cggcaattga agaaggctgg ctacctgagg gtatcaaaga 1380 aaaatcgtaa agacccctc cacaaccgct ctctcgaacc tgcccagact tcgaaggttt 1440 gataggtgac tgattacaat tagaacaatc gacctccaaa caatcctcga aaccccatca 1500 ctaatctctg ccctttccgc cacccatcca tctcaccatt gccatcagga aatgcttcag 1560 acgcttctga aatataacca agacctggca aatcaccttc tcgacctaca atctcaactc 1620 acaagtetee geteetetae egagacaete etgeteeage accaatetet tgaagtetea 1680 tggcggaaga agcagggcga gatggattcc gccctggcac cgtggtcgcc aaaggcattg 1740 tatcagcggt taagtgcggg tatagcggaa caggaggctg tttgttttgc tgttgaggag 1800 agctttttgg agggcgagca tcatggtaag gcatcagaga aggaggttgc tgattgggtt 1860 agacgggtta gggcggaagg ggcaaagtta gctggaagaa gggaggcgaa ggcgaggtgg 1920 gatgagggga gggttggggg gtggaggtag catccatgct cctcaagtac ggacttgttg 1980 actgcagtat gaaggtgaaa aggaatttct attcttttat gatgcaacgg acggaaaatc 2040 gctggatata aatcacataa cggttatgac gatttttctc cgacatcctt acttcgatat 2100 gcgacttgtc aatgccggca cacctcatgc cgccaaatgc cgcctcccgc tttccaagtc 2160 ccacccatca tctcccacat tgctcgggct tcctacgccc ttgaagaacg catggtccct 2280 actcatggct ccacacgacc acccggaacc acgctcaaga ggtggactat acagcctaaa 2340 cgcgacccaa gcgaacgaca tgcccattac agacccgaaa atgatatcga agccatggtg 2400 cctataatcg aaccagcgag aagccgatat aaagaatgct acgtgccacg gcacaaacgc 2460 aaggattatc agatagatgg cggcggggcg ccctgattac gggtcgcaaa gcggttccga 2520 gggcgcaggt cctgtgtcag cggtgtatgc gcgaggtagg ggaatttgat cgagaatttg 2580 gagcacagcc aaagtgagaa gtaggttaga ccggcgaatg aaactgtaac ggccctcagc 2640 gttgcccatg aagaccatgc tcaccaagaa ggaatatgaa catacgagac gagtgcccac 2700 taggaaagct cacaaaccca cccctcttca acaaatccgc cttattccgg cagatatccc 2760 agctaaccaa tgtgggagcc ccctgcagtc tctgcccaag tccacctacc gcataagtag 2820 caatattete gagateegga teacacegeg caageatgte eggacgegge ttgecataaa 2880 gatctttcag cccctccgta gccataaacg cagcggcaca agccagccca agtccaagcc 2940 atccggcatt ccattcccag atcttgcgcc gcagtagtag agccctagat gacgagcgcg 3000 agtctgcccc agatctgtcg attgattgcc ccggcgtaag aagtagacac acagctacga 3060 ttatcacggc gggtgctatc agcgagacga ctactagcac gcttgtgctg attgtttcgt 3120 cctctgtgta tgggtatgag tagctgacgt cggtaaggga gaagggcatg tggtttggct 3180 cgactttgtg aaaaccatat ccaatgaggg cgatgccgct ggctcatgac gttaatccgt 3240 tttttctcca aataataact cgcgaaacct ttacatgagg ctatacatac actatgagaa 3300 tccagtcgac gatgtatgaa aggaagacgc tgatggagaa gctcgcgtga cctcccggca 3360 aggccggtag agctttaagt ccggggagag gcatgatata ttagcttagt atattattat 3420 ttctgcaccg tcaccagaaa atatgaagag aagagatccc ccgacttctg aatgtgtcgc 3480 gaacggaagg ggttagatac gagctccctt tgcatgaaca ctggggatag gaaagggctt 3540 ttaagtaatc ctgattgctt gtggctacaa gccgatctta tcttggcttg ggtcatcctc 3600 aagaaccaag aaagtttaga ccagattgga acaacaaggc cggggctgtg caagattcat 3660 aagccgactc ttaaacctgt tgctgtttat gccattcatt cactcgggcc ggaatcacaa 3720 tgtttgtgtt tgtccaagta tgactctggt ccacgtataa gcccgattaa gaccgaagca 3780 tgcgtcagaa tgttttcagt cttgggtgca tacggtgtgc tctttgctcg gtcgaaatca 3840 acgagcatta gacctgataa cttgtcttat ggagcgctcg tatactcaga gtcctcgtcg 3900 gcctggatgt actcagcact cgttgctata actatctgtc ggtttccaac gtccatcctg 3960 atcacaggac agcccctctc agagtaatgt aactagttcc gatagaaatt ttttgcccgg 4020 ccgtgatttc gacttctaag actgtatcac tgattcaaca ttgacgggta gaactgggct 4080 gcgatttagc aaccgaacta tctagtccgg nctgaggatg cttgcttatt gcaacagcca 4140 gaaagtctag tcccgaccct gcactaatta ttagtgcccc caaatttttt tttcccat 4198

<210> 2118

<211> 1995

<212> DNA

<213> Aspergillus nidulans

60 caaaccaagg tcgcagccgc acgggcatta gcggcctgtt aataccagcc tggcgttcac 120 tcgtccaata tcgtaccgcg ccagctagga cagacctcct aagcaatctt gctcagaagt cgccactcag ttcgttcgct tgatcctgct gcacaagcgc aacgatcacg gtcgcgactt 180 cgtcaggcgt cacccacgca tccttcgtat catccactat cttcagtttc tccgggtggt 300 cggtccaaag cggcgtcttg atgatgcccg gtgcaacggc cgtaacgcgg atcccgcagc 360 gctcgtcgag tttggcgagc gagcgaacga acccattgat cgcatgcttt gtggcgacgt 420 agatgggcgc tgcgaggaac gggttttgcc ctgcgatact ggagatgtgc acaatcgctt tgcggcgtgt gctgtctgtt ccggacctga ggaagtgcga gattgcgagc tgtgacgtgc 480 ggatcgggtg cgtgaggttg atgtcgatga gcgcgtagcg gtcgccatct ggggggtcgc 540 ggctcacagc cgttcctgga gggcgccaga agttactcca gtgctttaac cggtcggtca 600 gcctagacgg acaaggtaag gatacgtaga gagaacgcac cggttcataa atcccggcgc 660 cagggcagac aatgtccacc tcgccaaatt ccttctccgc aacctcaaac atctgctcga 780 gctgcttcca ctccctcacg tcggttcgct ggaatacagc ccggggaatc ttggccgtat actgatctac caagctctga gcctcaggac gcagggccaa gtcagcgatt aggacattgc 840 agccattctc caagagctgt ttcgcgaaac tcaggttgat tcctgcatac aagcatttct 900 cagtacatct cacgccgtta aggatggatc ttggataaac acaccagagc cagcaccagt cacaatagct gtcttgccct gcacggagaa tgacatgttt tgtttctagt ctggtcgcca 1020 gcaaagaagc cctaacagcg tttgtatttg cagtgctcgc aatacttatg acgtttgcgt 1080 ggttgtagtt ctgtcgtgaa acaaacctag gctcctgtaa gaaatggtgc gtctttatat 1140 gttgtggtta ctgtcacacg gaccacggct cagagcctat aatctcccta ctgggcaaca 1200 aaccctggag cactatctgc cgagctaccg aagtccagct agaggcgtgc gtgtcctgac 1260 tcggattcgg cagctgatga gattcgcggg gtaagcatgt aatggagttg aggccttggt 1320 ggaccggggt gtgggacaat tgaggggtct ggcggcggca gacggagtat agaccgatcc 1380 tatatatcat ctcaaggttc gaaccttgaa catctaagat atctggtctt gtttttagcc 1440 ggtaaatagg tgagaaccgt tccatattct gcaaccgcca ggtctacgca taattgggta 1500 caaactggtt aacctacgct tcgttactaa tcgcatgaat cgcatgtatc gcatgtatac 1560 ttcggtacat gatggggac cggacccagt ccgatatcag gactccacct cggaggttcc 1620 ggatgatgaa tcgcctaacg cctgaatctg ccttttatgc tgctgaatta agtggaatac 1680 agctgtggtg aactgcctcc tgcacgagaa agcacatctc ggcctggtag cagtctcgac 1740 ctcagtcgac agcgttcgag gtcctcactc ttaaagcatg agaactactc tctgttctag 1800 ttaaggcgct atttattcat ctcactattt ggccaggtat gtctttagca gaattatttg 1860 cagtgaaaac tgcctgcagt ctatgtaaca ccaacaggga ctatgcgcgc tcagtcttat 1920 taggtatatg atcatgaatc ccagaataag aggaatttga tgagctgaaa acacgccaca 1980 caagttgaaa cctga

<210> 2119 <211> 1984 <212> DNA

<213> Aspergillus nidulans

<400> 2119

aagcgccact gatatatatt tttttcgtac cacactccgc cactggattt tcgaagtatt 60 120 gcatgatgca tatttagttc tgcgaacgag tgaggatgta tgaacccacg agactggcag 180 caaacgcatt aagtcctcat ggttaatagt atctaagcgc ccttaatggt gtcatgacat 240 acccccatt agggactcat ttaggccgtc attcattatc aagtgccgtc ggacctccac 300 caatcctctc cttggggaaa ggtgaactgt gtttgaacag taaataccta ctggctctac 360 ctaaatgagg aaagagactg ttctgactta tatttatttg ccaggtagga ccgtatcctt 420 gttttcagga ttaatcgagt aatatgctac atgatattgc gagtagagtc cttaaaaagac 480 aaaacttcta gtctgaaaga tcttttattt acagtatatc cagagaccaa tagaggaaaa aagaagaatg gcgaattatc agcctctttc cttccccaaa atcattccct cgacaatctt 540 cctctcccca ctgccctcga ccatcccatg gaatacccca tcctcaatcc ccatcaataa 600 660 tcttggggaa tccatctcga cgacttctcc tctctcaagg acgacaaccc tgtcgaagtc cgcaattgtg ctcaatctat gcgcaataac aatcaacgta caaccccacc cggcaccaca 720 aatatcctcc ctcagcaccc gttggatacg ctgatccgat tcaacgtcta tactggctgt 780 tgcttcatcc atgatcagga tcttcggacg agagaccaag gcgcgtgcga gacagaggag 840 ttggcgttgg ccttgcgaga gatttttgcc cccagctgct attggagtag acaacgacag 900 ctggagaatg gtcaaagcgg gcgaaaaggc ggcgttagaa gaagttgaat cgtggtcttc gtttgatatt ggatgttgcg ttggcgataa ggagaacagg cctactctct ccaacgcggc 1020 gaggagctcg gtatcgtcgt actgcttgaa tgggtccagg acttctcgga ctgtcccggc 1080 aaacatqatq qqatcctgcg aaatcaaacc cacacgctca cgcagatcct gtagtttgac 1140 atgeteaata teaataceat caatatgaat geteceetea egaaegteea ageagegeag 1200 agogteateg caaagetega titecetget cetgtgegee egaegaeeee gaegegeteg 1260 ccagcgcgga tgcaaaagtt gaggttgcgt aagaccggag cgagatctgg cgcatatgcg 1320 acagtgagac tagagatttc gacttcgccc ttgctcggcc aggtggcggg gacatcgacg 1380 ccagactgta gttcctgatc aagctgggta tactcggcaa tgcgctctgc ggcattggag 1440 ttaatttcga gtgatgcgta ctgagacaga agccaagtga cgttgctgga catgtcgagg 1500 gcgaagctga gtgcaaagcc ggccagtggc gcgtcgaggg tgcgaacgct gacgaatatc 1560 attgttacag ccgcgacgaa ctgctcggta cttgtgtgtc aacgatgcat ggttccagtg 1620 ttaaatagca cgctagaagg ggacatacca ctgcgcccac cgagctaagc cagatggccc 1680 gccaggaggc gaagagtttt ctgtgccata gagcctgaca atacgaatcg atgagatcat 1740 acatgcgcgt caaatatgcc tgctcccgcc caaaggcacg aacggttggc aggcctgtga 1800 gtagagagcc gacgagctcg aagatgggag acctagccgt gctctgtagt cttttcgcct 1860 cgcgcgctgc ggtcacgtag aagtacccaa ctgtccagga agcacctaaa gagagaatac 1920 ccaggccaac aacaacggga gacgtgacca cggcggcaac aatcacgccg aggacagtta 1980 1984 tcgc

<210> 2120 <211> 2645

<212> DNA

<213> Aspergillus nidulans

<400> 2120

aagacagact ggacacccat cgcacatcta agtcacgagt catgacacca gactgcagca 60 tcgacttgaa gcggatggta agagggaacg ggagcttcac tgcaccaagc accattagca 120 attcataaac agtagacaga caggcatagc ctgcttacaa atgacgaagc ccgaaaaaaa 180 agcatttatc cagctcataa tcagggtctg cggaatcatc atcatcatat ttcccttcat 240

cattcccatc atgccctcca tagcagcggg atctgacatt gggttagcgg gtggctggcc gcgactgttg gggtccttca aaaaggcgcc ggtttgaaag cccgtgacaa ggtagttttt togcatotca aaagootott togacagoac agotgggggg tggttacgca ggttgacggo 480 gcggaacagg gagaggcgct cgcgggattc tgctagggtc gcgggaggct tcggagggga 540 gttcattagg attgtagcat agtgtcggag catgccggtc agaatctatt gggtttgtta ggaaagattg aatatgttta ttagaatggg tcttaccatg acaacggaga taggaatcaa 600 aatccagtaa ctgcgagttt caggtaagtc tcgtctcaca gatccgtgaa tatggactag 660 gtgtactcac aatagagccg gatcccgaag gatcgtttgc tctacacctt gcaatgccat 720 attgatgtga agggagagcc aaggtgtaag ctgtagctgg caatgatcaa gagaagtgtt 780 cgaacatcga atccccacag ggtccgacaa ggcggcggac ctgaatctag tccatactgc cgctttagcg ccgaaaggga cagctcgccg caactacacg cagcagctct aagcataccc atcaaaaata accetettge ttetttetat tttgetactg cetectacge geeegcatea tatcattctt taaccattta ttaattacgc aatgtcttcg gaagctgccc ccaaggtgcc 1020 cgtctactcc ccgaatggta tgctggcagt aactgagtct acagctcaca gcactctgaa 1080 ccaactaaca teegcatetg ettaattete gatacatgta etaatteett titgaaacaa 1140 acacagacct caaatcaaca acagacgacg cettagteec etacettace accetecege 1200 agccctacac ctttaagcaa gaccacttca agacaaatgt tcgtttcatc gtcggttaca 1260 gcgccgtcgc aatcgcagcg ttcacgttct acgcggaccg caagcttggc tgggaagcga 1320 cgacatcgtc atgggttatt gccgcagttg gttcgtactt cattctaaac tcgctgctca 1380 cgtactgggt ctgggccgtc gaggctagcg aggtctttcg ggggaagcgc aagtctgggg 1440 agacggtatg tatcttctca ataatgtcta ttcctttggt tttttcactc aggggaaggg 1500 agcggagcga ctgttggcga cttgcgtagt ttctaatacg gctatgaata gatatctatt 1560 cgctcgtccg tgaagaagca cacgcctctc tacagactgc agattcagta taaatcggct 1620 tcgaacagcg ttttagagga gatggagatc gtgtcgccgt ttacagcttg gttctctgct 1680 gacgggacat accatccgga gcctttgcgc atgtggcttg cggatgagat taatgtgcta 1740 cgcctggccg ctcagaaccc cagaaacaaa ccgggtggcg tggctagcgt ggtgggagtc 1800 gaggagtctg agcacaacga ggtctaggat gcgaagaagc gaaggtagtc taagtatgga 1860 atgtgccaga tgcaggtatg caactgaatg aagagtccct tcttaagatc ttccaagcat 1920
tcatggtcta cctactccat gttgagatac aaccctaact ggcttaccaa accagcatga 1980
ctgcgcttga gccgttgact tcaccattag cggcccttca cttcccattg cgctctatca 2040
taagattttg agatgataag cagagtctat ataaggcaga caaaaaaaaa agcaagttta 2100
acgtttgaac aagggaaatc ttatctccat gcgcttgata acatcttttg accgacacca 2160
ctttctatga agcagcctcc agagtgccag gacgctcggt agcagcagca ggcttaatgt 2220
cgtccattct cttgttctga atgagtctct gttgaaatgt agtcagtttt gagcgcattt 2280
gtaataaaagt ctcaggactt accagcaagt tccggagcaa aacgacgata gtcaccttcc 2340
cgattgaggg cacgaagatg gaggctttt gcttaacttc aggaccaaag ttctgtttac 2400
tcctgtataa gcaagatgcc agctagtggc cgtgaagaga taaacatacc ttctcgcttg 2460
aaaaattgat acacacggca ccgtctcgca gcaagctagt gtcgaacttg tacttgtccc 2520
cagggacacc agagataacg gtatcacaca gcgggacaat atccttcagc tcctttccct 2580
ctacatcctc aacctcatgt ctgccactt cagacccgtc cccgatagaa cttctggata 2640
cagtg

<210> 2121 <211> 2655 <212> DNA <213> Aspergillus nidulans

<400> 2121

acaaagccga tgtttgattt tcgtaaccac agcatacgca ataggagtgg gcctgtcacc 60 agctttgtcg tatacggtaa gctcgacctc gtttgccttg tctatgtcga gattgaatgt 120 ctcatcctgc cacctgtcgg acctggttgc ctttgttctg qcctttatag tatcctcgac 180 tttcacgata acaaacgtct cgggacccct ggaaaatctt gagctagtcg catgatcaac 240 gtcctgaacg gcttgaattc gcattgtcag aagaccggtt agcggcttgc gcagattcgg 300 ggcgcttaaa ctttcatctg aaatcaacgt cagctagggg gagaataagt cacacagaga 360 gcaatgggtc cgcaccatca ggagtatccg tcgactcaat atcaacatgg agatcttcgt 420 atcgcttgag agcctgcttt agaagctgaa tcttctggtt actctcaatt cgtcggccct 480 cggcatctgt gcgactcttt ctatcgcctt cgtcctggta caatcggacc atcttctcaa

600 tgcctgcttt gtattgtttc tcgacactca gcttgaactc aagctgggat aacataagct ggatttttgg tccaaggtat ggggtatcat atttaatcag gtctagagaa gatacgtatc 660 agtataagaa tacatttgaa atagtgcacc gaaagtgccc aggtgtccaa tgcaatgaac 720 ataccqaqtt taqtataatt cggacgggcc ttgggcacag gcgcgaaagg tcggggatcc 780 ttgaaaggag cacccgacgg catagatccg gccccaggct gcgggtgctg cgtaggatca 840 ccatacccca aaggatettt eggeggaggg geagggeeat etteagggtt eggtggeage 900 cqtttatcqq tqqqtqaacc qqattctcqc tccatctqcc qcaqctqcaq ctctttcatc 960 ttctcttcca gataagcgat gttcttgcgg ccatctcgaa tattcgcatc gactcgttgt 1020 tgcaccagag gattateggt tgactgtege atattegaeg eageggegat aagggettte 1080 tecegetega tettgeggta gacegaggeg atgagetegt eecegteeat ggtgtaagag 1140 geetgaeeta ggggggtegt ggteggggaa egaaeteaag ageeggggea ggaaagegae 1200 cggttgaaag agggcagaga agaagagacc ctaagagaat acgtaaagaa ggagaggcct 1260 cgtaaatcaa gaggacggag tagatgaggt cagtagggta ggtcggtggc cggcagattg 1320 gaggggggga ttggggtgga gtttgggcga gcgagaggcg gaagtacaga cagatagtgt 1380 cgcggggttt tgttgacaat aatgacagcc tcaaacagag cacaaggcga ccaaacagtc 1440 ctgcaacctt caataatcct cagcagattt tcagatcctt gacagatgtg agacaatctg 1500 tctgtcgatg acgaaatgaa gtcgttttct caatttcctg tggccagatc gatgattgat 1560 ttatccacag ttcagcagaa tttattgtaa ggggctgtgc tgggcgttcc gtgacaggca 1620 attgtcctga tactccgttt aagtgtgaat attgttaggc tgccaggtgt gtgccgaaga 1680 ggtctccaga cttcacaagg tgtgccagtc aaagaaattg tgtcagactg ggccacctca 1740 agactttctc aacgcagaat ccttgggcgc tgggctagct acaaaatatg gcctcacgcg 1800 teettgatga aaggaatgaa agaeteegga atteaaeteg eegatgageg gaeeageegt 1860 cgcaacaccc agcttgaaac ggaaacaatg tgcagaatcg agattcttgc ctgagcttcc 1920 ageeggeeag tattegteae caegaaeeat atetgtteea ttaacaggga teteeggage 1980 ctacttccaa ccaagacttg tctgccagaa agaacccctc ttgaagccat taggctttga 2040 acatecetga etgtaggett teaaggeaga aageageatg tggttgaget acaagaatee 2100 ataattetat egategteet tgategatte eaeggeteae gggtgeagte teageateae 2160 accecettac tgtatacagg cacttggaat ctgtaaatgc atccaagggt catggccct 2220 gtttctggaa catcgagtct tctggattga tccacggaga tcaccgcctg tgcggcccta 2280 cccggccact gtcgcagcgg agttcagatt ccagcagccc tacggtttac ctcttaagt 2340 cactggattg cgtggcagat cacggcgtag actggagcac atggatgacc aggaatagga 2400 cccctcgact agatccggtt tagcgtccac gtgataacaa aatatctcta gatagcgggg 2460 aatcttggag gttcttctag ttctcaatct gcactgcaaa ttgcaaatct actccattgc 2520 ccgagaatca aacttcagtt tctccgaaca aacttgaacg cattgcaatg cctcccccga 2580 acgtaaggtt cttgcgacac gcgagaaac catgtttccg ccgacgaact agcacaaggg 2640 caagaaattg cgcga

<210> 2122 <211> 979

<212> DNA

<213> Aspergillus nidulans

<400> 2122

ccacccaaga ctacgatacc agcgacgatg aagctaagtc ccggttctct tgaaaaccat 60 gaccttgtga aacgcgcatt cgccggcgat gaggtcgttc aagagttcga gcaggagaaa 120 cttgacacta tcgaggacga gggcgacaag gtcatcgacg agacactccc tggctggggc 180 agctggactg gagacggcat tagcaggaag gaaaggaagc ggcagaagcg cgttttgaca 240 aaggttgagg gagtgaagcc cgaaaatcgg aaggatgcga aactttctcg tgttatcatc 300 aacgaaaagc gtattaagaa ggtaaaggct tttatcgatt tcgcacccat cgacgtgaat 360 actaatatct ggcttcctgc agaacaacaa gtaccttgcg acgcaactgc ctcacccgtt 420 cgagtcgaag cagcagtacg agaggtcgct tcgtgtcccg attggtcccg agtggtctac aaaggagact ttccagtctt ctaccaagcc ccgtgttatg atcaaacagg gcgtcatcaa 540 gccgatggag aagccgatgg tttagatact ggccgggcct tgaccttgaa gttcagaaca 600 ctagtcttga ccgcggagta tatagggtta gacaatatat acctggatac ccattcaacc 660 tgccatcaat gcagcttaat gattagtttt gaaaagcatt gtgtttatct tttagtgatt 720 tgtcgtcgtg ttttctggtc tgttctaacc tggaacagtt cgaaccctaa atcgaaccct 780 ctctcaccaa catctggcag taacctatcc aagtttattg tatttcgtga cccctaagcc 840 aatccaagge catcagttac gtgataacat ctgcaaaage tgagaaaage tcatctgtgg 900 ctgcaataaa gccatagtta gcttcaatcg ctcattctac ctaagccatt gcgcttgage 960 attcctacte ttcacttte 979

- <210> 2123 <211> 1748 <212> DNA
- <213> Aspergillus nidulans
- <400> 2123

taccgatgtt gcctggtact ctgacctcga gtcaagcgcc caagttctcg cctgccgttg 60 120 cgtgtatgag cacgacacgt aagactttct tacatactct cccgtctttg acggttcagt tgaactaaca gcttgttgga gcattaacgg tggcggatac ggccagaaca ttggctacgg 180 tacctctgct gatgaagttg ctgtcatgat ctccaacttg atgtataacg atgaaatggg 240 300 ttacttcgag aacctctacg gacaagccac cccagacatg accetgttcg agaaatgggg 360 ccacttctct cagatcgtct ggaagggaac caccgaggtc ggatgcgcca ctgtcgactg ccctagcctt ggcaacgtcg attccgcctc gtctgtcccc ttcactgttt gcaactacag 420 ccctgcaggt aagtcgacca accgttcttg gtctctcact cgatctgaca tgtacgctta 480 ggaaactacg acggtgaata cgccgacaat gtcctgaagc ccctcggtaa ccccgtgtgg 540 tctgcgtcat aaatctggag ctatatgcac tcacttttga cggggtactg cttgtgcctc 600 660 gctatatggc agtagactag atggcactat cgcacttagg tttagtgatt agtcggtacc 720 gcttgagccg actcgacttt tcgtctgtag ctggtgctcc ttgcatacct atcgtcgtga 780 gtactgaatt cgatatatga caattgtgag attcgaatat tctcttttga acagtcattc caactttect tetegtgget gtggettete ggtggaaace geatattget tttgegettg 840 tgtcaagtct cgtgcttgtg agactcgaag ctagcgttgt ttatcttctc ttctattgtg 900 aatattctat catcttcgag cttgtcacct gacaggaatc cgatattatt tcgtcttctc 960 tccacgttqc tqctcccctq ctttqtqtqa atqqcqcctq gataqcqtqt ttctqaccaa 1020 aagatatgat gaacgttcac ataacaaaac ctttggtagt agactgttta aaaaatgaat 1080 cctgtgggcg ggcatgttac gtttaccacg agttgggctg caaacggcga gtgtcggtga 1140 tgtcattctt ccccccacag tgtgctccca catacccaca aaacacgtga ccccgaacaa 1200

tetececgea tecaatecaa aegatteaeg ggegaetega ageeteett egteeggaa 1260
agettegtee categagtgt ceatggteea aegeeggtaeg gaagateettg catatggeee 1320
aattgetagt ttgecattet ttgaaaagag tgaegeegag tggaegaeat tggtteettg 1380
gaegtetaag caaattetaa gttgeegeea tttetgetga eeagaeatea tttetaeettg 1440
actgattett teaettgeag teetgeatea attaeagtgt aeteetgeeae agaaettaag 1500
cetetagtge egttteteeg egeatgatae etaaeagagta gaagteteeg egtgaeataa 1560
tgeeaceaee egetetaega teaetaetee eataeteeg egeeteaagg eaaateaaaa 1620
tatataaatee teageeegat etaateeteg aaeteeae eaateteaee tttggaatte 1680
gatattette tgettataee eeataeegag egaaeteega aeetagete etegetigee 1740
aeteegget

<210> 2124 <211> 3025 <212> DNA

<213> Aspergillus nidulans

<400> 2124

gagcgagtga tcttcaatct attttcttct tggagactag catactgtat atcttctata 60 cccttcatat actgtggata cccagcttca tctctactcg caatgatctt caaatacgtc gtacggttat ctgaccagta accactgttt ctgtcacatc gtcgtcgcgg atggcaggcc tacactaacg aactggagta agcaatatac ctaataatgg ccagcaactc caggttattg tttcataccg ataaggacat ttaatcttac tgagcaccta ttatagggcc ctgatgggtg 300 ctcttgaact ctgcgtagag tgcatttatt taggatacat ctgaataccc tgagttcagg 360 ccgctatctc aggttgagtt tttttacctt gtgcatgtgc cacacctggc aagcccgcta 420 ccgggtagct aacgtaaggt caccaaaaag ttacctgccg aaaatattag ggaccgatgt 480 tgtaaccgaa ctatgttact ggagtaagcg tggaatttga caagaagggg ctgaagttat 540 atgcgtcaat ggtggcctgg agtattgtcc gtagtgatag aaaaggaacg tgtctcagag 600 ctggattggt tagggaagaa tacctgttct tggcatagtc cagcggcaga acgtatcttg 660 cagctatttg cgaagtagct gttggtgttg gacttcggca tggtcatgag aagtccaact 720 acggtcgcta tggacgagtc gctgcaccga atgcacaaga caaacttgcc tttctgccca 780 gctgacatct tctggacata gagccaggtt acgctctctg cgcatccttc ttggagaata cacctccagc cgacagccaa taatgcacat agcttagggt actgacctcg agcagcttcc gcgagatgcc accatcgcgg aaacgcactt gatgcgtgcg ccacagccaa aactctcttt ggtttggcag gatcttgctg tcgccctcct gttaagcaat actagaagtg tctttcattg 1020 atgtcggctt catatcatcc cgccggagtc atgataagga ctaaccaaac ggttcctgct 1080 gagactgata catcggcatg actgagtata tgtacgtgtt tttgtgagct gcgtgaggtt 1140 accgattggg tttgcaccgc acatagcaat atgacctttg aagagggcat atatgcctgg 1200 tacggtgagt ccggcctccg caaaagtatt atggtgcctt cgagcttctg aaagtgtgct 1260 aggaagttgt cccacgacgt tggcaggctc tcagactacg aatgcggaac gactgttttc 1320 atcctgagca tcggcaaata gagccgctgc aatgcgcccg tgaacattcg catcatagat 1380 caaccccgga tagtcccaca acgtcccatc caaagcccgc gcacccgtcc attcctgaaa 1440 tgtcgcgtaa tcctctgcat caaatggccc tgtttttggc tcattgatat acaccagctc 1500 cggctgaaac tgaaggactg atgtggaccg agcggcagtt tgcatggtaa ccatcagttt 1560 teccagaaag etetgeteee agttteeteg gteaacatge tgggtaacca tectgetete 1620 ccaaaagtcc cacggatgtg taatttctag aggaccatcg ccttgaagga tgagcacacg 1680 ttgcagatgg ctaaatgtct ttgcaaagtc tagtgactgt actgctcgat cggtatacag 1740 agactccatc ttggaaggac aagtgaaagc cagatgcgtg agatttgagc tctgccgcag 1800 cgtctcccac caacaagtgg tcaaaggctg ggttgcacaa ggccagacga cggacccgcg 1860 accacataag cgtcactcct aacgaccagg cagagatgtc caagcggtta agccaggtgt 1920 gcctgtaagg tgcagtgccg agaccatctc gcaaatagca gaactcctct acggcctcaa 1980 ggcgcaaaat cgcgccgtac acgacattct gagccctacg attttcggta tcgttgaaaa 2040 tcagatgccg cagtggcaga tcaataatga ggcagcggac gttggtgctg aagagggata 2100 aaaggctgtc gatttgtcgg tctgttgagt ttaggctgat ggttactggt gaggggaagg 2160 cgaggaatag ggacctcgcc cgcgttcctt tgtctacacc cgcagggccg tagcggccga 2220 acctgtacag ttggctctgg ttgaggacat tttcaattcg cttgccagag ttcaggtaga 2280 gacagtgagt gaagaggagc tcgcgggcca gaggataggt tagcttgcag gtgaggctga 2340 ggctgaggag agtgcgggtg acaatgtggc caggaggcag gatgcgtgac ttgaacggaa 2400

<210>	2125
<211>	1664
<212>	DNA

<213> Aspergillus nidulans

<400> 2125

60 gcgtccatca acaattttgg attcggcggt acgaatgcac atcttatcgt cgagagtcaa gcggctcagc cgttgccctg gcaagcagat ggatatggcg catcagctac taacctcgac 180 tctcagatct tcgtcttcag tgcgcgcgat aagcaggcct gtgttaatat ggttaacaac ctgaagaaat atctcagaca aaatgccgcg acggatagcc ccgattttct tctccagaga 240 gttgcataca cgctgggcca gcgccgtacc cggttcccgt gggtaaccgc tcgtcctgtg 300 cctgttcaaa atggctttcg cgaacgtatt caagccctcg aggtcaacat gccagttccg 360 cgccgtacca ccgggatccc acgcattggg atggttttta ccggccaggg agcccagtgg 420 tatgcaatgg gccgtgaact gattgcggcc tatccggtct ttaaagcctc actcaaggaa 480 accgatcggc atctcgcagc attaggagcg aggtggtctg ttatagagga gctgaatcag 540 gacataccgg cgtcgcgcgt tcacgacgtc gaatatagta ctccattatg tgtggccgtg 600 cagatttccc tagtccgact tctgcgatca tggggcgtca agccggtggc tgtcactagc 660 cattccagtg gagagatagc tgctgcgtac gcagttggcg ccctcggctg tcaagacgct 720

atggctgtcg cctatcaccg tgctttgctc gcaacaagaa gtagcctagg ctcgaaacag gaaactatgc ttgtggtagg catgagcctt gaagaaacag aaacttatct tgcacgaatc 840 gacgctttga tttgtattgc cacagtggct tgcgtgaacg gcccgtcaag tatcaccgtc 900 traggregate aagacgetgt aaatgeeete gaagegetgg caagaaacga eggeatette acccatcgtc tgaagataca tactgctttc cactcccatc acatgaatcc gattgcagat 1020 ctgtatcgca gcgctttaca aggagctcta tcaccaaatc acgataaagt cgagagtgac 1080 atcacattct cttctcctgt cactggacgc cgtatcacca acctctcgca gctgtctgag 1140 cccgaccact gggttgacag cttgctcaaa ccggtccagt ttgttgatgc attcaccgac 1200 atggttcttg gcgcttctgg tgcatctagc gccaatgtcg acttgattct cgaagttggt 1260 cctcatactg ctttgggcgc gcccattaag cagatccttg cagaaccaaa atttgccggg 1320 ttagatatct cttgtctagg ctctctggtc cgagaggtca gtgcagtcag gagcatgcac 1380 tegetggetg ctagectagt tgeagaaggg etteetetgg atetggaege agttaattte 1440 cctcatggac ggcccccag cgtacgagct ctttcagacc ttccctcata tccctggaat 1500 catcaaacgc gccactggta cgaatcaagg ttcaacaagg gcctccgcga acggcacagc 1560 caccacatga ccttctaggc agccttgtat tgggaaccga tccgaacagt cctacctggc 1620 1664 gccacatect gaageteaca ggaegeeeet gtggttegeg aaca

<210> 2126 <211> 1211

<212> DNA

<213> Aspergillus nidulans

<400> 2126

catteggtga actgcatege ettggcaatt gttgeggaca gaaataegta tegaacetta 60 tetggatagt tgaataatgg tetetteea aacaacaeet egegetatgt eeegtattta 120 gtgaetgtae tettgegace ttttgaeaea ettaetagea tetegeatgt aatgaatete 180 gtegaagaca acceaggega ettegegat gateteggag eegegataea acatagaeeg 240 eagaateteg gtegteataa eeaageaagt ageagtaggg ttgattgtea eateaeegt 300 eattagaeea acgtegeeaa atteegetge aaacteeegg tatttetgat taeteaggge 360 tttgatagga ettgtataga tgaeeetetg attgteete aaactetgag eaatageata 420

ttccgcgacc accgtctttc ccgcactggt atgagccgat accagcacac tttctcctct 480 ctgaatcgac gagacagcaa cctgctggaa tggatcgagc gtaaacggcc atactctcgc 540 ggggttctcc ggaggtttgt gttgagagat tggaacgtaa ggatacttcg gcggaatggc 600 gacttgatgc cggacctggt gggacaagac cactgggcct gcttctttct cagcttgaag 660 ccctgcagat cctgcaatct cgcgctcttg cgcagtttcg aacaagtctg cgacaacggg 720 ttccggctct tcttctaatc gcaatcgctt tgtctctggc tgattgttgt tatccgagcc 780 tgaagacttc tcttccttgt tttcttgttc cgcgacatcg ggagcgatat tctccttggg 840 900 ttttgcattt tccccgtttt ccttcacatc gccgtttatc tggcgcttct tgctcttctc tttcttcggt cgtctgggtt cagagagctg ggccgcttgg ggcttatcct cgaagacatc 960 gaaaagctca tccattgttg agcaggatct agaaccacag ggcgcaaata actcgagcag 1020 ccgcggtggt cgggtttctg ctatgtttct tcccaccgac tggagcgacc aagaaatttc 1080 atgtcccgtt cggggaaggt gccgcaatcg aacgaccgcc ggagaaactg atcggagaaa 1140 ctatcctctt gtaatagctg gttatcacgt gactaatttg gctccatctt catcctacat 1200 1211 ttcccgcatg g

<210> 2127 <211> 2121 <212> DNA

<213> Aspergillus nidulans

<400> 2127

aacaactatg ctaacactat caataaaggc aggggagcat tgctcttatc cgttgttggc 60 ggcaagttgt ccgagggtat caacttctca gacaaattag ggagaggtgt cttaatcgtc 180 ggtctcccgt ttcccaatat acgtagcccg gtttggcaag ccaaaatcaa atacattgag caaaaggctt accgaaacgt cggatctggc tccgaagaaa gtcggcgatt gtctgccaaa 240 gccgccggga gagattttta cgagaatgct tgtatgcggg ctgtgaacca atgtattggg 300 360 cgagctatta ggcaccgcaa cgactatgcg gccatcgtcc ttattgacaa gcgatatggg aaaactagca tcgaagccaa gctgcccgga tggatcaaac aaagcctagt gaaagactcc 420 gctcttttgc cagcagcgac aacgttagat gggcttgcgt gtttcttccg cagcaaaaac 480 540 cactgcgggt agaatcatca tgagagggaa aagtggaaaa ctttacacgg gtatctacct

600 tggctctata attatccatc tgttccacat cacatagtct agaatctaga tcgacgttac gaaaatggct atctaatatc acgtgataat gccgagcatt ttcagggcta actcgcttgc 660 720 ttgcccttag cgcacactct agccggggaa agcccttgaa ttcacctccg agccagatga acactecgae egeateceta tegecaaceg ecaacacttg tegaacacag cacegtegae 780 840 aagatgeeta ecegtetete taagacaagg aagcagtgag tegecagete eetattttta 900 ttttgccccc tttcgaattg gtccgacgat gcggcgagaa gtggaaatcg atgaaattcg cgacaagtct ccgctggaat cacgaacatt accgccagaa tgagcacagg gactgacata tatcgttttt ttcctagccg cggtcatgta tccgccggtt acggtcgtat cggaaagcac 1020 cgtaagcacc ccggtggtcg tggtatggcc ggtggtcagc accaccatcg caccaacctc 1080 gacaagtacc accctggtta cttcggtaag gtcggtatga ggtacttcca caagacccag 1140 caacagttct ggaagcccac aatcaacgtc gacaaggtac gttctggcag cacatgaaat 1200 ggagtatcgg tagtcgcgga tggaatttgc agaacacttc gacggtgaat ctttacgagg 1260 ttctatcgtt ggatgggttc aggcattgtc caaaagcggc tccgaaccgc gtcacttggt 1320 gttcaaagct gatggtccta ctttattagc tgtggtccct cgttcccgcc gagcagcgtg 1380 atgectacat tageggeeag aagaeegaea etgeeeeegt eattgaeett eteteeeteg 1440 gttactccaa ggttctcggc aagggccgtc ttcctgaagt ccccatcgtt gttcgcgccc 1500 ggtacgtcag ccgtgatgct gagcagaaga tcaaggaggc tggtggtgtt gtcgagctag 1560 ttgcatagat tatcatgaag ggaaaacgtc tttttgtctt ggaggcgcaa cgcaaaagct 1620 aaagccggtg ctgcgctgat aatgggccgg cgaagataga cgagtgtcat attctaaggc 1680 ctcgactatg ggagccgcgg atcggtcaga cggatccgtg tatctacaaa acaagggttc 1740 aattttttt ctctttgtgt ttgtgatgat cataacctcc ggacgctctt aacgatcaca 1800 tttaccaata aaataccttg agagaacttc tactagtttc tcacgcagcc actcaacgcc 1860 ctccaactgg gtgcttggct atcaaaaaaa aatgctagca atcaagttaa agatcgtttc 1920 cgccaacaaa catcttttcg tactattcca tatctggaat tgataatccc aaagtagagg 1980 tacactggag tetettgagt teetggaata aegtaetgtg ggtgeggaag getgatgggg 2040 taacttcatc ctcggcagat gcgtcgtagg atccggccaa cctccactca ctactaccga 2100 2121 gagcaggtgc aagtacatat g

<210> 2128 <211> 1646 <212> DNA <213> Aspergillus nidulans

<400> 2128

cttettacga gegegtgeag cectatette gteteceteg tegaattite egetegegaa 60 gtcgttctca ttttcaacgt aaaagtcaaa tgtcgcttca tccataaacg caacaactct 120 gccgattgag ccgttcacga gagtatcctc catatttttg atgagcatga cttgcgaacc 180 cttcttcagg tgqatcgttt qaggtgccat gcagtttgag agtaactttt cacgaaattg 240 aatgtcttga atagtccccg aatcgaccgc attaaaagtc atcgtttcac ccgaaagacg 300 tgccatcctt gcagaattgg cattgtctac ttcggcgcgc gtgggaaatc tgtacgaaat 360 gttagtctag aaaggcggat attagagggc ccgtacagtt cagtagcctc aagagcgtcg 420 tgaaagtcca atggacgaga aagctcctta aaagcctgta tcgtccgagg actaagtttc 480 ccaagtcgca tctcattcag catqtcggca aactcgggat cacqctgacq qaaaacgtqt 540 gtcaaaagga tagtgtgttg tattgaggta ttccagctcg ctgcagcaaa tgaaaacttg 600 gcttctcgat tatgaccctc tggaactggc ggtaattgaa agaagtctcc cgtaacgacg 660 agetgaatae caccaaaegg ceggecattg tttettatta geegageaat etettegage 720 ttatcgaaca aatccccgtc taccatagaa acctcatcaa tgaccaggac tttcgtgcgc 780 aaccageggt ttettgeett ttggttette ttaatetgeg gatggteaga gacatgaaat 840 caatgaatcc aatagatccg acctttttga ccagctcagg tacaggttct ttacctaagc 900 caatgcccgc gaaactatgt aaggtgacac cttcaatatt acatgcagca aggccagtag acgetgtgac tgegatgegg teeggttett teetgtaett atecegtaat ttettgatga 1020 tttctctcat gaggactgat ttaccagttc ctgctgaacc tgtaaaaaat atactctgcc 1080 ctttctcaac aactgctttc aagacatgct tctgctcatc actgagaaat ataggagcca 1140 cttgggcacg gggcatatgg tgtttggtgc ttgattgtgt tttctggqct tgcqctttct 1200 tattctgacg gcgaagttcc ttctgctctt ccttgattgc gctggctgtt ttattccacg 1260 gageegttge agetggeege gegggtgtet etggttttge etcateatet ateqtaatga 1320 tattattctc ttgcttccgc cagggaacgg ttcgaggcgc ggcgggcttt tgaaaqtggg 1380

agggggggg ggaagaccag ggcagtgcgc tgctcgacgg cccgggattg tcatcgggcg 1440 gaacaggcgg aagatcagga tacttgatgt ctgattcgta attagtcttc gaaactgtca 1500 cggccgattg cgagtccgcc ttgtgggata atgttgagtt ggatttcgcg gcgtgaaacg 1560 attcttcgcg gaaactgtct ttctcgattc tcgcgggagg gatgtatgga tctggtgatt 1620 caaagtccaa gtcatcatca tcgtcg 1646

<210> 2129 <211> 2848

<212> DNA

<213> Aspergillus nidulans

<400> 2129

tagatgtgtg aacgaacatc acgatgtttc gtttgagttg tccgacttga tagctctgcc 60 120 attaagaagc atcgggaccc agaaagcttt cgaaaggagt tggagaactt cttgtccaat 180 ccttggttca ctgcaaatgg aggacttcca agctgccggc aaaaaggttg ctgcgtatgc tcatcttctg gcgttggtgg tccaggacaa ggagatgtac aacgctacac tagacgagct aaaggagtgt ttcacaacgt tccttcagtt catcgcggta ccctcggaga agactcctga 300 360 tgaatcattt ccctgggtag gacatgtgtt gcttgttctc gagaaactac tctctgatga tgctcaacca ccccaaatca actgggcctt acctgataac tcggatccca gctcgataga 420 cgatgggccg gcccagttgc aggagcctct catatccaac gaggagaaaa tgcaactgtt 480 tgaagttete gtegaagtge tteetagaat tggaaaggae gacaetetgg eteteteagt 540 600 gtgtcggatc ctggtcatcc tcaccagaat tcgcagtatt gccgttcgac tcggtgagaa acgtaatttg caacgattat ttgtcatggt caagcagctt tcgagctcca caaatgataa 660 gcttcaaggc gctttcatgc ttatcttgag gcatattatt gaagacgaag ataccatccg 720 gcagatcatg aggagtgaaa tcgttgccaa cttcgaatca aaatctcatt cacggccaat 780 cgacactacg gggtatgtca ggcaaatgta tcatttggtg ctcagatcgc cagaaatttt 840 tgtcgaagtc tccaacgaaa agctcaaact cttgcggtac gacagccgac aacgtcctca 900 gcacctcacg ttgaagtctg agaagaagac tgaagcgggc gcgaaaccca gcggttctgc cgagcagaag cctgacaatg cacaaactga caaagagaag ggaaaggccg ctgagttgaa 1020 aactcctgtc gtggagaagc cagatggggt catccactat cttctttccg aactcctgtc 1080 ttacaaggat gttgatgata aggaaccatc aggggacaat ctagaaacct ctgccgttga 1140 gcaatcggag actccgactc agactgatgt tgagatgtca actgacgaac ctgctccttc 1200 cgtttcgagc accgagctcc agggctcgcg gaatcccaag aagtcagaga agcccgcatt 1260 ccaagcagat gatcatccca tctacattta tcgatgcttc ttgcttcaat gcttgacgga 1320 actgettteg tectacaace aaaceaaggt tgaatteate aacttetete geaaggegga 1380 tcccttggta accacgccct ccaagcctcg ctccgggatt ctgaactatc ttctcaatgc 1440 cctcgtgcct gttggcacga tggagcacga tgaatccgtt gcctttaaaa aacgcagtaa 1500 cacctctgct tggacaatgc gtgtcctggt tgcattgtgc accaagacag gtgaaatcgg 1560 tggtcacgga aggcgccgca atgatcagaa ttctaacgaa gaagacgaac ctgagctagc 1620 cttcgtgcga aggttcgttc tggaacatgc tctaaaagcg tacaaggaag caaatgcttc 1680 caatgaagca ctagatgcaa agtattctcg gttgatgtca cttgcggacc tatttgacaa 1740 gatgctcagc ggctatgcgt ttgtctcagg agacactgct ttcccatcct ccaccaggca 1800 aatcgctaaa actatgttcg agaagcattt catttctgct ctcactgcat ctgttgccga 1860 aattgacctg aacttcccat cctctaagcg ggttatcaag tacatcttac gcccattgaa 1920 caagettace cagactgetg tgetettaag egagaettet gaeatttega eeattggggg 1980 atcagaggat gacgaaatct catccgctac ctctgtgtct gacatggaag atgagcgtga 2040 agaaacccct gacctcttcc gccactctac cctgggtatg ttggaacctc gccacgaaga 2100 ggaaacaagt tcggaggagt cagaagaaga agacgatgaa atgtatgatg atgaataccc 2160 agacgaaatg gactacgaag aagagatggc ggaagacgac ggggaagtga tcagcgatga 2220 agaagatgag attgaaggcg ttggccctat tgaaggcctt cctggcgata acggaatgga 2280 cattgaggtt gttatcgatg atgaggatga cgatgaagac gacgaagatg atgaagacga 2340 agacgacgac gaagacgagg atgacgatca ctccgaaatg gacgacgatg aaatcctcgc 2400 gggcgagatc actggtgaca gagataatga aagccttgat gagggtgatg aggacgaatg 2460 ggaaagcgaa gagatgtcag aagacgatga tgaagccgac attatgaacc agctcgagga 2520 cgaactagcg gatatcagac acacggatca gcggcatgac gggggacgcc ttgaagacat 2580 tttccgtgcg ttgaatgagg ccgctggtgg cgttgaagac ctccaggcgg atagcttggg 2640 agatttgcat gatgacattg ccgatgacga gctgaacgaa gatgatggtt cgtatatcct 2700 cttcgccgca gtttactcca ctgctaacat acgtaacaga agacgaagaa attgatgagc 2760 tagaggaaga gcttgatgaa gcagatgaag accaaggttc ttaccatgga tttgacgacg 2820 atgaagactc attgatcatt ggggatgg 2848

<210> 2130 <211> 2216 <212> DNA <213> Aspergillus nidulans

<400> 2130

atcttgctgc ttcctaccat gctcttgtga tttaacaccg tcctatacgc agattagttt 60 ttctccacac aactgtcttg cgactcatgt cttaccggca cccccgtcgg ctcaaaactc tccaccaacc gactctcata gatgagattt ggattcccac ggctctggct aagcttcatc tgcccaaaac cagttttatc cttgtattgg tctaccgtct tcccgggcaa accaccacca 240 ttcgtcgaca cccccagatg cttcctcttc tcgtccacac tccgtcgtac atactcaaga tacggcgggt tcccgggctt gatcacatta tccgcggcta aaacggagcc aggagtgatc agtttcaatt cctcgcagag cttcaggtca gtcgtgtatg caggcttata gtggtctaga 420 aacagcaggc cgatatgcgt tagtgcggct gattcgtaga gacgcgcgat cgatacatcg 480 540 cttggtccaa taaccacttt cacgacatcc gataaccctg ccaggtcgac gagggccata atcaccgccg cgaattcggg gttcatttct aaactgtaat accgacttcc accggcggcg 600 cgaactgcgg ccccgaaaag gatgctggag taaccgacat agccgcctag ttcaacctga 660 atgcgaccat ttattagctc tcttgatcta gggatcgata ccgcggacta accgggacat 720 accattgtct ttggtttcac ctccgcaatc aagtcacaca cgatcctccc cttatcctca 780 ccgacattca tcaggtactt tcttgtccga gcatactcgt cgatggcgtc aaggacactc 840 tccggcgatc ctcgaatgct gtccagtttg gggtgcgagt aaacaaaatg aaggagctcg 900 atttcacggc catcgttgaa aaatgtggtt ccttcttgtg ctgcataggc cttagagggg 960 tcaaatgccc ccctttttac tgtttgagat actgcttctg gcatcgtgca aatattggtg 1020 ctgtagggtt gtatgggata tcgaagccct aatgttctgg caacaggaga gaccccaagc 1080 gtcccaacag tgatatgaag cgataagatc aggaactcag ggggagatct gcaatggtca 1140 ggtgctgctt gcgtaatgct gaaaatgttc ttgctgatct tgactgctac acttggttat 1200 agetgeaace ggatgteaaa tggtagagae caettgetgt teeteaceaa teacaceage 1260 cacacagaat aaaatgcaat gatgagacag gctctaacct tgcgggaagt ctccatgtac 1320 cactgccgtc atgtccggct tcgatggcca ttgggagttg ccggtgtata attccgggtc 1380 gggagggccg gaaccaacca cgtaccaaga tcgaaagtgc gcttaaaata ttgagggaaa 1440 taaqtcqttq acqttccttg agaccctcta tgaatgctac tgttcacatg ggcgattaag 1500 cttgatccta gcgcacgcca tcgaccgcat gcggcgatcc ggctgttccc ctcccgaagg 1560 ttctccacgt tagcttgacg tgtagcccta actcttgctc aatgacctcc aggccacatc 1620 caatcttgga catctctggt gaagtagact tgtccaatct aatctcgacc cttttcactt 1680 tttgttcttc cccttttttt ccgcgggcaa ctagctgtca ccatgtcaga cctcaaagct 1740 aggegtetee gaaacegeea atggetteea egtegagggg taegagaaga ttgaataega 1800 tttcacattc ctcgatggcg tctttgagac caagaacgcg cagctggcac aactctatga 1860 gcgctggggt cggtgcctcg ccatcatgga caagaatatt tacgacctct acggcgacga 1920 catqaaacqc tactttqacc accacqaqqt aaaqctqcaq atccatcaaa caatqattqq 1980 cgagaaggcc aagtcgctag agacatttac aagcattgtt gatgtgatga atgatttcgg 2040 catcatgcgg aaggagcctg ttctcgtcgt tgtacgtcgc atgcttgccc atctaccttc 2100 agctcaagac taacctaccg cagggcggag gactcgttac tgatgttgct gggtattgaa 2160 tatctttgtt cgcttatatg aaactgaatt gttgatgatt gaatatacag atttgc 2216

<210> 2131 <211> 1089

<212> DNA

<213> Aspergillus nidulans

<400> 2131

ggagactctg gaggegcagc ttgctgctct gactttaggt ttacaaggag tgctagcgtc 60
tcgagatctg aggagcatcg tcagtatcca gatgatacca gatcttcagg cgaagggctg 120
aggcccagca caggttcagg ttcaggctcc ggctcgaacg caagcataag cacaatcaca 180
gactcacccg aaacccaggg tgcagtcatg catttcttca tccagggacc gggtcggtac 240
gaagataaag tcgaggggaa ctatctaggc ccatcatctg gccttgcaat cgccgagaat 300
atcagtcgta tagtccagga cgccgtgtgg aagtccatcc ccgtgaatga gacgcacgag 360

420 tttcaggcgc cctgtgagaa tgagaccacc ggcccagcct cagcaccgga cgacgcaatg ggagcgcgta tccttgaggc gtatttcaag agtatgcaga tgcgtttacc attcctgtgc 480 cgagccgaga tttacgagtt gcacgctaga cgctatgagc cagttggccc gagtacagca 540 gagcaatttg cccgattcaa gatctttatg gtctacgcga ttggcgcggc catactcagg 600 660 atgacagaga tgtatgactc gacgccacct aggaattact ttgttacggc catgcagtat 720 cagcctgcta tccagggatc gctctccatc tcgagcatcg aagctctaat gctcctcgcc atgtacaatc tgcagtcatc cgctagctcg agcgtgtggt acatgatggg tctggcgaca 780 840 cgaatatgcg tcgatttcgg actgcacagg gaggtccagt atcggcggct cagtccgtac gaggcacagc gacgccggag gctcttctgg agtgtatacc tgaatgagcg ctccgtcgcg 900 tggtcgttag gtcgaccgtt cagcattggc gatgaggaga tcgacgcaga gcccccggct 960 gatattgacg attcgctacc agaaagtgca gacgaagatt cattccgaac acccaaagac 1020 cggggcgagc tgtggacggg cccgaatatc cggtgtttca ttgcgtgcat caagccaaaa 1080 1089 aggatatca

<210> 2132 <211> 1296 <212> DNA

<213> Aspergillus nidulans

<400> 2132

60 ttcagtctaa agtcagtcct gctgcccacc ggcgtggcat atattggttc tgtaactttt 120 cttgcccaat cactgattga ctctgtttca agctgtttgt ttagatacag tttatgagat ggccatcacc gggtcccgta gcaagtagga caaccttgcc acccttccac agccgaacga 180 cettgcactg cacggcgtgc ggtcacccgg cttttgtcca caaacagcgt acccactaac 240 cctttccgct cccctttttc ctccttccac tttttgccgg ccctacgaga agagaagcac 300 ggcggagata ccatagcaga aaaccagatt gcccaggtgc cttttatggc ccttccctaa 360 acgcagacaa acctccgaat ccgaccagcc ggatccggtg gcgataagtg ccagcgctag 420 gccggtctgc tggtatgtca ggtagtagct cgcgaggatt atcagggtgc caagggacat 480 gttgcggccg ccgatggcgg gaccgaatgc tgccatctgc tgactggcga tggtttttgg 540 gaggccgaaa atctggaagg ctgttcacgt tgatgtcagt acaggtcggc cagtcaatga 600 atcacagcaa gcagaagaaa ggactacaat acccaaatta tggttgacga accagaatgg 660 accggttatc acggccaagg aggctatgaa gcgcgcgagg tagagggcaa cggtttggat 720 aagcatgatg taactacaga ttggcgtcgg acagaacgga cagggctcgg ctgtgctcgg 780 tttaatgcga ggtattaacg aagttgatat gtggtatgtg gtatggtaag tcgtggggac 840 ggcgtgcacc tttttaaagc aggcttgatt ctagtctcga gcatgccgtt gttggaatcc 900 tgtgtttctt ataggagttg actggccgag ctccttgctc ttgaactcat gctcatttgc 960 ttgctgtctc agatacagac tcacagcagt aataaaggat atgtgctacg tctgggctta 1020 gactattggt gaatggattt aatttgaagc aatcatgcat gaatattatc agcaactgaa 1080 ccaaggctgt aaagtcatta ccacttggag tggcgggagg aactgttgcg ctcccaaata 1140 ectategtge atataateee ggeeaaggtt ttateaageg tagetgeagg ageeetgege 1200 agggtgcagt gccgttgccc acaatgggac caaaatattc ccggcagtac caagactgga 1260 gtctagccta agctcgcagt gctgcccagc tgtcat 1296

<210> 2133 <211> 2481 <212> DNA

<213> Aspergillus nidulans

<400> 2133

tttcccacga ctcgcgtggc tcgagaacat tctcagctcg ccaatcattg ctcccattcg 60 tttgctgaac aagcgcttcg gacttgccgg tggctttttt aatcagtttg atggtcaggt 120 cgatttgctg gatgatcttg atgaccatta cacggcgcgt cagcacaagc gggagcgcag 180 aattttcatc cagcgcctac aggacttttc caaqqctcac tccatccgtq ttacgatttt aggtggtgat gtgcacttag cggctattgg acgattttat tcgaatccca agctgggcgt 300 tcacagegag aaegaeeete ggtacatggt caacategtt ageagegeea ttactaacaa 360 gccgcctccg aaagcagttg cgaatctgct cgcgcgacga aacaagattc atcacctaga 420 cacagatact gatgagacgc tgatggactt tttcgacggt cagcctggcg gagtagacaa 480 gagegeetee tggaacaaag teactatgee atetegeaae taegeetgea ttaeegaaat 540 tgaaacaccc gctgctaacg gtgatggggc gcagcaaaat ggtgtgactc tcccaatccc 600 caaggacggc cattcccctc tgcatacggg cgagtcaacg gctggctccg ctcactcagc 660

ageggaeggt gteageageg egageactet ceatggtgge ttgaaegteg eaattegegt ggagattaac ccccagaaca gagacggcgc agctcatggt tatgggttta gcagtatgtt 780 gcctaataac acaagcatct tgcccatgac actgtaatgc gatagagcta accttgacgc 840 agttcccgcc ttatcatatg tccaaacaga agacgacgct cgaccacgac cgcaatcacg 900 ctcccgctcg ctccatgcgg cagcggcatc tatccgctcg cattccaacc agcgtgaagc ccgtcccagg acctcgacct agtcggatag agacaacaaa agaaaagact atatatgtac 1020 ctgctatcct aacacaaact gttgttgcta tgtataccca gttatattgt ggtttcgttc 1080 tgttttgttg ttgattgata tccatttgtt gtataatgtg tctggtctta tatctctgtc 1140 tettgtettg eteatgtgaa aatggteatt tatteattea tgggtegaea attataetat 1200 tcatgaccaa gcagtcgacg tggcgatcag ctttatgtat tattatgggt ataatgaaaa 1260 ttttgcttga ctgcacactt gcaaggggtt atgagaatat tcccctggtg gattaagtac 1320 teggeaeget agaetagtig atateaeeta titgaegget teegeeaett eteatgieat 1380 cgtaaattat ggaagagatg agtcgccaag ctttcgacaa attaatacgt agacaggcag 1440 gaagcaggaa tcagttgcag ggtaggtatc tttaagtcac gagtaaggtt ggtcaggact 1500 cgccaacgta acagttggat ctcgatcttt tgcagccgca agatcgatgc tgtatcccct 1560 tegttgtete ggaacaeest egtteggttg tggtegegge ggtgtgeeet geageaggga 1620 atcagaccct gtggttgaag tcgtcgttgc taccagcggc gccgcggact gtcccacggc 1680 cagactcaga geeteggetg etggetteeg eeteegaaeg acetggtage eettgtcaag 1740 ctcgatctca atagcgcatc ggaccttcaa tgcggagatg gcaggccaga cgccacgttc 1800 gcctttcagt atccagtgtg ctaaactggt atggtctggg ttttqaaaqa qtttqqaaaa 1860 tcgcggagtc cgagatctgg aatgagggtt aggtgggaac cagggattgt ctcttcgatg 1920 agaagtcttg ctaagggtac tggcagcgcg ccgatatagt tgagctggcg gagcggtgcc 1980 tgatctcgag ggcaacgaga cgagttaaag aacgggttat attccagcgg cttqtcqtqq 2040 gtctgcgatc gaggaagttg agctctgagc ggaaaaaagg gattatgtac ggacgtgttt 2100 gcgagattat gaagtggttt acattgaaaa gctcagcgat tcggtagagc ggggattccc 2160 cttcttcgta gtgggtgtga cgccagggtc tgaaaaccgc atcttggctg tgtggccagg 2220 ggacgattga gcctgtctca tctttgcaga agatcgtaac aggaggatag agagagttgt 2280

tggtggcatt ggaggcgact gcagcggacc aaatcagctg tggtttcggt gtcagtacag 2340 catcttgtat ggtcctgatc gactaaacgt accacattcg gtgcagtcaa gtaattgagt 2400 aaatttggtg ttccactccg gcctgatatt gctactgtaa tgtttaggat gcgtttggac 2460 ctagcataag cttcctcaaa t

<210> 2134 <211> 3417 <212> DNA

<213> Aspergillus nidulans

<400> 2134

cacccaagca actccatagc ccaactgaac cccagcataa gaaacgtcac ctagttgaac 60 ctctataaat acaaaaacca atctgattcg cgcctccct atatcgccaa ctggttcgac atgctcctcg ttctggcccc accgataccc ccggcaccgt ttcttctggc ccttccatct ccatccccag tcctatgaac accgtcagac cgcagccctt ccggcctccc cataagaaca tectgattea acatettete gtggatteeg eegegteeat gatgtaetee etgegeaaca 300 aggegetece teegeaceeg atettetee teeteggege gttegatace tattateegt 360 tcatagcgca tgttagactg gaggttcgag ataaagccta aaataaagaa caactcaaga 420 caagcgcacg cagggaacaa agactagagg ttaggtaaag cgagggatca cgcaccctc 480 540 ccgagctcgc gagcaatagg gacggacgac gaggggacct ccgggggggat attgttgtgc 600 gcgttgatga ttgtgtttgt gcttgtggac attctatcgc aagatcgttg aaggctttct 660 ttatcggctt ctgctgagct tgcagatcgg aatgagctgg gcgcttgtct gatggacgat 720 gaggtgagac gagaggagag gatagttaat ttcgaagtag attctatcat ggactagcta 780 ttcattcagt gaaggaaaaa caaaaaatca actgactagt gtgtgtagtc gtgtagcgag 840 ttcccttact atccagagaa atctaagata gaaaatactc gaaggagact aacaattaat 900 960 gtcatgtcac agggtcgctg aggcagtgag gtgaggctgt actctggcct cgtacctcgt 1020 ggtgtcacca gccagtcggg tactcgttct tactggccac tgcatacgag cgagtctctg 1080 ctccctgctt acgaaggtat tctgagccgc gccaaacctt gtagatgctc aaagacaaag 1140

aggtgtcggc agggttacct taaatccaag acttggtagg ctgggtccgc ggattggtgg 1200 aatatgggtt ggggtcgaag tagacgtgct ctatacctag gcccataact aagtatgcaa 1260 gagaattttc cgcgcggaga tggggatggg ctttcgtcat gcccagcagg ccatgacagg 1320 ccatgacatc tgtgtagaga cgtgcgctgg cctaccctgc taaaaactgc attgagagaa 1380 ccactgagcc atgcccgccg atatcattta cacgtacata aaaccgtcag caatccttct 1500 atacacggcc ttgggtattt gtaggtagca acttggcagg taggtatgta tgcaagcatt 1560 aacactgcag gggaaggtct gcagaaacga agcgaaacga gaaagtcatg aaagcctccc 1620 agtattagcg tagtcgtatg taactggctg ataaatgcgc gctggatgca agacgctcat 1680 gcagcaaaga gaagaagacc aaaaaaattg cggtgtccct ggggacgaag aatcaaaaag 1740 gaagcgatag caatgcataa ctccagatgc agatgcaacc gatgacttgt cgaaaggaaa 1800 gaaaagcata gggaggcgtt ggtcgtcgaa tccggtccag aacgagggat taccccagca 1860 teaeggeege catggttgtg caggtcagee caatggeeat tecaateeae ggagtetgte 1920 ccagtgtgcc ttcgctccgc ttggtcaact cggtcgatga tctccgtgtc cgtagcgaaa 1980 gagccgtcct tctgagaaga gggatggcta tcgtgtctgg ttttgcttgt gtatccgcga 2040 cttgtaggtg gagcatctgc tgcgtctctg actggatgtg cggtacgtct tcgggggtcg 2100 tttgcacgtc cgatagaggt cttgacgggg tgccattctg cagtgatggg cttggagcga 2160 cggcgtgcgg cactgggtcc gccgcaacga gggcagccgt gggggcgagg cagaaaagaa 2220 gtgtggaggg cttcattgtg ataataaaca ggcgatgggc ggaggttgag tcgaccttga 2280 ctatgcgtat tgcgggaaca tcaatagggg ttgcgatggc tcggtgatta ttgtcgcaca 2340 cttggacggc tctaatcgcg cgatctaggg cggctcaaga gataaataat aaaaatatta 2400 atgageegtg tgetgagegg agteggegag ggegagaeee ggttgaaaeg agtggeaggt 2460 caacctctcc ggtctcctga gaaaacagct atcgagcgac tagagcggca agttgaacgg 2520 tcgaaccact gacgcgccaa cacaacaatc acaatgttga gacaaaggcc aacagcaaca 2580 tgcgttaggc gcaagaaaat agcctgagct gcatgagaag atccaacacg ttcagcttct 2640 gcaagggaga gtaaactgca caagtgcagc tggaggtgga aattgggatg gagaaagcca 2700 aggcaaaggg gcaggaaaag tcccttggtc cctgggtctc atagtgggat ggtacctgca 2760

atgracaget gttgattgge catecageta ttgtgagget agegtgggee gategetgte 2820 tegtgeaace gteegaaget tgteggeeaa egagacageg eeggetgaat ettggeggtt 2880 aategeaace aataateata gggeggeaca gggegeecea teetgtgtga egeaattage 2940 accaateaga eagggeteae tataaatate aagateaagg atgrataatg ettatgatta 3000 tageagagea eeaaggetgt ateagtegg tagtacagag teetetatt ttteattat 3060 gaegacatta eatetaatet aettgaatat eeeaateeage gggttacaaa geaettgaee 3120 ggeateacag tatettgete eaatetgggg teacagtaaa ettgeegett agttgteea 3180 tageeeagae ettgtgetea tegteaggea teteetetgt eacattegge ggegttgaea 3240 egateagege tteetgeaga aaateaaetg eegttgeegg gteeagtteg aagetgatee 3300 egeeeeagte eatggteaee eggeeggaag egtgeaeat gagettaeeg gettgteegg 3360 eeettaagetg eeagteeget geegtgaeaa eettggaatg actaeegataa aatagtg 3417

<210> 2135 <211> 1799 <212> DNA

<213> Aspergillus nidulans

<400> 2135

gtatctcatc gcggtggcaa ggtggcgaac caggcgttga tctgcgattc gaactcaagc 60 gccattggaa tcagcggcgg acgttggccc atgttgacga gtcttctcga taaaaagcat 120 tcaggaccet gttgccaatg cgtcggagcg cgacttccgt taggtaatag taccagetet 180 gttcttcatt gaagagacgt gatatgtgat tatatacggc ttgacctggc acgaggtctg 240 ggggctcagg ggccgaagcg ggctcatcac gaacatccca gtctgaaatg tggttttgac 300 cttgacgtgt tgggtattct tctgaaagag tcggaggcgt ggggaagaga gctgggtact 360 catattcggc aatcgcagac tgcggcagag gcagttcaac gcggatttcg acctctgatt 420 tgaagcagga ccagtacaga ctctgctcta agcgttgtgc aacgggcggt tgctgttcag 480 cttcgtagac ggatcggtcg aggccttcga tcagcctcag tcgcaaacgg tagaacgtcg 540 aggcctggta gaagtggttc caagctggga gggggcgaaa tgtgtacatg aggtagactg 600 tgagcgtgag ttcagctcgg ccttgtcctt gtctggggct gacatacccc cggcgaagaa 660 atggcattcg gccccaatga ccgaatagtt caatagcccg atccttttcc gggccatcat 720

gaaaaacgcc tcgccctcgc gcagtctccc caaagaactc gacgtagagg cacgcctacc 840 ccatcccagg ccatgtcctt gcctggaaga agtaaatggc tgcgaaatac aacccaacgc 900 acaggecagg agtacaagge acgaetgage ateceaetgg agecegtaet egecageatg cctggcggac cgaacgagtg cttccagatc caggatcggg ttcttcgtgt ggacattctg 960 aatqaactqa tccaccagtg ctgggatctg ttcatctggc gtgatccgaa acccacctgt 1020 gtctgggtgg gcgctctgga cggactgatg ctcgacgcct ccgtccgagg agtactggaa 1080 gagegtegtg ataagegaat tgteteggaa etggeegeeg aaaateggee aggtgageae 1140 ggcatcageg ctgcategge aggeggggat etgcaggtag teetgetgee attectgtge 1200 tetttttgggg acgegetegg geegetgtaa ttgtaeggea ggegeagagt eeegaggage 1260 cagcggcgtg ttgttcctgg agatcaagag gtgctggata ttctctactg tctcggtcag 1320 ggtgtcgagc cgttcaaaga ctttggccag ttccctgcag gtgccagatt cagtatgggt 1380 cacgagacgc atggatcgag taggctgaca tactgctgac caaccgtacg ctcatcgccg 1440 cgcgcagtgt aaacacaagg gatctcgtta gcgtggcagt acccacaagc tggctggcca 1500 ttatcacage ggatetteeg tegtegacat gtttggcatg geeggettge geegeggeec 1560 attggtcctt gcttttttgc tagggggagg ctggtcgtct tccacgcgac tttctgatct 1620 ttgagaagct gaatcgaggt ctggatccat ttgtcgttaa cggagtggtg tgagatctgg 1680 gcacgtcgaa aggagaccgg gggagctgga gactgggaga agaaattgtg gagaagacag 1740 tctacggata actccacgtg atacttccga aagaggaagg aggtttcact atctattat 1799

<210> 2136 <211> 1613

<212> DNA

<213> Aspergillus nidulans

<400> 2136

tcccacctct atcagtagta ttcgccagat atatctcgga tgagccttac tctctaaaca 60 cttaagccct tccattctgt tacccaacca agctcgtcgt aaaaaagacg tagacggtgc 120 aaccaaacat aaaccacaaa atcgaaagag acacctagag cacacgctca tttattatca 180 ctatcatgtg cctcattaat ccttttccag acctcggcct ccacttcagc aagcttgttc 240 cccgcgctgt gcagccacga ttttgtgctt tcccagaggc ccccttcacc ttcaccgcca 300

tragtatgtg tarctaaatt tgagctagtg gragtggrgc tgtgragggg aagggtggtg gaggtagatg ccgagggagg agtgtagacc gaggcgtagg gtgttgttgt tgagttggga 420 actggacctt gatattggga ctggtaactg tagccagagc ttgagcttgg ccctgatgtg 480 tagctataag aactagctgt cgttgttgcc ctagctgttt gaggttgagc tggatatatg 540 600 cctccqqtaq aggacqtcga ggttgaggta ggagctgttt cgcctggggg gaacgcaggt 660 gcactggtta tgatagcagg tgcagggtta gggtttgaag aaggcggtac ttcatgtgtt cgtgtttgta aagctggtgc aggcgtgcgc acagcgccgc tcttcggtgc aggtgccggc 720 actggaggag atgaatggtc ctcaattcca gctttgggtt catcttctgt agcttgcttt 780 tgctgatect tegggatgga agetatgeta etggttgggt eagggaeggg caeageaeet ggctgcggtg gtggcggaga tgcagaggca gacgtagcag taagagattc cggtggtgga atggtggttg tcgggtcatc tgggatgtct ggcgtaggag cctcgaggac tgtcatgctg gtgggtttgg ctgtcgcata aagaggagaa taagatggtg ctgttgcagt agaggcggag 1020 gctgtgcctg tggaggcaga tggctcagat agcaatgtat tcttctcgtc aatgtccatc 1080 ggcgaagagc tggaactgac tttgttagta gacatgatgc tgttagggtc ttgatattgt 1140 agttctgact ctgggcagta tatggtacgt agatggttta ggatctacga cgtcattatg 1200 gtactgcacg tgatcgacaa aacacgtgtc tacagcgagg agatttacgg agaatcaggc 1260 qaaqtaacaa aaaaaaaata cagttggcaa aaaggaaaaa gcttgcaggc agtaaagtac 1320 aactggtaca agagaaaatg tcacactttg tatgctttac gcatacctct aaaagatccc 1380 cttcatcatt cacctcttga gttttatccc agaaagtgac cgaccccttc cccaaaaggt 1440 ttacaccaac aaaacagtca ttttgggcga gacgcttatt tgaacttctt gccgaagagg 1500 atgagetgga etgggtetta atggaeagga caceageace agegaeacea egatggatgt 1560 1613 tagcaccagc acctttgaga ggggacttga caccttacgg cgatgatctg cgg

gtgcattaaa agctcgaggt tgcattcagc accgttctga ctgaaagtgg aattgcgatg 6

<210> 2137 <211> 2375 <212> DNA

<213> Aspergillus nidulans

<400> 2137

gttctgccag tctgctaatt ttttcggtgg gcgccagcga tccctcgcca atacccagac gctgggaacc tgggaggcga atatgctccc agctccatga agatcttccc gaccgcgcac 180 gctccagtcg ccatccagag cagtggccat ctcgaaaata aattacctct acgtggacta 240 ttgctatgga cgagaaagcc ggcgagcaat tgtctgcagc ggacggcggc acatttccca 300 actatgtgcg gtgctccgtt gccggatcct gatatgacga tgcgcagtga tctagttcac ctagttcatc tagtaagcgt acctgtctca aagggcatcc tagtgtctgg tacgtctgga 420 tcccccgttc cagaaccagc agaaccggca agccaggccc tcgactcgaa actagggcag 480 ctcccttgcc cttttctggg tcgtagggtc ttgtcggtcg agaaaggtct acgtaggcgt 540 aataaaactc gaacatgcga tcgagatgga agaatggcat tcgttcagta atgctccgta 600 taataagtag aatattaatc cccggaaaaag gactcgtcca gtggatgtcg tgtgctgcct 660 tcagttcgca gcgacgctcc cagactcagt ctcgttggcc ctccacccac cgctccatcc 720 ccatcatcca cttctgcatg ccatcctttc ccatcttcct catctagttg tgaacctgga 780 ctctgaccat cctccgctga gccctgcttt gtgccaaccc tgagggggcc caagttccct 840 gtcagcttgt ggttgaccac tggaattgac tggttggctg gcgtctgtct cgtgcttttc aacctttcac cctttcttac atctcccttc cccctctcat cgaccacaac cttctcgact teteettega acaetgettt cettteeaga egtteteeta egtegtaegg aatataeeae 1020 gaacctacce tgeateegat etgeegactg tattetttge caetgggetg etgeggeetg 1080 cgcgctactc gaaccccagg ctcccgtgct attttgggat catcgtcatc cccagccccg 1140 ggtttccctg cgcgtcagcg gcggtgacga gactgttacc ggccagcgac tttgctttat 1200 cactgaaccc tcgattatat tctaccgccg gattttaatc ataccgtgcc caagatggtt 1260 actgggaage egggtgaace gttecagteg etteegeega eagegeetea gegegaaace 1320 tececegeet eteegeegte gagaegagae ettacaacat ggtggaggea gtteaagaga 1380 aactctagaa aggaggagcc gaaaggtacg tgcggacaca aacgttggag agagagagta 1440 cttcaggcgg cgggatgggt gtagtgaatg cgacaagcta gttcttaaga acccaattat 1500 tgttcgcttc actgctctct aatctcttta ctcctatcat gccgtctttc tggagacgac 1560 attgcgcttg agtttgatct ccctatgagg caccttcgta ctgacaattg cgttcagaga 1620 aagcccagca gggcattttt ggtatcccac tcaaggttag catcaagtat gccaacgtcg 1680

ctatetetet cacaaacgac aatggegaga gttttateta tggetaegtg cetatagtgg 1740
ttgcaaagtg tggagtgtte ttgaaggaga aagggacgga atteccattt tetggtgteg 1800
cteggtegge getgacettt atgetetatt agegacegat gtegagggaa tttttegtet 1860
aaaegggtet gegaagegge ttaaggatet acaggagatt tttgacteee eggagegata 1920
tggecaagge etggaatgga etggatatee tgegeatgat ggetgteaat gteettegae 1980
gatacettaa eccagttgee egaaceaate gteegttaga gteetteegag gegatteaea 2040
gaggeettgg egeaatteaa attgeaggee eagagaaag gaeettteet gaeteggagg 2100
ceetetaget geeaaageeg etgggettee eacatettae eagageette egeettaaaa 2160
agagtteegg teteaatete ateteetget gettgeetaa ettgteaace ggtaeetttg 2220
tatgtettea tttttaeget tteeteteae ateaeatteg etegateata taeateeete 2340
acceeetet teaaceaet eteettgtt etteeteae ggtaeeete tateetgtt 2340
acceeetet teaaceaet eteetetee gttee 2375

<210>	2138
<211>	2071
<212>	DNA
-212	Agnorgi 11

<213> Aspergillus nidulans

<400> 2138

gagacgctga ggccggactg cgtgcctgat ggatcagggg gagggggttt ttcggatggg 60 tgcgaggttg cttcgatatc tgttgatgcc gagtgagggg gtaagatggg atcggagagt ctcttcgttg agcctaggtc cagcaagttc aagagccggc gggtggcctg cacggcgcga agctgaacaa tgaagaactg tgtctgggtg tagtgaccag cgataatctg cttcgcaccc 300 caccagtatg caagcgcata gacgaagttg ctgaggccgt aaccgacggc gagccagagg 360 ttggtgaagg cggattgccc tgttatctcg cgcatggggc cctgcaggga gcggcggtag 420 gtggaaagaa cttcggactc aatggccagc gcgtggacgg tcttaatgga tgtcacggct 480 tegacggtta tgcccaggga geggggaag gegtcattgt ggegcteete aaageggget 540 aaggttgaga cacgcatgaa cccagcgccc aagagaagtg gcacgacgga gagacaaacg 600 agtgcaattc tccaggcaat gatgtgggtc ataataatgg cggcgaagag gttgacgagg 660 atgctgagga ttgtgcaaat gacggatccc gtgaggccat tgagcgcgtt gctgtccttg acaatgagtg ataggaggcc ggagggtgtg cgcgcttcat gccattccag cttctgctcg agaatggaac gtagagagag cacgcggact ttatatatga gctgctccgc gatccagccg 840 aagagggacc agctgatgag gtttgcgaaa aactcaatca gagccaggac gaagaacatg 900 agcccccaga attctcccgc gtggcggatg gattctgctg tctcgcacga gcttagcttg 960 cccacaacqt taccqaatat gacagcagaa ccgcagtatg tgcctccgat gacgacggca 1020 ccgatgatgg ctacaaggag ggctagcgag tacggacgga agagagaggc aatggcctta 1080 gaggtagaac cgacagagcg ctcggtagta actggttctt cgtctgctgg cttctcttta 1140 ggggatggag tggagctttc gtcgtcttgt accgatgtta cctctgcatt cctttctttc 1200 tcaagcgccg tactgtccag tgacggccga gcagacgaag acgcactctc ctgcgaggca 1260 ttgacattga gattctgcaa ccttaccagc tctgcatacg ctccatctgc cgcaagaagt 1320 totgoatgag agoodtgoto aatgagottt cootgtotoa toacaataat gttatoogoo 1380 ttcttgatgg tcgagagccg atgggctata gtgactagag tgcgtccagc agccgccgcc 1440 tccaacgccc gttgcacgcg taattccgta gcggaatcca gagatgcggt ggcttcatca 1500 aggataagga tttgggggct tttgaccaag gctcgggcga tcgagatacg ctgcttctgg 1560 ccccactga tgaggttccc gcttgatccg accattgttg cgtagccgtg gtcgagcttg 1620 ttgatgaagt tgcttgcgtc tgctaggcca gctgctgttt cgaccaagga cacaatctcg 1680 cqqatctqqt ctttqttqct qqqttqcaag tcaatqqcqt gqttqaqact caaqcctttt 1740 tecegaatag cagtggeaat atectecaag geactgetet teageacate cateaaatge 1800 acatgtgctg aggagttcac cagtccaaga gcaatattct ccagtatcga ccgatcgagc 1860 agacaaggtt cctgctggac aagactaata gcactgcgca gaaaccgcac attcagctcg 1920 cgcacgtcat ggcccccaat cgtcacctgc ccttcctcag catcatagaa ccgcgtgatc 1980 aaqcccqcqa caqttqactt gccgctgcca ctcagctccg acaagcgccg tctgcttgcc 2040 tgccgggatg cgcagcgtca gatcctgcag g 2071

<210> 2139 <211> 3588 <212> DNA

<213> Aspergillus nidulans

60 ggcggctgcg atcgattaca aaggggtatg ctatttggta tctatcttct ggatgccgaa 120 caaggtggct aacaatctac aggtcctggt caaagtagtg accaaggatg gcgtgagggt 180 ggaggacttt gacaataacc gaatcgtcaa aagtgcttag tatatgataa caagcatttt 240 atgttttccg gtatcatttc cgacattttg ggcctggggt ttctgaaatg attgcttgca 300 360 acatgacacg tattcagagc caaaaatgtc tatataatta atccaaaaaa cgcgggatgg ttttgctaaa gcttcaagtg agctccgctg tcgagcaatg atgcaagacg aactgtgttt 420 gtcctgtttg catgcgtccc tgggtcttcc gccgtgaggt tttccataac gtcctcgtct 480 540 ctaccgcctt cgttttgcta ttccccggag gagtcatgat gaccaaaaga caggcggagc 600 tgtcqctaga qcaaqaagct gcggtcggct ctccagcctc taaaaaaggcg cgcacggaga 660 gtgacaacca gcaggaagat gacccgcgtc atggagcact acccttgcgc cgagcaccag 720 gacaagagat ggaggacgat gaacaccgcg gaatgaatat ccttgcagct gcggatcaag 780 agggagagga gcttcaagaa gcagcgcagg tagatgagcc ggaggacgac gaagatgagg 840 acgacgaccg gcctgcaatt gtggcccccc aacgccaaag tgctccgatg gaaggataca gcgatctcta cctagatacg atcaatcgcc acatcctcga ctttgacttc gagaaattgt 900 gctccgtgag tttatcaaat atcaacgtgt acgcttgcct tgtgtgtggg aaatactttc agggcagggg tectaagtee taegegtaet tecatgeeet ggaagtttea cateatgtet 1020 ttataaacat gggaacgaag aaggtctacg tcttgcccga aggatatgag gtgaaaaata 1080 agagcttgga tgatattaaa tacgtcgtcg acccatacta caccaaggac gaggtcgcaa 1140 aactggacaa agtagtcaca gatgcattcg acttgtcggg gagacgctat cgaccaggta 1200 tatcgctccc tattcctgcg attcctcaga taaagctaat tgatgtatct acaggctttg 1260 ttggtatgaa caatatcaag gccaacgact atttgaacgt cgtggctcag gctcttgccc 1320 atgtccttcc catccgcaat tactttctcc tccacgagtt tccacaacca ggtacacctc 1380 agetggteet gegttttggt acaettgtge geaagetetg gaaceecaag gettttegtt 1440 ctcacgtgtc ccctcacgaa ctcttgcaag aagtcgcttt acgttcatcc aagcggttca 1500 ccctcactca gcagtctgac ccagtggaat ttctatcctg gtttttgaac aacctacatc 1560 ttgcgcttgg cggctcccga aaaccatcta agacaccaac cagtgttgtt cacgctgctt 1620 ttcaaggtca tctccgaatt gaaagccagg caatcacagc acactcagat acccagaacg 1680 cccgcctggt cttcaccgaa tccggtacca ttaacagtca aacgaccccc ttcctcattc 1740 tcaccctaga cctccccca acacccctat tccaatccgc gaacagggaa tctatcatcc 1800 ctcaagtacc cctcaccact ctcctgaaca aatacaatgg cattaccgcc tccgagaaac 1860 tcgcccaccg tgtccgccac cgcctcctcc acccgctccc cccttatctc atgttccaca 1920 tcaagcgatt cagcaagaac agatttgtct cagagcgcaa cccaaccatc gtcactttcc 1980 cgtccccgcg ctcgcttgac atgtcgccct acgtagaacc caacccagag atctggcctc 2040 cgggcgagcc gatcctatac gacctgttag caaacatcat cctcgacccc atgattaccg 2100 ctcccggggg aacggaggac gctgctgaaa agggcgtcaa tgcagcgtcg ggcggcggcg 2160 cctcgtccag cggtgccggt gcggggactg agaaggtctc gtggctcgtc cagctgcatg 2220 ataaagccat ggctgctgag aataccagta tccagaatga gcagcatagc ggggaacagc 2280 gcggtccgga gtggctagag atccaggact tgtttgttaa gcgcgccgag agtgagacgc 2340 ttttcaccaa ggaagggtat cttatggttt gggagcgaag gagggttccg ggaatgaaaa 2400 agaaggggaa aactgctccg aagtgaattt tgttcttggg tctaaagcgt cctcagctag 2460 ctagcttttg tatgtatcat taaatatgag atatcatgat attgttcaga agagaatata 2520 cccaaattta cactgtactg agttggcaat tgtaatcagt taggaaaaca gactagaaca 2580 gtgcattagt attacaaatg cgacatctgg tatcgtacat gccgttccgt ttcagtacat 2640 gaaccettte agaatgeace ceateegeae cattteetee caattetaat egeagteece 2700 gagataatte eecaaaegga ageatttaeg geageetgga teeceateat gagtgtaagt 2760 ttacccaaat aggcgagtgt atgggattga gagcgtccac caccccaagt tcccaaggga 2820 taaacatcgg accggagaac ggctggagct cctttatagg caaggtatga tcttgcaagg 2880 gaacggaggt aaaatgactc gaggggcgcg aaaagggccg cggtgatcat ggctgctaaa 2940 aaggctgttg ttgcggcggt atcgctagct gagttttggc gggcagcgga atcagctaag 3060 tgtggaggaa attcggagtc tgcgtcggcg gcagcgtcgt cgtctcggtt gggtagttgg 3120 ttgttatcgg cgtcgacggc taattcctct acgtccgatg ggttattggt cgggcctgaa 3180 accgtcggct caagagaga ggcagcggcg ttttgacctg tcggcacgcc atttggttgg 3240 tggccagagg cagtggctgt tatggttcc ccatgactgg ggtgtaccgc atcagtcata 3300 tcaacagcgt tatatgtagc ttcggagtcg agcattgttg ttatgtgtcc gccctggtca 3360 gatagaatcg tatcaaggag atccggaatt gagtgactac ccgccggtcc tgcaccggca 3420 ttttgtagtt cgacatcgct gtctctaata gcattcctgt catgtgtctg acggctttcc 3480 agctccagtt gcatggcaat gacatccgac tcctggacaa actgtgcgcg aacccgagga 3540 gatgattggg aagacacagg cgactgagac ctggagagaa gtgtatct 3588

<210> 2140 <211> 2972 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2140

cccgggcgta tcggagaccc aatccttcag caccaccttc gctgcttgag tcgtcccaga 60 caaattcctc gtcatcggag ccgggtctgt attttctgta gatcgctgtt gcatcgacct 120 cctcgttgtc ccaagatagc tcctcgtccg gatagtcatt tgcaggatta ttctccgcta 180 240 ttaaagcagt cccattagct tcaggcatcc gcatcaaact agaaggtaac tcaccgttag aggececate ttegetatee caettateet eggeateete ateettegea aagtegteee 300 360 agtacatttt atcctccggc gtaatgacca taacgccaac attctgacca ctgctatcga tcccatggtg gcgcaaccat gtttcttggt ctaattcaat actagctagg ggggccctaa 420 agcccttgcc tgggagccca ttaccgatgg aggtgtcgta aacctaatcc tcatcacttt 480 caccaccggc tttgtgcttc cattgatgga tgacccctct caggttctgg cgctggcggt 540 gcggttcgat gcttgttagg aacccgcggc tgatgtttca gcggaggctt aggcaccgca 600 gggcgagtcg gagaggggc ggcgtattga ttcgaacttg ttggctctgc ctccatttcc 660 ccgtctagct ctagtgcgat tcgctcgaac tggcttgcca atctgtccga ttcctcctcc 720 caattactct ggcgagcctg cgcttccttc tcaagcactt gggaaatatg atctttagca 780 840 gcagaaattg ccttttgccg ctccgctcgc cacttcttct cggcttgatt taccaccggc cgctttcgag gacgagaagg cgtctcttct tgggccaggg acatagcaat gtctgctcga

gcggctgcat ctgcaaccag agaagctcgc ctggaatgtg gctcacgccg cagcttttcc 960 accaagacaa ccacggcact atctgctctg cgtttctgga cgcctccgcc tgtagtacgt 1020 agagggctca tgggcgtgcc acttcgtgaa atctggaatc gacgtatcga gggagtacct 1080 cgttcggttg aagcagaaga tactacccct tcgcgggttg gcgccgaatc gctcttatgt 1140 gatatagttg tggtagcttc agtctctggc tttagcgaac ccggcgaacc atgtagagca 1200 tttgccagtt tatcctcagc ctgcttgcgg gcagccgcaa ttctcttttg ttcacgaagt 1260 tctgcccctg gtgacgttgc tctcaccata ggcacgacgg gcccactggc ggtgtttgta 1320 gtcttgggct gatgaagact gctcacggag cgaggagttc gaatgaccct ctgcggccca 1380 gagtgcgata ggtgagcaga gctagttcca tgggcattat aaccgttatt accgttcaca 1440 gtgactcgtt ggaaaacaaa gtctgtaaac cgacgcttgg tctgatgcag atcagactgg 1500 atatctgagc ccaaatcagt cttacagaat tacagtaacg ggcttacaag aatgcgcctg 1560 tttataaacc gtgattttct cgctgttcag gaaacgggcg agaaagcact tacataatgt 1620 gtctaccggt tcttcctctc ggcgccgttt gatgctgatt tgttcgggtg gcaaagacat 1680 ttcgagtcag taagcagttc agcccagtca gatagacgca atgaacataa aggatgttag 1740 gaaggcgaag atagacgatg gcggtggtgc tgaacattgt cgttactgaa acgcggcttg 1800 gggttcttcc gttccgcaac ttcttcaatg ggcttaaaca cctgcttgca gtctggaata 1860 cttccatagc atattgctca caaaccataa ctcagaagca ctgtgacaac acaggcgaat 1920 ccaggtttaa ctttactatg gttgctatag cacacaatta tataatcaga cctctaatgt 1980 cgttgatatt gtatttctgc tctataccac ctcttctccc caatggctca caatctcatt 2040 tcgttcttaa tgattaccct cggaagtact cgagcttccc tccaccatca tgcgttagga 2100 atgctgtaat cccggattat ttctgacatc acatatgcaa taagagaccg agacatagaa 2160 acagaccaga gccataccag tccatggtgt agccaagatc ccattctcag aggcaaagag 2220 aattaagcaa aattgtaaaa gtcaagaaca aatgagaaaa cagagaaatg aagggggaaa 2280 tgtatcatat ccagctagca atacatgtga atggtataag caaagggaat taaaacatta 2340 ataatggggt tgatctggaa tgtgatactg acatcaaaag ggcaaaagca agacgaaacc 2400 aatacagtag aaacgaagca gaatgaagga tattccagtt tcaggatgtt tcaggatgca 2460 gaaaggatca accgtagcag atgaagataa tgggaaggga agaaatattc aaaaactggc 2520 gtgcttattt ggcccaatc tcctcttctg cccagccagg caatgagttc tcgttatgaa 2580
tggccaaccc gaagccggag tggttgagcc ctccaagagc agagttgaag cccgagaagc 2640
tgctctgagg gtgatgggac gctccagaac gacctgggcc aggttgacca gaaataggac 2700
caaatggctc ttgagagaat gatggtaagc tcacagcccg cgaatgctga gcacggggaa 2760
cgctgaggct gctagtgctt gcagtggcat ggtgaccgga gctggcggac gtgttgctga 2820
tgttgaggaa accgttcgta gatggcttgt gctgatgcaa gggagcatcg atactaccat 2880
tggtgagttc gctagtggt ccgttataaa gggattgttg atggtgatgg ctgggttggg 2940
gctgagattg tagaccngtc agtgtaaggg aa 2972

<210> 2141 <211> 1503 <212> DNA

<213> Aspergillus nidulans

<400> 2141

gtagactctc gctagcccca tcgacgtctc tcttggcttt ttcttccaat tttgggcttg 60 aggettgage tteeggeeat tggactgegg ttegactetg geetgaegge geegtgatat 120 ttaatcttac tatatcttac tatagggatc ggaccagatc tctcctgtac tttgttcgac 180 teceaacteg caeeecatee geegtteega gtecaggegg ttgeggttge gggettgeag 240 tgctgttcct gcggctccag ctcgtcccct catgcctgtc agtggtagca gagtcggcgt 300 cactgtgggc gtcgatgggg gcgtcattgt caaaagtgcc acgaccgtca actgtcaatt 360 gtcaataatg tcaatcgcaa tcgtccgcgt ctccacaacg tcgattttgc cagtcatttg 420 ccagtccatt tgccattgga attgccgttt tcagtccccg tctcatcaac agcggcgacc 480 540 cagtgcggtg gcgccaaccg atcgtttact acgtccgata ttattcccag tcttggaggt 600 aactataact gccatattat tatttctata attatttgac tccgatcaga tcagcctagt 660 720 atqaaatcqc attctqacac tgacccggcc ggccagaata atgggaaaaa aaactttggc cgcgatggcg ggctagccct ctgtctggcc ttagcacgac ccgctgctaa ttgactggaa 780 840 acquattqqa tcaattqcat aatttagaat atqaaacqqc acaqaqatta gttcqactcc gactaaagag caagttaacg atttgttcgc gtcgtgcgcg gccgccacgt cgctggataa

gtttcccaca tcgttcgcgg ccaatatccg ttcgcatcca gagcgtgcgt gcggacaaaaa 960
tctcacgggc gtctgctgta tgtactccgt acaattatac atagaacatc atcttgggta 1020
gcatatgccc aataatgaaa tacgccaacc ggcttgcttc ccggcgatcg accctgcgat 1080
gcgggtgtgg acaagggtca gggtatgggt gagtttctcg tgcgagacgc cttggtagtc 1140
tgggagacat accacgagga accgcgagaa atacttctaa tggacctttg ttggttaggt 1200
gaagtttacc gagttagatg gactgttgga tggactggag atccactgct agacggactg 1260
ttggatggac tctttgagac gatgagatct ggggaaacct tccaggccaa gcactattga 1320
ggggcagttc gtattatcag atgcaaaatc agtaaacagt tacgataggc tctagactag 1380
tcgcgaccat gtctctagtt aactacacct acggacgact cagacaccaa agggagtcta 1440
gtttacccat atattgcgga cagcctgtcc cgtctcgaag tcgcaatagc ggtcagttgg 1500
cac 1503

<210> 2142 <211> 2991 <212> DNA <213> Aspergillus nidulans

<400> 2142

gatcgacggg tatgttatat gcgtttgcgt tcgttttcga agacacttgg attaatcatt 60 tctcatgttt gtcacagagc ccgtattcca gcctacagtc gacactttca agggattcga 120 ccaaggacaa catcacaata tgggtcccat ggccttggac cctgaagatg aaccaaggag 180 240 gggtacgtcg agagcgaata gcgttcgatt tgatgaaagt gccatacacg ggtattacgg 300 gcaggccaat cgttctagta gtgagcttcc gataagaacc ggaagcggga tgggaagcct tcctcttact gagcgatctt tatcacatcg ctcggacgga aggcagagct cgtcaggata 360 ttctcatcat tcagcccgaa ccaatagcct gggtttagag acaaccaaca ggataatggg 420 480 ctcaatgctg agcgattcgc ctctcatacc tccgccaggc ctgtttctac taggccccgt tccagctatt atccggtgct ggatgaccac aaatttctcg aatgattcac ttctttacgc 540 ggctgcctgc agtggatcgt atagatctct gttgagccac gcgatggttc gaaagctggg 600 660 ttttgaggaa cagctggtac aagacgttga ctcgcagtat atcaagcttc caatgtatct tccagaagcc agtgtgcatc aggcttcatc acgccctagt agtcctgccc cccaggtccc 720 caccttgaca atccgtttcc ttgttcaaca tgttagcaca gatgatactt cggtccagat 780 catccttggg agtgatgtcc ttcgtgccca taatgctgac atcctgtttt cgcaagacaa gattattatg gtggacgacg aaaggaacaa ggtatctatt cctttggtac ggcccgagaa tgactctgtt ttcaaacacc tacacactgc atcgagacat atgaccccat caggagatat 960 atctcgaacg tcgcttgatt tgacgagtga acgtgttgac atagaaaacc cacccgccgt 1020 tggtgtaatc gggaagcgta ctcgcgtttc gcaagaggct catccggcct cttctcccag 1080 tcgagacttt gcgtccgagt ttgcgaatag tcgagcagca gaatcaccgg atgattcaag 1140 gaatggcaaa gatgatagcc cgcaggttcc ggccaaaact ggcatatcaa ccgacacaca 1200 aggagacagt gttgtgaagg tgcagcccgc tggtgtatgg ggctcatgga agcgcgacac 1260 aaagactgac gcgaatgccg ctggagcagg gaagccctcc cgtccacgtc cgatgaaggt 1320 tctccggccc tcaaaagcta cgaatcgaag tgtttcggcc actgggccac ctggtgcttc 1380 cagcagcgag gcgacagggc ctccatcatc acatcctgca tcaacaatga cctcgcctga 1440 aagtcgaacg gggaaaccac tcacccccaa cccgattgga ggtgcttcgg ccttcccatg 1500 gctgaatgcg tcctgatttt tcggatttca agtatgccct gattggaata tatcagagta 1560 caacacctgt gacgacccgg ccaccgtgac gactttcatt gattactcgc acctagcgta 1620 agcaaaagtt ttggatgagg acgctctgtc gatgtcgtct gattacgttt tcataacgtg 1680 taatagcagg catcttagca tattaataca tacaggcgga cacacgtccc caaacagatc 1740 ttactttaaa tctttgaaag tttctctaat gcctccttag tctcttcctt ggtctccttc 1800 acaagccccg caatggcctt gaagtgctgg tgattcgcat cccctaaaat ctcaaataaa 1860 atactctcac tggttgtcac aatcgctccc gcatcccgca accttgcaag cgcaatcccc 1920 ctctcctccg cgttgatact gcttacaccg tcaacaagaa catacactcg atgcccgcgc 1980 tccagcagat cgagtgttgt ctgcgtcaca caaatgtgtg tctcaatgcc gacaatgatc 2040 gcatccatca gggcttcacc tttcttcgga acgggtagaa gcccatctat ctctggcgtg 2100 accatcgaga atagcgtctt gtcaatatcg gcgcggacat tggggccatt taaaagttgc 2160 tgaagaacgg gaacagtggc gccaagtctt gcgcggtttt gggtggtgac aaaaattgga 2220 atggagaggg tgtttgctgc gcggagaagt tttgttgtag ttgttactct aagttgtgtt 2280 aatcagagct gcccgacagc aaggggaggg tatatatttc atgtcccggt acattttggg 2340

gaattcatag atggcctttt cgaacttctc ttgcatatcg cagatactag ttcaaagtat 2400
aattagtaaa gtgaatgggc gctaggaact aaagtccatc acaaataagg ttgcgtacaa 2460
gaccgctggg ttgcctggat tgttacgctg ttagttgggt tggtttcgga ttcatgagtt 2520
gagggcgaac gtacggatac gacaggctct tgatatggca gccattgtat tttcccgcat 2580
caaaggaaaa ataaatgctc cccccaaaat gtggaaagat ttcgttcaaa agaaggaatg 2640
tacgtcgaga agtaggagta ataaatgaat tgaaagtcgg gggcgtgcgg ccaagtagtt 2700
gagtgcgtat cgtagaaaat agggccacat aaagttactc gaagtgattc gggtcgaatt 2760
tcggtcggta gatatggatg atgagtcatc gtggggacta ttgggcattg ttcatcttga 2820
ttaataagga aagcatgatg cttggcaaaa acggtcggt ccttttcttc atccgcgct 2880
ttctgttctc gtctttttc tcaccaccaa tctcaactcc ccataccggc ctcattcaac 2940
cccatcagct ttggacattg attctcgtca aacaacaatc cggaagctgt t

<210> 2143 <211> 1472 <212> DNA

<213> Aspergillus nidulans

<400> 2143

ggataaatgg gaccgcgcag accagggaaa aggactggat gacgggcccg ttgaagatcc 60 120 gcagttgccc gagtataacg ccccggggca gcctggggga agcggtggcg aggggggtgc ggtggcgctg ggatctgggc tacgagtcaa gctgggattg ggcatggtag ggctatggat 180 tgtttgtgag tttttctgat ccgctggatt gaatctcagg ggcgccagct gcccttgaca 240 300 gtgacgggtc tgctagaata aggtgcgcat acctactcta ataccctgca cctacatgta cagggcaagg cggacaaaca ccgggatgac ctatgacttg cataaagaaa aatatagatg 360 aatggacgga atgcacaaat atgaattaag ttcaatgcca gcaaggccat ccatgcaatg 420 caatgcaata tgatagtata tactaggcgg tctctatcag atagaccagc caaagcctaa 480 ccaactctaa gcatcaagca cgagcgcttt cagcttcgcg aaatccggcg ttcccagccc 540 cgtcacagga tcccacccct ccgtcgcgtt ccaacccgca tacgggatta cggggctccc 600 atttggcgat ccgttaaacc ggttgttccc gtcgcagccg gtgctccctc catccacgat 660 atcgttgagc ccgttcaggc catcctggta gagccaaggg ttgaggaatc ccagcacggg 720 caggectgee tteagacgea egtegttgag caaegecaeg atgeeegeaa ataeaggega actgcagctc gttccgtcga agagaccgac acggcccttg tcgacgacag cgaagttctg 840 cgcctgcgct gcgacgtccg ggaaggcgcg tccgctgcgg ttgaagtact gcgcctgtgt 900 gctaccgagt ttgcgcaggt atgactcaac cgcggcgttc tggtacgccg ggcgcgccca 960 gtagtcggag aacccgccgc tggagaagta tacaccggat tcgggcgctg tgccgttcgt 1020 gccgccgacg gcggtcaccc aggggcaaga ggccgggaac tgcggcggga agtgcgtcgt 1080 gtttttgcca tcgttggtct ggcaggcggc gccgacgcca gagtcacccg aggagaagag 1140 cacagacacg ccgcgggaac cgagctgagc gtacaggttg cagacggagc gggcgtacgg 1200 ctcagggatt gtctgctcgt cctcgccgta ggaggtcgag atgacctggg gcaggtcttt 1260 ctgatcgagc ttgaggacgg cctcaaggaa gtcaaggaaa ggctcgttgg tgttgtcatt 1320 cgggtcgggg gaggagaggt caggaatgag cttgccgcgg ccaccggttg tgaactcggt 1380 cacaggtagc ggcgacgaga cgccgatgat gtactgcagg tcgaggttcg cctcgccgct 1440 1472 gtcggccgtg gagtcctggt cgttgaggcc gc

<210> 2144 <211> 3271

<212> DNA

<213> Aspergillus nidulans

<400> 2144

taatgccggg ttgatatctg ctgccgccga gatgacgctc gcgtggggag gttgaggaac 60 tggggagtgg tttgaactgc ctgggcttcc atcagccttg cgttttcgcg agtcactgtt 120 ggaaatgggt ttgaggtctt ttgcggttag cgattccacc gtcccatatg acttgaaaga 180 gacgatgtag actgggttgc tggacgagcc ggtgatggat gttatgcggg ccgggtagaa agaattatcg cccgataccc agcgggcaag tacatgctca ttcacggaga acgaagccgg 300 360 qccqqaqttt gtgttgtcat ctgtctgctc ggccgtcgaa ttgcgatagc cgggtttcga agcgttgtca tctctcgagc cctttaattt tgctggagcg gtggttggtt ggggagttgc 420 aggtctgagt tcggcgattg atgtttcagt gaggtttata agttcttcca gctcagcttt 480 gagactttgt aattccgtgt tatctgggtc tacctgcaaa cttgattgaa cggtttcaag 540 ctgcgccggt tagttgcgct cgcgatagcg atcggcctga cctacctgaa gcttgaactc 600 cttgacctca gcctccaggg ccgcgacgtc tgtcatatcg atgtgagaaa ggcacgagac acaagagctc gtgtgggtag agtagtttgc tggtcgtgaa ctctgcagtc tgcacgcgtg ctggtcggat gagtctgaag ttcagtcgtt tgacgggtga gtcacgtgat ctacagcgcc 840 acatggccca ttattacaga aaacgggtcc tctgttttct agagataatg tataaccaga tcccatatga cagggaccaa gtattgtacg agagaatgcc ctgcctacag aacaacggcg 900 ggtctatgtg agatgcttgt caaccctgac ccgatactaa gcgaacccga aaaaaactgg 960 ttcctcctgc aataataatg catgacgggt gaagcgaata gctctgtcgg atggggtgac 1020 atccggagcg ccctacgaaa ttcaaaccgc ccgcctgggc cggccgtatg cgcctatcca 1080 gactaaaagc atcgacccga tgagtcagac ctgaagccac aaataccgca tatcgaatag 1140 gatcacgctc accaaggatc ctggtcctgg aatgtccgca atttttcca aagcgcaaag 1200 ccttgatctg aaatggtcag cgaatgaagc aatgtcgtgg attcctcatt ctggctcaaa 1260 gcagcccact gattttcccg ctctttcgtg ggtgggctag tcacgggatc ctgccgtgca 1320 tccgaaagat ggggtctgga acttccaggt tgattgataa cttattaact gaatttgcgg 1380 cgtaaacttg tagcgcagtg cctgtgcagg gtatagacta ggcagggctg gagctgcagc 1440 ctgcaagcgt agaataggac gcctgtgatg atggagcatc aggctgaatg atcgtcctag 1500 ctgtctggat ctaattctag ggatcgaaac gagaattgag aaggtcgcag aatcgaccct 1560 cgtggctgat ttctaagccg caccatatgg ttttgcttcc taaaagcggc agtgggtgtg 1620 aattgagagt attggctcct tcgggtcata gccaataaga gcggtcaatt tgggctgccg 1680 ctctttcggc cgccacccgt gactgctgcc actgcatcgc catcccctcc tctgctgcct 1740 ctcgcctcca cgtttctcag gcttcgtcat ttcgtccgat actgatcaga agagtggctc 1800 ttcgtttgtt tcgctgttca gccaaccatc gacagctatc tgatgcacta gtctggtgtc 1860 tctattcttt ttctgacctc atatctctcc ttgacccctc ttgcctgcag tctcacttct 1920 tagcccggcc acttcactca aaaaagcgtc gattttttct ttgttctgct gctcggcatc 1980 ctcagcggct gagaacagat atcgcttcac tttcttcttc gaatcgagtc gctccatacc 2040 aattctcggt cgtccttgac ggccgaatcg acgtcccaaa atcaccgggc ggagcatttg 2100 cactgtcata gtcttagctg gcactgcaat ttggtctggc cgtccacatt gagccagcaa 2160 acgggtagga agcccgacta caccaccaat acgcttgcaa cctctcttcc aggaccgaac 2220

ctctatctta tcgtttcctt ccttaagagc ttagtcaaac tgtacattat agcatatcca 2280 taatggccga ctacaattct ttgtaccaac acggtcttta cctttcgcct gaccagcagg 2340 acctcctctt agccgctctt tcgtcgaata atccgccctc gaagcagaaa caaaacgttc 2400 agaagccgga gcttggtacg aatccgacca atactccagg tcaagcttcc acgggaagct 2460 tcaatacctc tcctgcattc gacggttccc atcagttcga taatcttaac tatgatgaga 2520 gcccttttct tgacttcaac cccgaactag aatgggactt tcccggatcc gagaacctga 2580 ttggcgaact acctgggagt gcaacatcag acgatcacga ggtcggtgag aaacgcaagg 2640 attcaaacag caatggcgag gtgaacggaa agaaaaggag ggagagtgat gacaagagtg 2700 atgataaaac gtcgaagaag ccaggaagaa agcccctgac gtcagagcct acttcggtat 2760 gtactggcgg tcactggtga tagacatgac cactaatggt tcctgcagaa acgcaaggca 2820 cagaatcgtg ctgcgcagag agcattccgt gagcgtaagg agaaacattt gaaggatctg 2880 gaagcgaaag tggaggaact acagaaggca tctgacagtg ccaaccaaga aaatggcctc 2940 ctcaaagctc aggtagagcg tctgcaagtt gaacttcgtg agtaccgcaa gcgcctttcc 3000 tgggtgacac aagggaacgc gctctcggct atcaactcat atccaggcaa tgccaaccgc 3060 atgtctggac tcaataataa cgatttcatg ttcgatttcc cgaagtttgg ggatctccct 3120 ggcggccgta ttttcaatgg ttcagtggcc aagaccaatc aaaacaagaa agacgacacc 3180 cccatacccg gcatcttacg acattctgcc ctacaggcgg ctaacggcag ggcttcaagt 3240 3271 ttccgcttca cccaagacgg tcacatcgaa c

<210> 2145 <211> 1404 <212> DNA

<213> Aspergillus nidulans

<400> 2145

tcagtcagta caaatcccac acacacaga agctcgtatc ttcaaaatcg aggcgaaaag 60 gttgacgaac cgtgccgagg cgcttcgtac ttccggtgac tcctattcag acaaaatgta 120 attagcaatt gtccattgga gcaattttcg tttacttcga catcaaaata ctcacatctt 180 gaccctgttg tcgttagttg tcgaggtggt gagtgagagt gtctatctcc aggtttggcc 240 gcaagtccga ttttgcaacg cttaacgagt gtgggcgccg tctaagcgag gagtcttggc 300

acttagccct gtttagctag cgcacaccta ttgtagcctt aggcatcaag tacgtgccca cctttgttaa cgttcaaatt tcccgccctc catttatgac tgcagttctt cgtccatatc 420 tcgtgttcgt cttttctttc ctaagactta ctctccagct gcggttgtct gtgcaatttt 480 tactgaccta tggtggaaac actcaatagc tgaaaatgat gattttgctt gtattgggcg 540 cttaaacaca atcatagtcc caatcgtaca atacaacttt gggctgacct aagctaaact 600 accttaaggg ctaaaaaaca gcaagtgtag atgccaccgg agacagaaag ctaaaacata agggggatca aacacagtta gagaaagaaa tggtggaggt gtaagcgaag gtagattgtt 720 780 ttctcgtaac aagggcatca ttcagatctt caattgtgac tttgggtgtg atgttgcaac gtcctccgac atgatgtgcg tgagtgtgaa gttttacgca gctgtttccg acttgccaac 840 gccattgctg tttccattgg cgctgcctgc tgcgctgcca tgggggactac ccttcgcagc 900 agcettetta teatettege categicate giaateeteg tetacateea tittaegige 960 agcaggeteg tgagetggag ettgtteage eegggeatgt teeteettga eagataettg 1020 aacctgaact tgagtagtag gaggaatagt ggcaggcccg ttagatggtg tgggagcgct 1080 ctcagccatc ggtggaaggg tgccaccgga agcatgttgc ggcatgtgct gaattgaggg 1140 gagagttgga gggtggtgag cggcttcgga aggatggtag ccttcattgg cccggcgttg 1200 atcctcacgg cgaacgtcgg accgttgcat ctcgcctgga gaaggcaagc ggctaggaga 1260 tggaacgcga cggccgatct gctcatccag cctggagcgg ttttcttcac ttgcaagctt 1320 cttgactgga ccgtcagcct cccattcccg cccacgcttc atggccgaac cagggcggtc 1380 1404 ttcacqqtca cqcqcagagc ctca

<210> 2146

<211> 3357

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2146

gatctaccga gcttcgtctt gatgacagtc tagcgcaagc tgctgacact cagcaaaagt 60 ggtgggcggg ttgatacacg gagttatccg ccatgcagcg aaaacttctc ggtacgcaga 120 ccagtaggtc atataaagga ctgttatcct ctctggggag cgaaactctc ggcaagaggc 180 aaaccatcag acacagcaag aaggcctgat tttatgcagt actctctgac tagtcataat 240

cattataagg atgtctttct ggacctttgc accgaagccc aagaccccgt tggggtatca tegggteete tegecaaceg egggegteaa agtgteacet etgtgettgg ggggeatgaa 420 ctttggtgaa ggatggtacg ttgagttata cgccattggc tgagcggata ctaaatttat 480 ttgttcaggg agcactttat gggaaagtgc agtaaagacg atgcatttgc gctgatggat 540 gcgttttata atatgggtgg caatttcatt gatacgtatg tgttctgaat cttctgcttc ggggtaaaac gtgcacctga ccgtttatgt atagcgccaa caactatcaa gaaggcgact 600 ctgaaaggtg gattggagag tggatggaga gtcgtgggaa tcgggaccag attgtgtatg 660 cacacccatc agctttgaga attctggcac taaacgaatt ggaaaatgca gtcttgcgac 720 780 caaatataca actggttttc gtgaccagaa tattgacacc gaacgaattc agtccaattt 840 cgttggtaat tcggtcaaat cactccagac ttcggtcaaa cacagcttga gaaatctgcg caccgattac attgacctgc tttatgtgca ctggtgggac ttcacatccg gtgtcgagga 900 ggtgatgcat ggcttgaacg ccctagtcac ggcgggcaag gtcctgtact tgggcgtgtc agatacgccc gcctgggttg ttgtcaaagc gaacgagtac gcccgcgcta acggcctgcg 1020 gcccttctct gtctatcaag ggctctggaa tccgctgcgt cgcgacatgg agagtgagat 1080 tatcccaatg tgtagagacc agggcatggg tatagccccg tggggtcctc ttgctcaggg 1140 aaagctcaag actgccaaag ctcggggagt aaaaggtgga ggccgatcgg acggggacat 1200 gacggaggat gagatccgcg tgtcggatgc ccttgatgaa gtcgcgaaga gcagaaatac 1260 cactctcgcg gctgtggtat gtgtaactag tatctagatc ctaacctgaa gagaactgac 1320 aatcgcaggc ccttgcatat ctgctccaca agacaccata cgttttcccg atagtcgggc 1380 agaggaagat cgagcacctg aaagccaacg tgcaagctct tgagatcgag ctgaccaaag 1440 aagatatgga caagatcgat gcggccgtac cgttcgatcc tggtttccca atgagcttca 1500 tcttccctgg caaatacgat ttgaccctta ctgctgccga tgttcccttg acgcggaagg 1560 ccggccatat cgatgcgccc cctcaacagg gaatagtgcc ccccaggaag atgtcccaga 1620 tatagatage ttaggteaat acetacagte getacettte atgteegeat ggageaaata 1680 tacaatcaat tgttctccga gtaaacaccg agggttaatc atgtgactat tgctgtaccg 1740 caagecgaag aeggeetage geegeetage teeegaggte ttegeetegg caategtegg 1800 ccgcatccat gcttgaatta ttctgacatc agcagcacgt ccaagcagta cgtcgtacaa 1860

aggagaacga tttgacaagc ctaatttttt ggaggagccc gcatacaaga ggtatggctc 1920 ccaagattgt tetttgaggt teettetett ecaattttee ttgegaattg egaagtetga 1980 accttcacct aatcggcgtt tgtaggcagg gtccgactgc cccgccctcc agaggaaatg 2040 tcgcccgcag acagcgagtc cgcctacttc aacaactacc ctccacccaa agccctttcc 2100 aaacatgaat cgctcgccag atcgtttata gagtaccatg tcgaatccag tcggcgcgta 2160 gtactcgtca cctccggagg aacaacggtt cctctcgaaa accaaactgt tcgcttcatc 2220 gacaacttct ctgcaggaac gcgaggagcg acatccgctg aatacttctt ggagcagggg 2280 tatgcagtaa tcttcctgca ccgacagttt agtctgctgc cctattcccg gcattacagc 2340 cactcgacga attgcttcct ggatttcatg gacgaggcgt ttccgagtga tgttagccgt 2400 tcagatcatg gtcctatcgt ggtgcggaag gagtaccagg atgagatgcg cgacgtgctt 2460 cgaaagtaca gatacgcgaa acagaacaat cttcttctgc tgcttccatt cacaacggtc 2520 teegagtace ttttegaact gegeatgete gecaagtgea tgaaceeget eggteetaat 2580 gcgctgttct acctcgccgc agcggttagt gactttttca tcccgcgcga ccgaatggca 2640 gagcataaga tccaatcctc cgaaatacca aaggagttcc aaggtaacga tgaagctgtg 2700 ggtgccgatg acctttacac gggcgggttc gaacagaagc aggagtcgag caaaaagttg 2760 gtcattaacc tagacccggt tcccaaattc ctccatcaac tcgtagatgg ctggtcaccg 2820 gagggtagca tgatcgtgtc gttgaagctc gaaaccgatc ccaatctcct cgtctataag 2880 gctcagacgg cgctccagcg gtacgcccac cacctagtta ttggaaattt gctttctacc 2940 agaaaatggg aggttgtctt cgtcacaccg aacccacctt atgagcgctg gattcgagtt 3000 cccaagtcgc gccggagtaa gagcatctcc ggcgtcgaag accaggtggg caaggctgag 3060 gcagcgaatc ggtcatcagg agaccagacc ttggcggccc cagtgggtga agagccgtct 3120 aaggaagaaa aggacggaga aggcacgtcc cgtgagggca cggagattga aagcttgatc 3180 ataccagage tagteaaact geatteggag atgategaga agtteaageg atagtgaaca 3240 ttactcattc tattttgtct agataccttg atatgcccag tatngtatca ctagcaagct 3300 catattcgct gtttttttt ctcaagagaa attcgatacc ctacatagat tcgtcac 3357

<210> 2147 <211> 1782 <212> DNA

<213> Aspergillus nidulans

<400> 2147

ctcgacacct cctcgccata cgaccaaatc tcattgtctg cgccggagca gtcggctggt 60 cctctggttt gggttcccga tccccatgta gtcgcattac gggacagaat gtggcccatt 120 180 gaaaccaacg gtaaacaact cgcggaaggc aggatcgtcc gggtttccgc catggaagcc cccaatgtct gtcgtccacc agggaattcc tgcaatgccc atatttaggc ccgccgagag 240 ctgattgcgg aacgacgacc acgacgaggc gatgtcgccg ctccagacga gagcgccgta 300 tttctggctt cctgcccagg cgcagcggag caggttgacg atgtttgtct gccctgcagt 360 ttgcatgcct tcatagaagg ctcgcgcata ctccttggga taagtgtttc cgatctgcat 420 gttgctgccc gcgtggtagc ggtagatatc aaagtcgtag atggagtatt cgggttctgc 480 ctcatcaagc cagaagatcc ggatgccttt atcgtagtag tgcgactttg ccttactcca 540 gacgaaggat cttgcggcgg gattcgtggc gtcaaagtgc gtgatgtcgc cgtcgcattg 600 660 catggcgatg cggagaccgc ggtcgtggcg gatcaggagg cctttctcaa gcatctcagg gtagttctct gaagctgttt cgacggttgg ccagatggag accatgagtt cgacgttcat 720 780 ctcttqcaqc tcctttacca tggcatctaa accgtcagtc ctcgcttgct cactataagg 840 aaaacctacc tggatcaggc cagaattcag ggtcaaactt ccactcgccc tgatgtttcc agtgaaagaa atcacacact ataacatcaa gaggaacctg ccgccgcttg tactccctcg ccacattcaa caactgttcc tggttccagt accgcagctt gcactgccag aacccaagcc catattctgg catcatcggc acataccctg tcacccgggc atacgcctcc tcaagttctg 1020 caggtgagtc acctgcaaca acccagtaat ccaatgcctt ggtcgagtac gcttcgaaac 1080 tcatcgtatt tgtccccagc actgccctcc caatcgctgg gttattccac agaaacccat 1140 atccacgcga tgatagcgca aatggcacac tagcttgaga gtttcgatgc gcaagctcaa 1200 tgtcactccc tttcaaattc aggcctggct gctggtactg gcccatcccg aagatcttct 1260 ctttagcatc gagcgactcg aaacgcatgg tgagatggaa atcgccgccg agaataggcc 1320 gcagctcgcg ggcttcaatc tccaaggcgc tgcatttcgg gtccgtcggg tcgcgtcggt 1380 gccgggcgta ctcttctagc agcttggtgc ctttggagtt gtaaatggta agcttgccgc 1440 gtttggtcac gacgccttta atcttgccgt tgctgatcgt tgcttctccg ttcttgtcag 1500 agggaagctc aattgctgat ctgtcactct gaggtctgga tgaaagagcc cagttctctg 1560 cgggcatggc cgcgagcttg gtggccctga cgcggagtgc attctcgctc cagggctcga 1620 cccagagaag atggtcatca aagcggaaga cgagcttgtc actgtcggag tagagcattg 1680 ttaggcttcg ggagttgcaa ctgtggttga gacattctaa ataatgaggc gcgcggggga 1740 agataaatac cgtttcaaca gcaacagctc agcatctgct gc 1782

<210> 2148 <211> 3945

<212> DNA

<213> Aspergillus nidulans

<400> 2148

60 tcatcctctc tgacatcact gacaaacaaa cagaaatgca agcgtccaaa aatccccgac 120 caaaaccctc caattggcct cctcaatctt tccacaccgt cctgatccgc aatctccaat tattggagct cgaccaactt gaagactggc ccggcattac accacgcact ctcttgccca 180 240 cgtcccagaa ccagcgccag cgcgtcaaag ctattgaatg gatcttgttt cgattggtcg cgctttggga tccagagaca gctcgcgatg taggtacagt cttccgctca taccgctgct 300 360 cctgaagaac ccgaggagct gatggattga tgcccaccac attagaaact ccgtcctttc ttcccgccac tggagcctct gcaatctgtg aacctaaggg ctgccctcta ccgcattctg 420 tctgatctaa aaaagaatgg agatctgggc cgcgagacca tcctccgcaa gtccatgctg 480 gacgactgca agggcgagaa attcgacgag ctcctagctg tcttctctac taacgtgcta 540 cggaggaaaa tctcaacccg caatccggca atcgacttat cactgacctc cggcctgaca 600 cggcaagaat acacgcgcct tctaccgctg attcttgctc atcgggcatc gctgagtaca 660 ctcagcgagc gccgagagcg tgttcgtgat acccatgaga agttctcgca gttgttggac 720 780 agaaagaagg aggaactcga cacccggtcc gcaattgaca cccatgccat ccgagtacgg gacactgaaa tagaggctct tgcccacgag acgagagcta attggcaagg aagcgtggaa 840 tgggttaacg ttctactcta cgggggtctt agtagcagcc gagacgcctt cttagagctc 900 ccatttgata gtgcctggtc ccaagccatg gcatctacag ttgataaact ccgcaccacc 960 gcaacccgct ctgatctgat actggatctc gagacccgag tctcgcgaca gcgagcacgt 1020 ctacaacatt ggtgtcggta ctcagattca ctcaagcgtt caggactggc atcaccagca 1080 aagcctgcag ccacaaacaa gggccctcaa ttgatcttcc gggaccacca gaacctcacc 1140 attgccagca tctccaaggc agtacggcaa cctgttaacc gagggcctcc tgacgtcgac 1200 gatcaaaaca teetgeacte eetetegaca geaatggage gtataaatgg egtttegaga 1260 cagcgacaga gctcgccgag ccccatttcc gggcttgagc cagagcccga accgaagaca 1320 tcaaggtcat atccacccat cgaaagacct gaagttatcg aaccacctac cggatccaac 1380 gcttccgact acattgacga agagtcgctc aaaaagagac acagggaaat attcacgctc 1440 acagaacgca cccgcagatc catgtccttt tttgaaggga tccccgagag ccctccacaa 1500 gcggaaccaa accccgtcaa agattccaca aattcaagtc cagaagaaga accacccaga 1560 gaatcctaca ccctagttga acgcacccgg aaatccatgt ccctgcttcc tccaccccgt 1620 gacceteege gtecaceaeg acaatetege aaateeegeg ceteetteee egtaaateaa 1680 ttcgagacgc ctccaaagcc ttcttacgat atcccgagcc gcgcatcgac cccaagggat 1740 gagttattcg aggaacaggc tgattacgcg agtgtattca agtctaggcc gcgtattgcg 1800 ttaagtcctg ttgcgtcgcc agcagtgcat attaatccga ttgaggactt tgatcttagc 1860 gcggatggga atttcgggca aggccatacc aaagacgatt tgaatcacgc tgcactaggg 1920 tcgcctttgc gttcccgggg gcgatggtga tattgattgt ctgtttttag agcgtaatga 1980 aaccatttaa tacacgaacc acaagcctct agatatttag taagtcctac cccgtaacaa 2040 aacgccaggc aaatatccat atctcctcca agaaacctga actccgaact aagatttgat 2100 gaaaaattgc gtcctcccct aagtcttcct agaattccgc gtgcgtctgc gcttctgtgg 2160 tggaggggat atatcctccg tatactcttc cggtgatgat tcctcttcaa gaacaggaga 2220 cccatctctg tacaatatcc tcgggattcg tcgcacaggg ggttttctca tttgcgctag 2280 ctgaccctcg tcattgctat cattgtttcc atcgagaaga aatccaccgc ctcggccgac 2340 gtctccggaa agcgactcat tttcggaaga gatattctgg acccgtcgca caggcggctg 2400 tctcacttcg atgatcagat caccatcatc agcatgatcg tctccgagga ggaatccgcc 2460 gccgcgatca gcttcttctt cttcttcctc ttcatctaca aggcctgctg ggtgttgttc 2520 ttctgctggt gtctgagtgt ggcctcgtgc gtgtgtcgat gccttccggc tagcgaaggg 2580 attatgcgca tegggtagat ggeceteete ateetetgeg tatteeteet geacaegetg 2640 cgcaattcgg agcccgaaca agaacttacg ccaggtcgcg agaatcttcg cttcagcttt 2700 tcgcgcttcc ttgcgtcgtt tttcctcgtt atcagcgcgc catgcatcca caacgagatc 2760 cttattctcg gccgcgacaa caacgccctc gataacaggg acggccatct ggctgccgaa 2820 ttcaaacccc gtcacagcct cggcgtagtc gatgcctagt ttcttgcaaa tacgcgcggt 2880 accggagaag gggatgtgta ctgcaccctt agggaccatt cgcgggacga agcagtcgat 2940 gttgccgtac tcattttttg gtataatgcc atctacgatg ggaggaggta tgatttcctg 3000 cgtttgttca aaggagtaaa gaccctgaag gggtttctgg cctgtgcggc gggcttcttc 3060 gtcgacttcg cgcttacgga ggagggtgac ggcgcggatg gggacgtgtt tgaggggctt 3120 cgctgagggt agtggctcgc ggccttcttt gtgccagctt tcggcggttt gacatttgac 3180 tacatcagag cggcgataga cattttcagc tttgggggctt tctgttggcg tagatgcacc 3240 gttgccattg gcatttttct tcttgccccc tggggtaaag gtgcggacag gcagagcgcc 3300 tggcctgaga gcttcctcac ggcggagaaa gcgctccaga acgaactcgg aggatgtacg 3360 taagctctgt agagtgtcaa ctgtttcatt agttggcttg ctttttgtcg gccggttggg 3420 aaccagatct ttagcatctt caatgtcgtc cacggcagtg cggtccttat atggacgttc 3480 ataattgcgt agaaggaccc gaaaccaatc taacagatcg tcgtcaggcc ctttcttccc 3540 cagtcggaaa cccttggtct ttccaggcca ggtccgcctc cgcagatacc gagttgtgac 3600 atcctttgcg gtcttgtcgg ctgagaatgc aatgacgtaa caaattacct gcttagcctt 3660 ctcagcttta gcgccgcgcg gttcaaaagc tgcttggagc tcttgggtag ctgccacggc 3720 attggagagc accagaggat cgacggagat gacttgatgc gtgattggag atactacctc 3780 ggtccagtag attggaaaag gaaggtcctg gtcgtaccgt ggcgcacgtt acggccacga 3840 gaggaagget gagegteete ttetteatea etateaggaa aaceateece atetgattet 3900 3945 agatttgtat gcttcggctt tgtttttgac tttggagagg tatgg

<210> 2149 <211> 3894 <212> DNA

<213> Aspergillus nidulans

<400> 2149

ccctgcaatg taaattatat agaggatgag aacaaaggat ggtcgcagtg taagccctcc 60 tcaacaaagt agccatgttt gctacattgt ccaggaggga tcagtctttg gccaccttgc 120

gttgacttaa gtttttacag agggcaagtc atagttcagc tcattctaga acatagtgga agtaagttca atgaataagt tggcttgttc tatgatattg aatcgtgaat tcatattatc 240 ctttgaaaat ggagccctct agacggcaaa cgaccagata tgtcattagt gcctcactac 300 360 aacagacgct acattcaaac ctagctgcca gcccaggtca atggacctca attggtcaaa taaqqtcatt tttctqcgcc aatcgcagta ggtatattgt tgcatccaaa agatcacagc cacagccaga gacagcccat catggaagaa caggcagaat ccataacagt cttgcacaga 540 ctctcctaaa ctccttgatc gggatcccat gtcttaacgc aacttcatct actttcgccc 600 tetttetggg gttaaccace teetteaegg acetecaate gtgttteeca gegeaatatg 660 ctgccacgcg atagaatccc caccgtgacg tgaatttgct cagcatataa atctttgcga atccattgta tgctcgtgac caggatggtt gaaaaggaat tgagaacccc tcgtgtcggg 720 780 cgcgggataa agtgaatagt atgtctgagg tctcgctgag tcggcctagg ggcgttgttg ccttgcgcca ctccaagagc tcttcggcta ggcggctttt atgccaggaa agttccggtt 840 tgcgggagag gccaagaaca gtatgccatt ttttgagaaa ggtggacatt ctgaggttgc 900 ccatcggcgt tttagggttg attgaatttg atctggactt ttgtaactga ctgctgttgg atgatggaaa ggaagacact tcaagtcacg tagatggcgg cttctatcaa attgatctta 1020 gtttatcagt caggacatca tggactgtgg gaagtggtag aaataaacca gctaggacct 1080 aatgtcccat atggggagat gcaaacggcc cagatcctgt acctccagta agtaagcaat 1140 ctttatacaa agcaccaacc gccctagccc ttgacttcgc tcaatatcac catcttagta 1200 tacqatctaq atqtccatct aataggaaga acaactatat gaccgcgcac aatagcctcg 1260 caccatggag tcacgagtgg taaacttccc gaggtagaag agccagtgag tacttggaaa 1320 ggcatcgcga cagcaccaac atttcgattt ctttacgacc atctaatcgt gtagctggaa 1380 ggtagcaata gaagtaagga aactttcaga ctcatcacgt atttatatgt agtagtttgt 1440 atagatgcga gtcatgtgat atggcgttga ggccacccag cggtgagtaa atagacctcc 1500 aacgaaccaa caacaatcct ttgacaagtc atattggtat cgcatttctg taccccggac 1560 ggtaaatett geetgaegea teeaatatge aggetggaat eteaggtgeg tteeteeece 1620 gaagttccag cataagcccg agcagccaca aaaatgcata tcatgagttt atctgactgt 1740

ataaagtctc ccaagagctc cacgatgcct tctcccgttc gcgtctgata cctctatctt 1800 ctgtctcccc gtgacaatca gccgcggagc gcctaacccc gctttcaacg ctccccttct 1860 ccggctttgg agagaacgcg ttctacgcct cactgtcaca gctaacttct gtgttggagc 1920 caaagacgcc tatttacctg ttaatccgcc ggactggatc taatctgatt gccttaacgt 1980 acattecete caacgetggg gtgegtgeaa agaetetett egegtetaea egggegaege 2040 tggtgaggga attgggaagc gagaagttca gtgagacaat cttcgccaca gacgaggagg 2100 aagtcatcgg agagaatgca tggaaggagc gggaggcaga gaagaacggg acttccactg 2160 gcggttatag aagggaggat ctaatgggag aaaaggaaag ggaattggaa gctgtgcgga 2220 gggcggagga ggctgcaagg agtgggactc cagggaggga tattgggatc ggtggaacgt 2280 ttgcgagagg tccttctagg atgaaaattg aaatgcaagt ggacgaggat gcgaagaatg 2340 ctctaggggg gctgcagcag ggtggacttg tgcagatggt gagtttgaca agatatattc 2400 aattgcactg tgcgttgatt aaaagctaat gttgttctaa taacaggcca ttgacgtttc 2460 aacggagaca ttcaagctca ctgcggctga gtctggagtt gacgccaatt ccgtccagaa 2520 teacatetet getteeteac egagatacae gttetaceae tatecegaet eegacaeeat 2580 catcttcatc tatacctgtc catcaggctc gtcaatcaag gagcggatgc tgtacgctag 2640 ttcccggatg catgcgctcc aggtggcgga agaacagggt ctgaagattc tgaaaaaggt 2700 acggcggctt gacgaatgac agaccgggaa ctaacaaaga aatggcagat tgaggccggg 2760 gcgcccgacg aagttacagg cgaacgcctt caggaagaag tgaacccccc gcagaacaac 2820 ggtctcaggc aagggttcgc aaagcccaga cgcccgggga ggtagatgtt gaccgccgct 2880 ctctagcaag tcctggggga ttgatccggg cttcagcgta agagatatcg tacacatata 2940 teegtageea agatteattg cegttettag attteaceag taacegeegg taagageage 3000 gataatacca gccagggccc gacagctctc cgcaccaggg acccaatagc gtaagcaggt 3060 aacttcccaa gtttataatc ttcggacatc cgtctcggtc tttctctagg cgcgtacatt 3180 cgaagcagta gaatgcatca ctgattccct cgccaccaca aacgatacac ttgttctggt 3240 agttgccgaa ggagcattcg tcgcagatgc ggaccagagt agtaggacgc acgtaggagt 3300 cacacagg acacttccca togcatttgt cgcatagacg gccaatggag atgccaggtt 3360 gettgeggea cataacgaga tegggatgat ggegegacat gttgetgaaa agaggttgaa 3420 eggagtgega aaagggagtt gagetegata gegaaggtae eggagatttg aaeggtteta 3480 ataataaata tacetggaag egacaagtet ttagageaae eggtegaage tggtggaaag 3540 eggaaaggag eteggagga agetgggaae gggeatgaee tttteeaagt ttetgeegge 3600 ggtggttggt eegtgeaegg gagtetgget etgeggetet ategegaeag eatgteteeg 3660 atteacatat gtaataetat tgeteetget tgtaegggtt agaegggtet eatetategt 3720 acaataetea gtacaagtge tttgeataet tacettgeea ttgeecaata ttgtgeatee 3780 gtttgteage ggteteggae eeggeeataa eeagaeagae teaegeteae eatggeagaa 3840 gggtaagegt tttettteea ttatettaet gtegeacatt eeagtageta attg

<210> 2150 <211> 3993

<212> DNA

<213> Aspergillus nidulans

<400> 2150

ccgcttccgt tgttgaactt atgatccaac ttagaagaca cttgttatcc tagcaatctc 60 agaaatctca gaaatacgca gtctccaact tcacgcaggt tgcggcttcc taaattgagc 120 gggccagtcc gtcaaacggt tgaaccatgg ttgactttgc tagtgtgcca gactttggtt 180 240 taccqcqtta ttctcctctc ttttctctca cccctcaccg acaagaaggg ctagctcgat cctcccgcca attcgcctgc ctgccaagtg cccttggacg tcttgtcggc gagttattcg 300 ccaactegca agacegaaac caagacacec agaattacac cegegettte aggeeetgat tttccgggta tgcaaggaac ttcaagtcag gcacccgtct cgacccatgc ccgtgcatgc tcatatcaga tttctggccg ttgcaaagaa caaagcgatc ctacaagcct cgaggatctc 480 540 agageetega gggetgeace catactetge gggeteaaga gtaeggtegt acteceettg cttgccatgc aaggattett ccaagaatcg ccgctgcaag gcaggetcaa aagetaette 600 660 agaacctgga gtccccgaac atagccgact tgccaacaaa tcggtggaac cgcaagggca 720 aatggcgttg acgaatacaa agtcgcagat tcagtgcgtc gtcaatgtgc aatgtcttcc ggaaaattct ctcatctggc attggcaaag gccgattgtc tgttatcgct gcgggtcaaa 780 agtccgctgc gtcttgacat ctaaatcgct attgtatgtc tactctgttc cctcgtatct 840 ggactgcacg caaggaggaa gttactacgg tcactgcaac gctaggcggc gcctcgacgg 900 atcqtctacg gcccagatat tgggtatgaa ctcaacaaca tttggctgag agcaatcata tcatctaccg tggtagtcgg ccgctcgacc gctgactcga accgcctgga cccatgacaa 1020 aggaccgccc cgaaccaaat tcagcactaa taacccggtg gaacggactg cgtttggcag 1080 aaccatggta gaagttctgc actggaccga agtaccgaat tattggatcc gccgctgtta 1140 aaagcttcca gtgtctcggg gcacgctcgg ccccggtgac tctatgcggg gtcccatacg 1200 accaacacag tacgtaacgc cattggcatc aaccaggtta tggctctggt taaatcggga 1260 gatgatcctg actatcgacg acacagcgag cactagaaag tgtgcttcca cctcagtcac 1320 cggtccgtgg tactggctga gctcgtctgg gactaccgaa catctcgccg tctgctcgaa 1380 cagacaacca aacaccgaca ccgggacggc caatteccag tactgagact aaaggatett 1440 ggtcttggtg gcaaattaag tgcgcacgaa gtttcttctc ctcggttaat gattctgact 1500 ttgtcttctt ttaggtccag cctgtttcac ctcctccgcc gtatagtagc tgcgtcgcac 1560 aatcaggcga atgttcgatt atacactccc attggctccc gatacatgca agacagccaa 1620 tagaggggcg ttcgacatga ggatggacgg gaagattgtt caatcagcgt cagaaaaccc 1680 tgcttagcac taaagtcaga gacgatccag aagcgggaga gggggggagg ggcagagggg 1740 cagagggtcc ggcctacggt accagtgcta cagtcctggg atcgggtgac gaagacgtta 1800 caggctgcag cagcgatcga aggaaatata aaaatagaaa aaaaagaaaa ataaaacaaa 1860 aaataaaaat aaaagaaaaa gaaaagagca gggaagagga tcagaaaatc agaaatcaga 1920 aatcagaaaa ttacgtaggt gcgctcaaaa ataccgaaca tgctttagcg cgactcggcc 1980 ggttcgaatt tctcggtctg aacttttgaa gtttgcagct gaaaagaagc atcgcgggac 2040 ggtgaagggt ccgagcctac caatcacacc ggctgcagag agtctgctga catgcattgc 2100 ttactacggt ccacggagta ctcctgccct ttggattgtt tgctgtcgta atcgtccatt 2160 accetacgca gagttgeteg atcecaageg ageagatgeg gtetggaget atcategatt 2220 caggcaactg acacgactct accccggccc tccagcacaa atgaagaacg agcggtccat 2280 tgagactggg ataatcctat cagatgctgt cgttcctatc agtatcccct ggcgatactc 2340 cctggatgga ggacctagaa acatccagta acggggtaac ccgtgaccag ccacgcttat 2400 cqtqtqactc gaatccccag aatccggctt cagcacagga cttgtgccgg gccctaatct 2460 gacggtcgca caatgatgcg accgacaagg gggcgctcgt ctcctggaaa tgcaggtgcc 2520 tgtgactcct gtcaaaagtc ggcccgtcag ggcattgggc aaccacaccg cacctcgacc 2580 aacccccgct agtgaaatta attgtcgccc tcccatgcca cggcggcccg caccgttccc 2640 gccaatctaa tgcatgaagt gtatcgctgc cgtcgcaagt cgcaaccttg gatgctgaac 2700 ccctgctagc tttagagctt catctctcga ccgtgtaccg tccgactacc gctcatcctt 2760 cgtaggtcta ttatttttat tggactggct cccgtctgtg gctggcgaac catgcttgac 2820 taacgcccct gtaccgcttg cctcaccccc ttgctctcgt cgctccgcat ggactcgcca 2880 aagcgatctt cagggcgctc gcattgggtc cttgcctgaa gcaaggtgtc ctgtttcgtt 2940 tcgcggtgtt gttgtagtag tagtagtagt agtagtagta gtgagtggta gtgagtggta 3000 gtcagtggta gtagagtggt agtctaccag cagtcttgcg caagaccaga ttgcaacgca 3060 cgactgcagg tcgacaaact ggcaggcaaa ctcggtgtgc tacgctcgtg cgaattgata 3120 tcaggcaaac ccggccgctt gcacatggcg agttccaccg agctcagtgc attagcctcg 3180 cttcgtcaca ttgattattg ttgttattat tatattatta ccatgactct ttggtctgta 3240 gcgtcaatga cttggacctt ccataccata ccgaacgggt ccggaacgcg gctcatacgg 3300 taataccgta atcaaacggc ttcctttttc tgccaggctc agaaaattgc cacgtttttc 3360 gateceaace ggeteggtge agecgteegt ettteegetg eggeaceaga acceaeegge 3420 cagtgcggcc acaatcacct gcgttgctgg cctgttgttg ggctgagggc tctgcgcttt 3480 tectcaggtt teettgteec agteettggt ettgeteeac egeegaetee acaeteeett 3540 caccgccagc cctgagtctg agagcactac cgcattctgc ggtgagtcgt gaccacaaag 3600 ttcaaactca acgctgcgtt aaggcctcca gccttctctt ttagccagct attcgcccct 3660 agtcgatggg ccgtcgcgct gcgtgcataa tctgctgcag gctactgacc gcatgcgctt 3720 ggatcctgag agcgacacta agcgacggac cgtgactcag gagcgctcct tttacgtgcc 3780 agactettte tgggaaatet gagtetgeea atetaaegge atgtttgtea gegegtggeg 3840 gtacgacggg acagctgaac ggacacgcta tttcaccact actgtcgaac tagcggacta 3900 gtcgactgcc caggtgccta gcgtgcggct accccaacga cgcagggcaa gccaacttga 3960 3993 cgaagcatgc cgcctgtgat cagcagtaac ccc

<210> 2151 <211> 4229 <212> DNA <213> Aspergillus nidulans

2151

<400>

gcatatagtc aataaccgca cgaagagcgc ccccagccaa catctcacta gatcagccgc 60 tccctgtgtt gccacagcct gagttggata gagatcaatg aggagcgtgt atatgattcc 180 cagcagggga gttccgctca gaccgatgag cccctgcagt gccaatgcgg ccgcaagaga ctggcgggtt tggacgatcc agccgtatgt gattagcgac aaggaagcca ggagcgcaaa 240 aggcgctgcg acttggagcc tggcaacttc gtacggaaag tcggcgtctg ccggtttatg 300 tacgtcggca tcctttagtg cctgggcctg atgtctctgg atcctgcggt agttgatatc 360 gagcagcctt ccgccaatta ttgacccaat gcaaccggca attccgtaag ggctattagg 420 480 gcaatgccgt cagcaatgtt ctatttattt tctcagaaat gagcgagggg ttgcttacag atatgagaac ccgaccgata gcgtatcaag gccgtacaga ctgctataat aactcccggt 540 600 ggttgcccac atggctgtga cgcccgagta gaatagactg gtgaatacga cgaggatcaa ggcgtccttt tcagcaagga tggtgaatgc ccttagtacc tccgcagcac caatgcgtct 660 720 ctgcggcgag gccgtgagcg gccgtgctgt gtgcctgagc gcttgtaatc cgaaccgcgt tgcaaagatc gctggatgtt ctgcaccaca gtccgcctcc accagcctgc tggctcgata gagccattcc caacgatact gcgagcagtc tcggggatga taaagatgta cgcaagcaga 840 gccgcaccgc tgccgatggc caggaaccaa aatatgctcc tccacccaaa actcggcgcc 900 aaaaggcccc cgatcaccgg accaaatgca aacgcgccca taacactccc ctgtaacgga ccaatatatc ggcctctttc cgcgggagac gagatatccg ctgcaacagc gaatccgaat 1020 ggaatggcgc agctgctgcc cagactctgt aagcatcgga ggacgatgag ggctatgtag 1080 ctgtcctggg ccgcgagccc gatgttggcc accgtataga gcgcgagcgt gaacatccac 1140 gctatgcggc gtccttggag atcagaaagc gaggacatca gcgctggcgt gatgccctgg 1200 acgagcgaga agacggtgac gagcaggttc atctgcgtcg tggtcacgcc gtactcagct 1260 tgcaggatgg gcaggacggg gagcacgatg ttcgttgcaa tcatggtgat aaccatggcg 1320 atgctcgtca gactgatgat gaagactttc ccatgggtgc ttgtaacaca gtaaggctca 1380 gacaccgcag tcacagtggc tgacgctgca gcctttttgg tgccggactg gtggccatga 1440 acggccggct ggctggacag gttgtcatca tcaagcacat gcatattgac gtggatattg 1500 gtgttaatag ttggttcctg gcgtcccgct gtggagctgg gtttcctgca tttctttcaa 1560 ctgcataagg ggccaggcag cttgctaata taggcattcg aaagcatttt ttgctgacga 1620 accttgcccc tgggaattgg gcgcgaaaaa aaaaaaataa aataaaatta 1680 ttactcctgt aacttagcca ttggatagac gttccatggg tgcaatcggc ttagtctcgg 1740 ggtacctgat attgccgttt ccggccggca gatatacggt tccaaagcat attacttgga 1800 tttgtcgcat ggtcgccact cattaagctc aaatttgtgg acacaatcgg gacgtgcgag 1860 cttttcccac gcgggccaac ggacccctgg gagattcccg tccagcaatg aagccatcca 1920 tgggtagcaa tgccttgtgg tgtccaggta tatacagtgc gtcctaaatg tcggcttgac 1980 gcgagatagc ttgctgatag agcatcaacc atttaagtat gccaagatct catcgtacgc 2040 cttaacaata ttgaagagct acagaagcct gccatcaggg agcctcaggg cagatagtaa 2100 actgccatca gcatttaggg ctagcgccat atggcgtaag aattagcact cattaggctg 2160 tctctggcct acttctaggc gcactgttct tagtgtaatc ttcctccaga ttcctaagat 2220 taataatata tgctatgatt gacttctaaa tgccccttga agctcggtaa caatatagta 2280 tccaagcaag tttacctaac tatatctgta tagcggtacg ggagctacct tgccggtacc 2340 gagctataca gcgggctagt atatataagc gtctgggagg ggtaccacga gatcaccacc 2400 aggaatcctg acgaataagt cctatactga taatctttgt gaaattggtg tatatatttg 2460 tgaataatag catctaacct aagagaacaa tgaaatacga cccatcataa tgcgagaata 2520 ccaattaagt catgtagagt tgacggcaga cgggtcaaag aagtgcgctt tgcgcgatgt 2580 ttgaatgatt caggtgggag agcatccagc caggcctatt attatttgat tgtcgtaagc 2640 ttctgagtgg gcagctgaat gaatggttcg gtccaagagg gccattcggg aaacggtatg 2700 gtgggtatgg ctaccttgcc tgggcgaggc tcaggttcat gctgctccct acttgatcta 2760 accgatcctt gaggetcagg taggetaact teaaatgagt cagattttgg attateattg 2820 ccaaatggcc gttaagccag agatcctgga gctatccata gagatcgcat aataatgcat 2880 agcccgacgc ggcatcaaca ccgcctaaca aggataatta catatagcca agcaaaaagg 2940 tgcaagatgt gaagcaacta cgtcattcat agtgtgggat tgatcgaacc agtatctcaa 3000 gcaatgctcc tgccgaacac tgcctcattg cgtatgacag cagacgaggt cggggcaata 3060 tacttcgacg aacgcgaatc actacaaatg taactacgaa tcagaaaaac cacattgagg 3120 taaggatcgt taattcgtac ttgcgccaat cgggctgaaa aaaaagattg tatgtataca 3180 tcgacgaacg gggttgtagt atgcgattta catcaaaaga caggcgacat caatcattat 3240 gtaccaatgt accaatgctc actcataatc tccgttcttc agagattgga ttaattttat 3300 cgcgatatgt gctggaaata acatgctgcg gctgtcgtgc actcagactc gctttacagg 3360 gcagcaacaa cgcccatgac gcccatgatt ccggcaacgc ccatgaatgg ggtcgcgtag 3420 geggegacat egteggaate ggteggetea gacteatege egetetgegt ggegetegea 3480 tcgtccgtcg cagaagtggt gatttccgta gtggtcgtgg tggccgagcc atcactgccg 3540 gtagtggttg tetecacagt ggtegteaca etgteggteg eegaagtgag egeateactg 3600 ctctcaccga cagaggtggc agagctccag gcagactcag cgtccgtcga ggcatcggtc 3720 gcccacgagg aggcgtcgga agcgacagat tcagcccagg aagagacgtc ggtcgggagg 3780 ttggtgaggg agtcggtggc ggacgcaaag tcggtcgaga tggcggtgcc gacatcctcg 3840 gcacccgagg tgacgttgtc aacaatatcg ccgatgttgt caccgagcga gttgtcgttg 3900 ttgttgtcct gggcgcgcg gagcgcggcc aggaaaagag tggagaggag gagcttcatt 3960 ttgtatgtga tgtgttgtgg tgattgtttt ggttatagac gggtggatat gaatgcgata 4020 tatgaattcg atcttagact ctgattagat atgcgatagg tataggaata cgatatgata 4080 aagccgaaga ggaaggggac cggcttataa ggggaaggaa acactgcgcc actgccctgc 4140 ctgccctggc cgggggccct gacccagtgc tgccatccta aacagcccca gtggaccctg 4200 4229 gcaacgtcag cccaaccgaa actcagcgg

<210> 2152 <211> 2218 <212> DNA

<213> Aspergillus nidulans

<400> 2152

atcttgtaac tgccgcgaaa taacggagca tgaattacat tgtaagctat ctatattata 60
tgacagcgaa ggatcttcct aggccgcagc cgtgcgggga atgcgggtgc ccgtgcggtt 120
ctgactcggc cattctgagg tttggtctat ggataaagat atgattgggc gggctatatt 180

atttaattag gtactctcaa tcagtgcccc ttgtatatgt gaaccgaaag caaaaacatg tgatagtcag tettetettg ggacegtagg aatagteaca ggeggtteet aacaaatgga 300 gctaacccta acttgcatca tgctgcatac ataacagcca tcgttttcat aaatcactag 360 gaacgtaata attataggta cctagaatgc ttgtacagtc taccaggcat tgttctgctt 420 tgcccggtac aacagattac gccaggccca acccatccac ctgcatatca agatccatcc 480 cagggctaac caccggaggg ggggccgact ccccaaagta atcgtgcacc cacgacgata 540 600 tcaacgggtc aaatccctgt gctaggtgtt ggaggttgat tctgtcaaaa tctgtcactc 660 cctggttaat ggcttgtgcg ttggcgtctg gctcgatgta gaggtagtcg agattgatct gatcttgctc gggctggggc tgaaagttct cggtaggttg acgcgagctt gtgagaagag 720 gaaaagaaaa atccgtccca gtcgcctgtg ccggcatttt catgttgatg ttcgtgctgg 780 tgttcatgtt cgtctggacc gaaacatcat ctggcagagt ccggacatcg tgatcataat 840 cgttgccccg ctctgccctt aagccaaatg cacttcctgg cgtcccagcc tggagatacg gcgaactatc tctccttgta ttgttcatct ccatcggcat ttttatccgc ggggtagcac cctcgatcgt ccaaggaagc ctaatcgcca ttccaatcgg cgggatacac ctcaccagct 1020 ccggcagcgc attatcgtat ggcaagcggc cgactgcaag actataatcc acacttgtcg 1080 atataagaag gtatgcgcgg ggaaaccgaa ggaatgcttc gtgccatgtg tttgcccttc 1140 cgcaccccat tcccgtgtaa gacgacttat ccacctccaa gccagccgag gccgaggccg 1200 agggtgagag gtcttgtgga gggctggggc tagaactggg actcgagctg gaagcagagt 1260 tagagctggc agttgacccg cttctctcgg gcatacgggt ctgttggcca ccattctcgt 1320 cccaccgcag gaaaagatgc tgtgaggtaa tataagccag acgtaaaata tgattcgttc 1380 ccgcggtcac aaagtcggtg acatcgtaaa cgcgccctga atgccgaacg atctcaccga 1440 gtgcatcgag tcgtctccgg cgacgcacca tttctgccga cgtcggagag agcttgaggt 1500 cgattgccgt gaggacaaga ggcatcgcta cgtaggcgag cctatgaaca tcttagttgg 1560 cgcacaactg tcaaggagtg cggaaggggt ggtgaaagac ttacacactc agaggtagat 1620 tctgcgcgcg tccctctcgt ccaaaatatt ccattatggc ggttagcttt gccattgcgt 1680 ctcgtagagt attgcctgct gagaagagat ggttgaagta gtttttgccg ctgaacagag 1740 ggtggttctc gagcagcagc gcttcgtagt gggctaggtc aatccgggca gtcctataac 1800 atttattcgt taaccagctg tccttagact ccggtaaaaa gtgtgaggga gacgcactgg 1860 tagtacatat aagtgaaatt cacgaaaagc attactgcct caggggcctt ctcctttcca 1920 ttccctttcc cttcgatccc tatccactgg ttcaaagacg aacactgctc ccacctgccc 1980 attgcattct ttgtcctggt aatcttgatt agttcctcgt ggaactgctc gaggctcaag 2040 ctcggggccg caatcccatg gctcgcgaag acaaaggtaa tcatttcgga aagcaataca 2100 gcgagtcgac attgctcctg cagaaccttt aacagcattc gtttgatctc aagactgtag 2160 acgagcgaat caacaatctc gtctgcgaaa tccgcttgtc aggaagctcc ggctactt 2218

- <210> 2153
- <211> 1056
- <212> DNA
- <213> Aspergillus nidulans
- <400> 2153

aagccatgtt ctctaagatc tcgaacggtt ggaccatctg gtcgcagctg gggcgacaat 60 ttactgcatt cagtgtcaat gttactgtag tcgagatcta ctggtatgta tttctgtcgg tectettaet atettgacaa tecatttaet tttgtgeagg gtegteetee teeteteeca 180 gatcttttac ctgttccagc tcttcaacaa agacactgcg atcgtagctc tagcaggaaa ttcagcggcg cacttcatcc tgaacaacct cttcgttgtt gcgtggatcc tcctctggac 300 gagaaaccac ttctggcccg ccgagatcat tgtgatcgcg cacattatca accagcatct cctgttctgg cgcattcgca atctgccacc gatttcgcat atcgcggttg tcgcaggccc 420 480 atatgcctgg acattgatta cgctcttctg gacaggagct gctgccgtca ggtctcataa tttggcctcg aatatcgccg cgaacatctt cctctggatt atctttttga tcggctccat 540 tcacatcttt ttggctgtcg atgatctcct ggggtacagt ctgagtctgt tgaccttcgg 600 tatgtttcat gtgaagccct cgcgtagtca ttcaccgtcc caaattagat gctgatttca 660 tgtttgattg caggcctggc cgtggcccaa actagtcgca agagccatct tcatctgcag 720 tggatctttg catgggtcat ctttggagtc ttcttgctgg actcactcta tgtgacctcc 780 840 gccaagtacg ttggtcgtaa tgtgttgttc cggagcccga gagagccaga gtcgagtgat 900 gctgagcgcg cccccttgct taatgacgct acggcacctg catcgacctc ttagattgcc ccagtggctt aaatggagcg acgagtgggt tgatgagatg gagtcagatg agagccagat 960 gagagtcaat taagagatgg tggagacaag gaataacgta cggcacgcta aacggggtca 1020 tggttttcga ggataggata tggttgtcgt gtaagc 1056

<210> 2154 <211> 2299 <212> DNA <213> Aspergillus nidulans

<400> 2154

gtttctcctc tggcaagcct atatatcccg aagtagccac ggctcgatgc tacgtaaggc 60 cctggcggaa aaactcgggc acagcaagac acttgagtta ttttcctttt tgcttccttt 120 tttctctatt ttcgctgtat ttaacaaggc aagtgctgca gacttgccat cgcaccgtcg 180 atcccgctgc agaggtacag actactcaag actactcaag gctactcgag gctacccaag 240 gctactcaaa gactattctg ggtactgagt gcaggccaga tccacagtaa tcagcatacg 300 tcgagtataa ctccgaagac caatggacga tcggtgctaa tctacttcaa acatccttat 360 cgatctggac gctggctagc tggctacagt cgcgccgggc tacagtcgat ctgcgttgcc 420 ccaacactag aaaattgaat gagtctttcc acctatactt cacccgccgt taaaaagttc 480 actataagaa tggcggtctc gataccgaaa ccgtacggac cgtacggacc gtacagccgt 540 acggctgtat ggtcgatacg gggccgcggc cacattttgg aacgccaacc acaccataac 600 cttgatcccc gcacctgcgt tgtaattggc caggcctgga aggggcatcc ttacttgatt 660 ctctatggtg cagaattagc gcgcagcgtt gagtgacttg cattagacag gccagtcaca 720 gctgtccatt tcgattcatg actccatgtg gacacaagcg tccatccaga agcattccaa 780 cttgctcgct gtcgttgctc gtcctggtgc tggtccaggg cctgtgcctt cagcattggt 840 aatctcgtaa gaagacatac tccgttctaa tgacgcgccg ggcccgcgag attaggccca aaaggaagga agctcattct aatatgcaat ggggacggtg catgatcgtc agctctttat ggcaacaact atgacatgga ctgctccaaa tcggtttcac ttgagaagca gtagtctatg 1020 acgattgaac ggcacaaagc actcgacagg tgtcgggcac cgggcgtcaa cgagcccact 1080 ccgttgtctc aggggcccgt cacagtctgt acagagtaga ctgcggagta tttgtcctgc 1140 agggtatact ccacccaaat atagaccggg atctacgtac ccaagaagct cgttgagctg 1200 cagacgtagc tgcaagagct caagcttacc aacagaacac ctgtcaacca gttcgttccc 1260 atctccgcac gatgggccaa cgtcgcagcg ctgcagtggt atgcagttat ccgcaaatac 1320 tggatctacg ccacattatc actatcatta tctcccttgc catggtgaca ctctgcaaca 1380 ccttccgtct ccaattcccg gttctttgcg ggcccaagag ggtagtggtc ctttgttcct 1440 atacattagc gcatcttatc tatcagtcat gttacgttta tcacatcagt ttcacagttt 1560 cacctagtat ggcacgaccg tacaaccgtt tgactacacc cacctaggct gctagccgtt 1620 ctgcatagtt acagggcatt cgtcatatca ggatcgacgg gcaggaattt gggttgcgtg 1680 agctgtcgat tatcagtctg gatcttttcg gtggcgttac actggacggt gtacgcagag 1740 cgcagtagga cagcgacgga gtcgcggatc ggatcgtcac ttggtatgta acaagtgaca 1800 tgtcacctgc gagatatcgg aagagagaac gtgatctgca gagtacattc aaacttggga 1860 tcatgtattc ctgtctattg gggatcgtcg aggaaattct taccgacatt gattcccagc 1920 gcgaagtcct gatgtatgat gtcagggccg ttatcattat gcatttacac agacacgtgc 1980 gttcgaacat gaagctttat cagctccatt ctagcgccac gtatgtcagg tagcttgcgt 2040 attagttctt ggattggtgg ggccatatac tggagaaaac gacccttact tatccggttt 2100 cgaggaactt gtaggctaga gtacatggat gagtagttag ggctctgggt cctgctttgg 2160 atagcttaag gctgaattaa ggaaacccag tgctacgaac ccgaacggct cttgaatagg 2220 ccgtccaaag ccttatcatg ttatttaaga tatattaaga agggggtgca aggcagggtt 2280 2299 agctatcgat ggtcctgaa

<210>	2155
<211>	1520
<212>	DNA

<213> Aspergillus nidulans

<400> 2155

gcacacccc gacgaccttg agcgtgtgcg caacaatgtg cttgcgaaga cagagccctg 60 ggcctcagcc tatgaggagt tcagtgccta atcctattct caagcaaact atactttgca 120 tgaaggccct gcgacggtcc tcagcagagg cgcaatttca aactacacct cgtttgcgca 180 cgacgcaagg gctgcgtggc agaacgcctg gatgtggtac atctccaagg accaggcgca 240 ctgggatcag agcaccacga tcctcgatgc atggggctcg aaccttacca atattatcgg 300

caccgaccgc tcactcttga tcggcctgga cgatatcttt gccaacgcgg ctgagatcat 360 gcggtgggag ggaaactgga cggaagccgg tgccaagtgg cagggtggca atggattcag 420 catccagctc tactggctct tctcgcgcca gtccatccct atcgggcagg cgaactacga 480 catggcgagc atcaaagccc tgttgagttt cgccgtatac ctggacgacg tactctacaa 540 600 ctatgcaatg gacgcgttca tccaggttaa ctgtgctggc ttgttcgcaa cctacgactc gtcgacgggc caatctatcg aggctggccg ggatcaaagc catactatgt ctggactcat 660 ggctgggctg catatgcagc tcgcgtgggc cagagctagg gtgttgactt gtacagactt 720 ggggaaaatc tcctcctgaa gggggccgag tatgcggcca ggtataatct caatgagact 780 gtcgagtacg atcccaagtg gtacagatgc gaggctgtcc ttgtgaacag accctgggat 840 acaatctctg agtccaagcg cggcgttacc aatcagaatc ctacctggga tatattctac 900 taccaatatg tggtcaagcg aaaactcaag gcgcgttgga taacaaaagc caagaatgca gaaagatttg gaaggtgcga ttttgggtga tgaccatccc agctggggag agctcatctg 1020 ggcctattag aatacagatc tggacgtacc cttaacatct ggagggtagc atctgaaggg 1080 atatgttgct agctagattc tatatgattc tgaatggacc aggatccgtc cccttgtaaa 1140 caatatctcc atccgtactt gtactactag ctgtaaatag gtccaaatat aacggtttga 1200 gcttgagcat agacaacgat atgtctgcca taaaattgtt atctatgtca acggcaagca 1260 atgaccagtc cccagcagaa caattcctgc gcactaactc tccacgccga gactactctg 1320 agtactactg agactacaca ctggactacc ccactaaacc gacacgtaga cacagcctca 1380 gggagctcca caggacgcgt atccgctgag ggcttagggg cgatgccgca gtgtcttgga 1440 cagcaaacag caagaattct gccgaacggg aggagaatgc atcgatctga gcattcaaat 1500 1520 gtcttcatgt ctccataaac

```
<210> 2156

<211> 1878

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations
```

2156

<400>

gccaacaaca agggaatgta acgccgtccc tctcgcctcg cggccaaagg ttggcacttg 6

ccaaggtctt ggcaggtacc atttgccctg tgattcggtt cattggacaa gtatcaaagc 120 ccagccctaa gcgattctaa ccgcagaagt tcgttctgta cacctgcagc gccaagggcc 180 tgctaccagg ttgataggtg cagcgtatga gctcactttg tgcctcctat tgaggcatgg 240 tcactggtca ctgtctatct ctggccggag catcctgtgg cccattggat aggctgcgac 300 ttcggcgccc cagtcttcgg gggattcccg ccgtaagtgt actcctattt cgctccactt 360 ccagcagact ttccctacat agccgtcctt ttcctgcttg tttaccaggt gcttcgcttt 420 tetgaccetg gtetcaacte gagttetgee etcagecace acaatttgea atteetgeta 480 cgctcgacgg agctatgcgc ttccctcaag cgagcctctt gctcgtcatc tctatgtcgt 540 ggaaactgta accgagtctg ttaacgtcgt cgaactggat ttcgtctttc cccgcaacga 600 aacctacgca ccgacggagg atttccccgt tgtctttgcg gtcaagaaca cgcagcatgc 660 ggagctgctg agcctcagga tcacctatac aatcttcaag tgggacgcca aaagcatctc 720 aggetettgg ectageacca ceateceega agagetgett egettggatt ggaccaacet 780 cagcgacccc tacctcgcat accgatacta caatgggacg agtcccggtc attggtggct 840 gacctggcac ctcagctggc agagctgcga tgttgaggcg ttagacgatg ctgatagtga 900 cggtggtctc ttcactaaca cctctcgtcg tcgcggatgt cacaatccaa tactcacctt ccgcaccaca gaaggaagta gacctggccg ctgcaaccgc agttgggaag tgcgacgacc 1020 acggtggtag caatgctgtc ggcatcaatg tcaccgacac gaccatgaat gccccctcga 1080 atctcaactg ggctgatcgt gatacctgtg ttcttttgtt ttggtttgta ttttccctca 1140 aaaagaaacc aaattgtttc gagagtttag tgtatcctgt agacaatgac aatctggcat 1200 gcaacataac tggctgttgc tgctgattga caagctcacc ctaggggccc tgaggaccac 1260 agcgccttat tcgaacaggt tgctaacgaa cgaaaattgg ttcatcaaca aaggaagaac 1320 cgcaattgag gatgcaaagg ataccgctag aacattcatg ggataaagta ctaccatcgc 1380 caaagacatg ttgcctgact gggcaaggct ggctggtacg tcgagacgca agatgccgtc 1440 tcagccccgt ggactaggtc attgctggct gggacaatgt cacttccatt gctctcacaa 1500 actttcttga cggaagcccg gagtcagtcg agtctcacac cgagatcatc tctgacggaa 1560 agctaacccc tggaaacgcg accgtcgact cgccagatgg tgacgaagaa agtatgaatt 1620 aaaatggctg cagcgaatta cgtaccaaca ttgtaaagtg tatcactggt cacgccattc 1680 cagecetgtg geetegtaca ecetegttga tgegggteae etetgtggtg aaceceaaga 1740
tateageagg tegettgacg aegatactea gagageaact ggtngtngeg ttgaeggaaa 1800
ataatactae ettgeatate eagatggtga tgeaggggaa tgeeeetgtg aeatttgaeg 1860
gaeacagget ttetgegg 1878

- <210> 2157 <211> 2315 <212> DNA
- <213> Aspergillus nidulans
- <400> 2157

cgggtcgccc atgaggagaa ccgcgcctcc ctcgcccttg gttccgtctc aaatttcgga 60 ggctcccaaa tatcgagcgc atagggacag tctcgacatg caacaccccc agccgcgcca 120 gggtcctact ggtcggtatc agtctcagtt agaatcccag gcgcagatct atggtgcatc 180 tgggaatcac tcggatcaat gggggttcaa accctagctt ctctgctatt aacgggaacc 240 gacgattaag tggcgcaagc cgtttatccc ctatatccga tgcaggctat tcggagacta 300 gcatgcggtc ttcgcgccag ggaccaccgc ggccaccaaa aatcaaggac gatgggccac 360 ttttcccaga gagacccgct aaaatcaaag aaggcgagga acgatcgtat gccgaccgtg 420 ttgtgtcacg ggtaagtttt atagtttcca atatatatag gataatgctg actcgtcact 480 540 acacagaget eggecatgea ateteetgga egeageaege egeeegeeeg eaageegaet ggtcctcgac ctctcaattc caatagccaa tacaacagcc ccaacagaag aaggcgaaat 600 taccgcgaca gccctgaaca cgttgacgag gagcatgact actaataagt gcgcgagttt 660 gacacttagt gcgcaccacc cgtttacgac acgacctcat gagcagtaac ttttggttcc 720 ccttttttta cgccattttc tttcagtgcc tggtgtcatg catgttgcaa aacttcatcc 780 ataatatact acatttactg atgacggcgc tttacatgaa tgtattttgt tctctcatgt 840 atctacctag cgattccctt ctttgctgca tatttgttac cgtcatgtgt gtaatgaaaa 900 gcctgcacaa acatcctcaa ctttagcaca cttatctctc agcttctcca tagctctttg 960 tctagagtac tgcagctctt agctagtact acttaggtct actccgtatg ttgcccccac 1020 tctcgaccat cgctgcgggg taaccactat atatgcgggg gtgcattcct cccatctctg 1080 gcaatttacc tcagcgcgat ctgaatcaga atcagctgcc ttaatctttc ccatccaacc 1140 ctttacctct tccctaagct atcagccatc aaaatgccag aaacatctcc aagcccacaa 1200 gccctcgatt tcctcatttg ctccacctgt ggcacccaat accccacgcc ctcgactctg 1260 cgctcgtgca agatctgcga cgacccgcgc caatacgttc cacctacggg gtgagtcctc 1320 tacatactgc tactatcaga taggatccta atactagaat gtatactcct agtcaatcat 1380 ggacaaccct tcgagcgctg cagaactcgc aagacccgaa gtataagaat atctttacgc 1440 ccgatacaat ccacggcgag agcttgatct caatacacac ggagccaaag caggcaatcg 1500 ggcaacgtgc gtacttgtgt cggacatttt caccaggaaa ctctaggctc tttaatgtcc 1560 tctgggactg catcacatat attgacgatt ataccataac acgcatcaat gaactcgggg 1620 gaatcgacgc gattgttatc tcccatcctc attattatac gactcatctc gtctgggcag 1680 agattttcga ctgcccggtt tacttgtcat ctgaagatga ggaatgggct gtcgtgaaag 1740 gggacaagca ggtgtttttc ggtgaaagtt cactgtcatt tgcaccgtca gggaattatg 1800 ggggtgatga cggaagagca gatataattg tccttaagac gggcgggcat ttcccgggaa 1860 gtacggtgct gtggtggagg ccgttgaaga cgttgttgat tgcggatacg attgcggttg 1920 tgccaagtgg aaggtattgg gttgataggc cggctggaac agcgtcgttt acgtttatgt 1980 ggtcatatcc aaatatggta tgttttctga atgacactga atgggccctg gctaacctga 2040 tagattccac tatctgctga tgacgtgcat ggtatctgga aggctatcaa gcatacggag 2100 tttgatatca ctcggggcgc gtttattgga atggagacgg acacagacag caagaagcgt 2160 ctgttagaca gtgctcaaat cttcgtcaag gcaatgggct atctcgatca tgctattcat 2220 caggaagaat gtcattgatg cagcgtgcta aggtggtgta cagaatgaag tcattgcata 2280 2315 atcatgaatt ctgataataa tggaccaagc acaac

<210> 2158 <211> 2852

<212> DNA

<213> Aspergillus nidulans

<400> 2158

cttcccttat cgatttgtcg cagcagaaaa aaccagctca tgaccgtcta gcaaactaag 60 acttcgtact ggatcatgcc gcgggcttct attttcact tgtgttgcct ttccacccca 120 tactgcttcc tctttcttt ggtcttgtcg tctttcctct taatttctct ccacttcttc 180

tgctcattgg atcttccaag cgttgaaacg agtaagctaa ctacacctca atttccttgg qtctcttcaq tgattqqqtt tactqacaat ctttqqtatc aqactattcc tttqqtcgtc 300 atqqatqaca ccaqcaactt cgtqqtatct acggtqagag atgccctcgc agacgttaca 360 aatgtacaaa acaccaagaa tattgaggtg tctgccctag ctcgtgagaa ggggcgggtc 420 gaqccaaagg actatgacta cgagaagtac gtcactgtca ttccttcaga aaaaccagca 480 qaqaaqqqqq aqaactatca aqacqaacaa tcctttcctg aqtqqqcaqc aaacqctgtg 540 aagtacgagt ggaacgatga atacggtgat gttgggccgg aaaaccctca tcttgaggaa 600 caactqttcc qcqctqaqtt catcaaccqt actqqcctca aaataqaaaa qtqaqtacqc 660 720 tttctctgct gctatctgtg gcatacctga ccggatacag ccttcaaaac attgatgttg tggctgaaag tcacgaaaga ccctcgccca ttaggaccgt aagtactccc ccagacggcc 780 cqtccatatc tqcqcttcaa qqqtaacatc ctaaataagt tcgatgatgc tgggcttcat 840 ccaatcatgc gccagaacat ttgtctctgc ggttacgaat ttcctacgcc tattcaagca 900 tacgctatcc ctgccgtcct gacttcacat gatttgatcg ctatcgctca gactggttcg cettgagaca teataaaete ateatettae taacatgeee aggetetgge aaaaeggeeg 1020 cettectaat acctgetett teleagetaa tgggaaagge gaaaaageta geagegeece 1080 ggccaaacct ggctgcaggc tttgatccta tcacggatgt ggttcgtgca gagccgctcg 1140 ttctgatagt ggcaccaact cgcgaactgg caacccaaat cttcgatgag gctcgtcgtc 1200 tatgttatcg atcaatgcta cggccttgtg ttgtgtacgg tggcgcgcca gtagccgacc 1260 aacgcaacga acttcaaaag ggctgtgaca ttctgattgg aaccctggga agacttctcg 1320 acttcatgga taaaccttac accctctccc ttcggcgtgt caagtatgat acccagcacc 1380 acgtaaaaac ctcaattaac ctaccatcta ggtacactat tatcgacgag gctgacgagc 1440 tgttgctctc tgactgggaa gaatacttca agaaaatcat gtcaggcgga ggtggttcct 1500 gtcttcccag gcgtggggct aatgctgaca agtacagaca taaatgagga cgcagaccat 1560 cgttatatga tgttctcggc cacattcaac aaggaatgtc gcgagcttgc tcgcaaattc 1620 ctcgctgacg accatgtccg tgttcgcatc ggccgcccgg gctgcactca cgtcaatgtc 1680 gatcagaatg tacgtaccca ggatgcccac aaaccatgct tcaaccacta agaaattcga 1740 atatcagatt atttataccg aaccgcaact gaagaaaaag tgtctttacg atctactcct 1800 ggctatgcag ccttcacgta ctctagtgtt cgtcaactcg aaagcaacag ctgaccagat 1860 tgacgactac ctatacaatc tgggattacc aagtacctcc tttcacgcag atcgtactca 1920 gcgtgacgtg aggatgcatt gtaagctggc aattggctcc gatcctgata cacttgtgct 1980 catgtgcttt taggcgtgcg ttccgctccg cgaaatgccc gatcatggtc gccacaggcg 2040 tttccactcg tggtttagat atcaagaatg taatgcatgt tatcaattac gaccttttta 2100 atgcgttgca cggtggcatc actgactaca tccacaggat cggtaagttg atttaccaat 2160 gcaagtcccg acacacgtcg tccagcaagc cctaacatct gagaggacga actgctcgta 2220 ttggtaatga aggtcttgcg acttcgttct acagcgacaa agactcagcc cttgcccctg 2280 atcttgttaa gatcttaatc gaggccaata aacccgtccc cgacttcctc tctagattca 2340 agececega gggegaagge attgaettee acgatgaeae eegaegatga gaatggtgag 2400 aacgacgaga atgcccgctc tagtacttgg ggtggcttac aacccgcctc ttccgaccat 2460 ccagcaactg ctgcatctga gggctgggag taaatcatcc cctggattcg tatgcgttct 2520 tacagctttg acaacgcttt tcgggaactt aatgggtatg ccctgactta ttaattttcc 2580 ccgtttcggt gtctggttta gaccccaaac aacggcttta cttctttccc ggatggagat 2640 cacttgcaaa taatagcctt aagcttaatt gggggcagcc aagcttgggg taggaaagtg 2700. tgttccccca ggcccttttt ctttgagacg ggggtttacc ctctgaactg cacaaatatt 2760 tgcccttgta acctttatcg gctcttccga atttttgccc ttttagccca aagaaggggg 2820 2852 ccaggggttg tccttaccgt tttgctaact tt

<210> 2159 <211> 1122 <212> DNA

<213> Aspergillus nidulans

<400> 2159

aagatcaaga tgttgaatct gcccagtttc ttcgcttgca tttgcagtgg caaatggaag 60
agcttcaagc gctgcgcctc cgcgaatacg aagaaactcg aggctaggcg gaagaccgaa 120
gtcaccgccg atatagagac cactgatgtc cagcttcttg agacgtgcaa aattcgccgg 180
attgaaagag ggcgggtaag gaacgaagac ctgcggattt gagtgcaggc gcactcggaa 240
aggtttgata tgggaagggg gatggatggg tcgaccagac gagggatgta gagagccggg 300

acatgattat caaggacgcc agattctgtt gttcccaggg taatgctctg taggtgagga agggatgatg gccagtttgt gtctgcgatg cgggacttgg aggcgctgtg gatttcaatg 420 cgttggaggt taggcagact agataatagt tttgtgattg ttgcttgcgg gattgttgtc 480 540 tgcgcagaga ctagaagaat tttgagattc tttgagccct tgaagaggtt ataaatggct tctggtgatg aaggtgatag aatctcgaga tgctggaggt tgggacaacg gctgatgtac 600 tcgagactcc tatggataga ggctttggtg aggtttgtca agatggcatg agtgagcatc 660 gctttagaac gacgaatata ggcgagaaca gaggaccagt gaatcttgca gcgggctccg 720 780 gtaaaatcta tgcgcatgaa taaatcacgc atagaggaaa gaaaccggtc ccatcctttc 840 gagactcgca aaatagccct atccggtcag aggtgaaaac ggtatagccg tggcagactt acacaatctg cctaaaatca aaataatcca caaccatcct ggctatttct agcgggaata 900 cactgaacgg atcgaagcat cttgatacca acttctcttt cagtttcgta tgcatttgtt 960 ccacgaccta catcggatta gtctcggtac cctgcaaatg acatacggca tatgcacgca 1020 cetgacgeec aggettatet tttggtatag attttagege gtacgeatae geteageaac 1080 1122 acttcgcggg cttcccatcc aacaggagtg ctttagccca tc

<210> 2160 <211> 1980 <212> DNA

<213> Aspergillus nidulans

<400> 2160

aagttgcaaa tgatttttac ctgactgagc acaaggagca ctgcgaaaca atcacaatat 60 aaaggggatt tgattgtacc aaaaggcttg gaggtcaatt gtcgtcaacg ccgtgagaca 120 gtccgtccga atcgggtagc acgaggagct gtagcacaag ggtataatta cataattaat 180 ccacattact ccggcatcat ttcaacagcg gggagctccc tccgaccacc ccaacttact 240 ttgcaaccat cataccctcc atcgaatagc catcgagagt gtcggctgaa ggttccattg 300 ccgttgcgcc tgggcccatt caggaccgtt gtcgtgtccc tcatcaatct tgtctaacct 360 caaggttagt cgcatccaaa gaggatcgga gactgctgca acggcccggt tacaaacctg 420 gctggtgaca agcctcctga gcaagcccga tttactcgcc gcttaatact gttgttcagg 480 ttttcaatcc cttcccttcc atcctttctt tttggaattg ctggacacat cgattaattg 540 cggctgttga agctttttgt tcttgtgcca tccccgcata tctggttcgg ttccgcttgt 600 cacgggtagt tatcacactc gtttatttcg gtatataaga ggggcgatcg atcggcctta 660 ggcttatgcc ccctgcgtat atcacgatct ctctatcgct acaaaattcc ggctagagac 780 attgaatcag agccacgatg aacgagcatt atttgcctgc aaaggctctg actcaacaac cgcgggccac gggtccgtct cttcttgctt gtcttctatg tcgccataag cacctcaagt 840 gtgatggagc cacgcctgtg tgtagccgtt gtgccgccac aggtgcagag tgccagtata 900 ccccgtcgcg gcgaggatac aagggcccct cgaagaagcg gcgcgccaat ccttcctcac 960 ctgagcaact accagccgat cttgcaccat cttttgaccc taatgttggg ttctacaatg 1020 tgcctgtgga ttggaatgct ttgaatcctt atccatatgt gccttcggcc acccttcctg 1080 cctcaacctc ctcgggaagt agtccccaat tcactgaaca acctggggct tcgcagcaag 1140 tggtcaccaa gaacgcacct ctgacccctg aatcgtcgtc atcactttcc aatgatggat 1200 atcttgtcga catttactat cagttcttcc accettcgca ccccatcttg cctccgatca 1260 agacactcta tcacaaccgt gtgccacctt accttgagca agtcatcaag tttgtgggat 1320 ctcatttcac tcccgccgcg tcgagtgaga cttatcgacc cggcatcatg acgactgtta 1380 tggagcagga aggaacgttg gagaagattc aagctcttct cctactcgcg attgtgctcc 1440 attcgcgaaa cgaacgggat aaggccaaag attgccttat taccgcagtt gacctggcct 1500 ttgagctcgg tcttcatact agggatttcg ctaccacaat gggcgggggt aatccgttag 1560 ggaggagtgc ctaagacgta catggtggga attggtcatc atgaggctat gttgacagca 1620 cttggactta aaaaaggtct cgacacatca tggcccctcg aagacccctt cctgggagag 1680 cggtatacag gacggataga gctccgcgtc accccgatgc gcagttgata gcggctttgc 1740 accagagega gatetatett taegttgaac aaacgeegtt tetagaeggt gggeeateag 1800 actggtgggc cccagacaat ggattcttgc gcgaatacag ttttatactc ttaataagca 1860 gctttccccc cgacttacag atttcagccc caggtatggc ggttactatc cggtaacgtt 1920 ttccgcttgc aaatgggccc gctttccctt tcccccccca gactagaggg aattttttt 1980

<210> 2161

<211> 2640

<212> DNA

<213> Aspergillus nidulans

cggctcgccg attggccgcg cgtaacaata attcccagac caaaaatacc catcacagca 60 cggcgctgtc tagcgggcag cttcagtttc cagatcaacg gcatgggcag gatagtggtc 120 180 aagacatccg tgaagatgtt gatggtactg gcggaaaaga ctatggctcc gtcattgaga caagtgtgcg ggtatttggg ctctagatcc cagtatgcct tgatcggtct ttgaaaaatt 240 300 agaatctcac caggcttgat gggttgacaa ggactcaccg gcattggaag atactgataa ggacaaaaag cgcgctggaa acggccacaa ccaccatgcc tactatcatg gcgatgttgt 360 atgtcgaata gatgcccttg ttgccaacaa tgaggaggcg cttgcagaac cataatagtg 420 aaagctttgt caaggagcaa gacaaagaaa ggaagatctg gaatatgaga tttagtttgg 480 agaccatcgg tatccaatcc agcggcacgt cccatatatg tctgacccag ccccagtctt 540 ctgttgctaa gcataagaca acggccatgc cgattccgaa gccctagatt cagtcagcga 600 660 gccaagactg gttccctcgc cggcatatca gcttaccagc cccaggacga ctagaatgtc gtccagacca gctgtgcgcg taattcgtag ccgggtatat aaccgaaggg cagttatgat agtcgataaa gccaagaaga taatgcttgc aatgagcacg ccatgactgc gagtgggagg 780 attaatgtaa ttcggcgtgg gccagctaag aagcacttcg ggaggaggga gtttcatttt 840 cctggtcgac tactggactg agatagtagc gcgctgcggt aatcgcttct tagataccag 900 gattccagga gagacagcga tcgagtgcca ggctccgtac gttgtcacgg ttggggtcaa gtgtcaagac actgggtgcg ccgatatctt gatcatttca tcgctctgta gaaatcggaa 1020 aggagtggac gaaagtatgc tgggaggcgc aactttaaca aacgaaagag aactgaaagg 1080 ccggaaatct ccatcattat tatacaattt gctcatctca gcgtgcctgg aacctgcatg 1140 gggtggggat ccttcgaaac tcaaaaagaa cgaggcatag ctgaaataat tggaggaaca 1200 tcaatagtgt atcgaggatc cacggatgcg taccagaatg ctgtgcgagg gacggctgcg 1260 ctatataccg tagtattatt attatcggag ttctgctgca gtatcaatgg cgggtttcgc 1320 ccgtggtatc agatgaggat ctggcaattc tgcgatatag tgcccaataa gcgaatcctc 1380 tgtctgcccg ctgtgaggaa ctgcacagcg gttactggtt gtggtaacag agacggctat 1440 cactgctctt ccgcatccga gtaatcgcgt gtcttgcgac gccaattcta cactgactcg 1500 atggagtccc tcgctaacct gataattcct cgtgggagag agctcgaccc tgggaccacg 1560 agatatttcc caaacatcgt ctgatcgact ctaatgatta tcgttcgtat ccgtggttgc 1620 atcgagtatg gcttggggct cgttaatagc cagaaatcgt ctggcgacgc tttgatgcga 1680 acgcgccttg atggctttga ttcgacgaga tcgctgaaca gaagggtgtg cgggccgcct 1740 aatacccaca caaagtcgca agctcgttac ctgagcgccg tcgtccaaat gggaacagaa 1800 ccgtggagct gaaaccgact actgaaccaa tcagacaggt aatcacgaag cgaaagaaac 1860 gattgaagga aacgactgag tgaaacgatt gatttggaat gaggaccact ctcgaacaga 1920 gatttatggt ggcgacacac cttttacagc gcgattttta tgccaggtgg aggcagtggc 1980 cacagecece gegegatace gaettaattg aegteettgt agatagttea gttgtagatg 2040 gttcacgctc gcaggctggc agactagcag actggcacta acagactggc actggcagag 2100 tggcactggc agactggcgc tggcagactg gcgctggcgt tgaccgaata aaaccgagga 2160 tgccagcctc gctagataac agcatgtgag gcttagtttg cagccctggg ggaatgggga 2220 agaggggcag ctaagcattg actttattag cccaggttgt cggctaaaga ctccggatgt 2280 gcgctgtcag atattgccaa tcaactacta gaatctaatc agaagaaacc tattcttgat 2340 agttattttt gagaggattt tttgagagga tttttgagag cgaggaatat aacataggtt 2400 aatcccagtg ccgaatcggc cccggcaact cgatccagta cttgatctaa cgcttaattt 2460 tgagacatcg acggttgtgg gtgcaggtta gccacctgca aaacgtggac ggtgccactc 2520 tgatcatcct acttagggct gtccaaatat tcagccagca ccttaactcc taagggttcg 2580 gtaggttcat cccgaggcta tacccacgcg ctgcacagtt caagctcaag gtagaatcca 2640

<210> 2162

<211> 1556

<212> DNA

<213> Aspergillus nidulans

<400> 2162

atcgtcaggt tcttatatga ttgatattt ccgatcattg attggagtca tatctgataa 60 ggtcgcagga tcggcctcgc ttgttcggtc aaaaggtgaa gcgcattatt agtcggcggt 120 ttcaagggac aagatcatcg ttattgtatc tcgtatcgtc tccaatctgc gcttcatatg 180 atgtggaccc tcgagctgaa gggcttaagg tagccgtacc tatatgtggc agcgagacgt 240 cttggatata aagggccgt cctccggctc aagtcataag aaaaagggaa agaaaaaagg 300

tgaaaatcaa ctctacagac ttaccttcac gcttctttga gcaacaacag tccagttcaa 360 aatgccatca acggttaatc tcctcctgtc cgctctcccg gccctcccca tggcgctggc 420 tgcctgccca ggccctgatg tcaacaccgc aacgacagat ctcatgaagg cctttgagag 480 ctgggagccc gatgtctacg atgacggtta cgggaaccct accattggat acggccacct 540 gtgcagcgac tggtcgtgct cggatgtcgc gtatgatatc cctttgtccg aagaggatgg 600 ggtgaagett tttgcagagg atattgctgt gegteteeet eeaeggeett eeteteatga 660 cgggacctct gggatggaag aaagatgtaa ggtgctgata cgatgagtga aacaggtcta 720 ccaagacggc gtggtctctg ccctcgactc ctcggttacc ttgaacgaca accagtacgg 780 840 ggccctcgtc tcctggtgct ataacgtcgg cgcgggcgcc gtcgccgagt cgacccttgc ggctcgcctc aatgccggcg aggatcccaa cactgtggcg gaagaggaac tgatcaagtg 900 ggtgtatgcg aacggcgagg tatcggaggg gctgaaacgc agacgtaatg cggagattga gettttecaa accagcagtg atggtgagge tetgeetgtt tettgetgat taaacagaeg 1020 tcaatcatgg atcgggcgat tggacgggaa attcttatta accatcgtga tgtgtttcta 1080 aatgggtact gttgaatcgg tggctattgt ggtctcagat ttgcattcta gctgagtgat 1140 atatggccct actataatag atgatgtctg ttttcatcag tgcatgcagc ctttttcagc 1200 tgacgatgag aattaatcat aatcctaaac tatctgctgc tgctttcatg cttggctcgc 1260 tagtgtgtgg ccagagtctt tcagatagta gggagtagca tgttcatagt tgttttgaca 1320 ccgtatttga gcagcaaacc tctttagtcc atctccagtc gtcgataggg ttagccctgt 1380 actcaaggca cttgagtctc acagctagat caacagcatt gagggctccc aatgaggaac 1440 tgcagtaaat ttgaattacc tacgagaagg tatttgacct aatccgatga aattaatggc 1500 agatacagga gaaatgaccg acagtcttag cgtcgcgagc tgtcaatatt ggccaa 1556

<210> 2163 <211> 3090

<212> DNA

<213> Aspergillus nidulans

<400> 2163

tagegtetet geaettagta gattaegage ggatagaeat tgatttegea eetgteattt 60 gteeatcaaa acagttegte eteeattgte aagtaggaag tteteeatge aagageaeta 120

gagtatctac gaaagctaga aaaagcttga ttgtatgact ctaagtctgc tccctgattc atttcctgta tttttcaagg tgcattatag tctttcctga tcaggacatt tccttgttgg agtgaatagt cgaagtgaat aagactctac cacacgtcct cccactccga catatcctta 300 aaaatgaatc tttcttttcc aaaagagccg cctctttctc tcttcagcat catgccttga 360 tgattctgac caatagccag gttttgagct cttccacttg ttatcataac atagttgaga 420 cagccatect getttecaga caaageeeac ggttgegaaa caaggtgeac getegaeeee 480 gattatagca gccgtgaaag actgagctct gtggcttcta cccctcgcct agcgattcaa 540 tagactctat cctgttctac ggataactcg ttgttgcaag cggtctgtaa cccaacaatc 600 cacctttctt cttatcctca cttgcctttg atactggcag tacagggaat caacctctta 660 tatctgtatt caaactcaca tgagaaggtc gatacgcttc aagaaaatga acagtgacgt cgccattgct atgtacctta ccattttcgg ctctgtcctg atcctcgtcg ccatgtggct 780 gaccagagge ttttctcgca tcactgaaac cttgtcctct ctcttctgtc gctctcactc 840 tcaatcccat tcttgctctc aaactagaga aagaactaga agcgcattca acgaaggtga 900 gcttgaaggc gagtccgggt ggcaaacttg ccgccccgg catttgactg agcgtcgcct ctctggcttt cagccccctc cgaccgagga ggaatatacc agctctttct ttcacggatg 1020 gtacttgccc tacaatgtca gaggtctaag tcaggtagag cccgagcccg agcccgagcc 1080 cgcgcctgag gctgacgttg aactcgaaga cctacctcgt tacgagcacc ctccggcata 1140 taccaacaga agtccgccag ccgaagccca tgaaataggg agcaacagcc gtaatgagtc 1200 tctggatgtt acggagtgcc gtccggctcc tggactgagc aacgagcctg ataccatggc 1260 cgtgaccgga caacccgaca atgctcctaa tgacaggcgg ggcccgacgt gacggagtac 1320 cataagccta gttatgtccg ttgaggaggg atctgacttg acgtattgct gaacaggatg 1380 actgtaatta tggacattta ttatgaccac aacgcctcgg cacggcaact ccgcgacccc 1440 gcagtttgaa tatcatggta cttattagga cgaagtattt caataagaaa ataagcctct 1500 ataattctcg caagaacgta gcagggcctg gaccatctcg aagattttcg ttattcgcag 1560 cactgtetet gtttgcacet teaccegteg teaaccatgg aceteaceea gataagaege 1620 caccattgga ccacctcaat cacctatgat gccagtaata tcataacata caatctatcc 1680 gtcggcagca aaggtcaaga tctccgtcac tgctgggaag agcatcccga gtttcaagcc 1740

ctgccgacgt tcagctcgct agctgtgatc gacatcatgg gaaaagtcac tgttgacatg 1800 ccqaaactcc tgccactata taagccgagc cagcacccgc atgtccacgc agagcattct 1860 ctcgagataa gagggccatt gccaagatcg ggaactctaa cctctgaggc gaggattctt 1920 qacqttqtcq atcqtcqcac gggcgtcqct ctgattqtgg gtatttcaat caggaatgag 1980 gatacggggg agtggatttg ctatagcgag tggacctctt ttctgatgaa gatgccagga 2040 gacggggggt cgaaggctte ttegagtatg cagagtacac tacttectag cegagagece 2100 qacqcqqtqc tcaqccacca qacaacccct gaacaaggtg ctctgtatcg agcggcaaca 2160 qqcqaqtqqa atccaatgca tattgatcct gcgactgccc agcgggctgg cttcccaggc 2220 cctattctct ctqqqacqtg tacgatcggg attggcgtaa accatgttat cgaggccttt 2280 qctqqtqqaq attcqqcqcq attccaqaqa ctaaagctga gacttagcaa gcctgtcttt 2340 cccggggagg tagtcacaac caagatgtgg cggtttaacg aaacgaagat tgtttatcaa 2400 caqqtqqcqq qqqatqqqaq qgttgtcatt tcgaatgcgg agattaaact gaaagctgga 2460 qqaaaqcaqc qqaqccaqtt qtaaqttagc tcttgctttg taatcgacta ccttttgtga 2520 ggagtacggg aagatttact tagacttgga catccgtagg catagatttc tatcttcagg 2580 catgcagtga tgaccaggag aaaggatccc tcatgcagct aaacaaaatg acagtattga 2640 caaccaacac aaaaaagcag gagccaaaca agaagttgaa gagcattaag caacctggca 2700 ggcagtcggc ggacagtatc cgtgatcaca agcaaagctg catagcccca ggtacgagtt 2760 ataqttetee ageeaeggea geggeaeaee eeggaeaeee gtegteggeg gegteggeae 2820 gggcgctcca taggccgtac aggtgcatgg tcctggaggg cagtaaccga agttgcagca 2880 gaaactgcat agaccgacat agttgcccgg tcctgtgccg gcgacgcaga catttccggt 2940 cqttqtcctq gtqgttgtqc tagtgctggt actggtggtt ggtctcgtcg tcgtggtgcg 3060 3090 cgtggtcgtc cgcgtggttc ttgtagttgt

<210> 2164 <211> 134

<212> DNA

<213> Aspergillus nidulans

<400> 2164

60 actagtgacg accgtagagt gcgaccaggc caatagctca ctgtcacgac gctaccttcg 120 gcgccgaggg agaacgggta acatgcgcac gcagagatac atcacgtgag ccggcaagtg 134 accggagttc acaa 2165 <210> <211> 2546 <212> DNA Aspergillus nidulans <213> 2165 <400> aggcggtttg ggctggacgg ttgaacgatc gtctatgacc ttaaggtatt taatgatata 60 ttcgatagca ccactttatc tggaagggtt catattgtgt agatatatat agtctatatg cattcagaac gctgacatat agtgcaatgc tatgattcac tttaggatta aagcttcgcc 180 240 ttcggagaag ccgcctcctc ttgcgcttgc ttcttaagta gtctcctcaa aatctttcct gcagcactct tcggaatctc atcaacaaat cgcacgccgc cgcgcaggcg cttgtgatgc 300 gcaaccttgc catccagcca cttggcgata ttctttgctt cctccgccgc cgaaacaccc 360 gagetettge tettegeget cettaegaca aatgeaacag ggaeeteagt eccatgttea 420 gcgctctcga caccgacaac ggcaacatcg tcgactgcag gattatcgac caggataccc 480 tcgagctcgg ctggagcgac ttggaagccc ttgtatttga tgagttcttt gacacggtct 540 600 gtgatataga agttgccctt ggagtcctgg tagccgacgt cgccggtgcg aaaccaccca tctggagaga ttgagtctgc tgttgcggct gggttgttgt gatagccttg gaagacattc 660 ggtccacgga gatagagctc cccaacctca cctgtaggca cctcggtggg ttctgaaccg 720 tcctcgggca tcgtcatata cttggcctcc atgttgggga ggagtttacc gaccgagccg 780 acactetege gecatteace ceatggttga gtgtgagtag tagggetggt etcaetaaga 840 ccgtaaccct gtttgatacc gatgtggagg cggttgtaga cagcttcaac aagctcctga 900 gtaagcggcg cggcaccgga gttcatcatt cgtagactgg aaagatcgta cttttcgact atagggtgtt tgcccagaag gagaacaacc ggaggaacta cgtagctgaa tgtgatacgg 1020 tagttctgaa catgctggca ccatttttcg aggtcaaact tggccatgac aaaaagctca 1080 tagcccttgt agatcgtttg gtggacaaga catgtcaagc cgtatatgtg gaagaatgga 1140 aggaaagcaa gtaagcggtc accettacca tetgeceege cattecaegt caggttaceg 1200 gcttcgcctg cagccaactg aaggctgttg gcgacaatgt tgcgatggct gagcatgaca 1260 cccttgggaa ccccagtggt gccagagctg taaacaagaa acgagagatc tttctccggg 1320 ttgatcttcg tgcgacgata acgagtggct ccggagatat tgcggataga ggtgaagtgt 1380 ttgaacctgg cctcaggatc gcgctggtct cctatcaaga taatgcggtc gtcagggatg 1440 cctacctctt tcgccgcggc tcgcgcaact gagagaacag gtagttgagt aacaactgcc 1500 tttgcaccag aatteettag etggaaegeg agtteeteaa etgtataege tgggttagag 1560 ggcgagacaa caccgcctgc ccagagcgcg ccatacatga caatgggagt gtcgatgctg 1620 ttaggggtaa agagcgcgaa catcgccttt acgccagtca aagagagact tcaggccttg 1680 gcacaaagta atggcagact gtttcacatc attgtaggta taggagcgtc gggtgtcggc 1740 atccgtgtag ataacttgaa aacgtcagtt ggggtttggc aaaactacgc aagaggtaac 1800 etcaccettg ttgtcaggga actgcctate etttegetca aagaggaatg eecataagte 1860 qatqttqqqa atqtccactq qaqqqtattq cqaatagaca ggcatqtcga gaagagggct 1920 tgcggagttg gagaggggac ggcttggcaa cggagaatgc ggggggacaa agcgaacgag 1980 tgcctggacg gtgacagaca agccgcgagg agaaactggg agatgaaggg aagaaaaatt 2040 taaatgtacg gattgtctag gcgaataaat cctgaatatt ggagagatag attactaaac 2100 agcacccaag geteeggeta tacgategte tateeteeat eegeagtget eggeeetegg 2160 caccttgtca cctgacttga ccccagatta ccgcatccgg aaggagccaa acgtttccaa 2220 cggtctcggc cagacaacgc ttatcagcgg tgcagcggtg atcaacatca ggtacactgg 2280 gtctttgcaa gctgcagatt aattgaatag agcaatggtg ctatatctat ctattttcaa 2340 tatatttccg aattactttc tatgtatget gtatacagag tacagaaaga cgccattgtt 2400 cgacttgctt cactacctgg acttataatc tgccggcagt tggtggatca ctttagtgta 2460 cccgatcttc gtcgtggttt tacagtggga catttaccgg gcgactttgc agctttgtgg 2520 gttttcgaat aaatacacta attgtt 2546

<210> 2166 <211> 1874

<212> DNA

<213> Aspergillus nidulans

<400> 2166

ttgggagggg cgccgcgccg tcaccggcag tctttgacat tgccaaccac tttgcttata 60 120 tggggcggct ctgagtgcga ctacagcatg atgcccaccc ggacgggccg tcgacagttc ctggaggaat acgttcggag ctacgcgcaa catcagggca ttccagagtc atcacaacca 180 240 aagattgttg accaactatt cgaggatgta gaccgctttc gaggtctgcc tggtttatat tggtcagcgt cacccccaga ttaagtggac gccatactaa cagttgcagg ggaacttggg 300 360 cattgatcca agcgcaaatc tcgcagattg acttcgacta cgcttcatac gcggagactc 420 ggctaggcga gtattacgca tggcgggccg agacggaagg agcaagaggc gagaaaccct 480 tacgagagcg acgctgggca gaggaatgag tgcaggtatc atcttcaaca gtgaatgttt gtacagcgtg tttcaacagc gtgcatgagc catcattacc agtaattaga caaaataaaa 540 atctctagat caaaccctat cgtcctttca agataccact acctacagcc gatgctgaac 600 agecagetee teetgeacet geaceteeae ceteteettg cegtteatge taacatteae 660 agttaccggt gctggcacct caacatcgag tcctagcgcc gcaacaaccc tcctccaact atccatccca cgtctcgcat gctcccccac cgtgttcaca tcgggatcat tacacgtcct tgaaaacagc tctagactca cccaccctc gaacccgatt tcaaagaacg ccctcgcgat 840 ctccaacaca ggaagatacc caccctctc ctcttcacag gggaataacc gcgcattgcg 900 actccagctc attcttgggg gttggccctc cacatgaaag gggtgcttct cgtccagcgg 960 cgccgacaac cgctcgccat cgacaagctg gatgtagaag attttcctga tgtccagttc 1020 tccactggag acgagagaac ggagcgtctc catggacttg gccacggctt gctcagcatc 1080 cggcgtcttc ccagtgacgg aagcggggtc cgcgtagatc cggccagcga tgttgaagct 1140 atccaggcag atcccgaaat tctctctatc aaccagcttg acgacattcc acgctgcttc 1200 ccatgtatcg acatgcgtcg accagcagag cgcctcgtac acaaagcgga agccctgctt 1260 tacaccgata tetgegateg tetgeagate tgagacgata ageettatgt egeegettgt 1320 tcgtgcagcc ccggtgacag ggtcattctg gaggaaattt gcggggattt ggatgagatc 1380 tgtgcctata atgcgggcga tcgcaaacca gagcgggagt ttctcagtga gcaggtacgt 1440 cgtctgattt gtgtccacca gaccctcgta gaaaccgaat ggttgcaggc agataaatgt 1500 gaggttaagt tgcttggcga gcgaggagat atactttgcc gcttgagtga gggagccatt 1560 gaatgacgat gaggcgaaat gggagaggtc atcaataaac agctcgatcc ccgcgaagcc 1620 atgagggcc gcgacgcgga gcttatggtc aagaagtgc aggcccggtt ttgacaggga 1680 catggttggg ataccgatt tgaggtttgc gggcattttg aattgccgac tcttgggtct 1740 ctgctggaga tctaaaggta tatattatat taagaataga atgaatgagc tgattgagtt 1800 gaagactgat cgaggagcag atggcggtga ttatgtaccc taggcgaagt aagtaggtag 1860 gtagggtatg tttg

<210> 2167 <211> 2229 <212> DNA <213> Aspergillus nidulans

<400> 2167

60 aggagttaca aagggtatat gagggcgtgt tgatgggaaa aaggcggtta aagggaatgg 120 aagagttggt tcagaaagaa agggtccggt tgcttaaacg tgagcggaga gggtagtcgc atttggttga cacggtagaa agggtgttca gcaaaaacgg ggactttgca actaagaagg 180 aggtggcccg gcgaattgac gggagttcat gttggagggg aaggtggttc gcgataaata 240 300 aggctggaaa gttagatatt aggttgtagg ccgacgggga actgaagctt cggttggcca aggattctgc gagcgaaagg gaaaagatac catggctgag ggggttccga atggtaccgc 360 caaactgccc ccttcattca ccggccaaat tagcatcagc cgggagagat gaaaagagcg 420 480 cgcgtgaaga tggccacgcc ggctgagcag gccgtaaatg cgatcatgga ggctatggag gagtagggga cggaacatca gtcgcgtccg cgttggagga gacaaggccc ctaatcgcgt 540 ctttggtacg tggtgtatga gaatgaaaag taggacgaat gtgatgtgca ttatcttatg 600 acatatgctg atggggatcg cagacggttc acctgcctgc cgtgggatat acaaagctgg 660 cgcagactga taacttcttt ataacccgca cagtggagtg gagggatgca gaatgaccga 720 aaagcagaca cgttgtctac agggcacaga cattgatatt gactccttat ttttggtatt 780 ccatgaagca gctacctatt aaatctcggc gcggacgtac acatcggcag accgtcgatt 840 cgcaccctgg acaatcccca ggtacgctgc ctttcacact tatatacaca gctgattgcc 900 tacaccaccg cccaacaagc cttctgcctg cgtcgcctca gccggaaaag atcgttcatc tgcctaggct tcaagcgaag cctccaccat gaccctcaat ccctgctcga ttgcctcctc 1020 attccgccag cctgaccaag tgtgatcgag tatcccccag gtatcgtcat agtcctggcc 1080

tccggagcga atatagtaac tcccactaat ggtccaaacc atccagccgg cctgctgctg 1140 qqqaatccac tccctaatac acgaagcata gacactctgc catgtcgttt catcctgcgc 1200 qaaaccqaac tccqtcaqqa cqacqqqcat gatqttaacq atqtcqgaac tgttcqtatc 1260 gagegeettg aacceeeegt teeagaggge geeggagaga ttggcacage tegatgegee 1320 tgtatcgtag ttgtgcaact ccagcaccag tttatcagcg taactgaaat cttcaaggta 1380 gaatetegte cecteaceca gategeteec agtegggate ggegeaagag tigtategta 1440 gttcaggccc gagagaaaga tcaacgcgtc cggattcgca gcgttcacca ggtctgccgc 1500 ttcagtcatt tggctatacc acgtttccca gttgtacgga taactggggt ttgcgctggc 1560 cggctgtcgc agttcatttc gcaacccgat agacgtgaac gtctcccagg acgccgcatg 1620 ggaggccata tactgcagcc cgcgtttcca gttgtccaca tcgaagtacg tatccccaaa 1680 ccaggcgttg ccatcagtgg tggagcagca ccacattgct ttggagatat ggttatctag 1740 gtgcacgtag acatettggg etgcgcatte ageggcaacg aggtegtaca ettgcattet 1800 ggttgtcgta ttcgtgatta atgggttgtt ggttacgatc tggttgaaga catccgttcc 1860 attegtaacg cecagageet tgataagega ggetaggaet gtagtatege cateattgge 1920 gtagatatca tcgacgagtt caatggggaa cgttaggcgg atcacattca tcccgataga 1980 cttaatcttt gatattgtcg aggcaaccga ggcatactgc agtccttcgg gaatcatggc 2040 ctcaccggcg ccgggccagt ttacgcccgc gaatgttacg cgcgcaccgg tagagtcgag 2100 gatccagcgg ccagaaacgg tgaggggggt attgagggcg gcatttatga ggccgggggt 2160 atttaggatg ccgacgagga ggctaatgag gccgggtctc atagtgaata tggattgtgg 2220 acactgatc 2229

<210> 2168 <211> 2633 <212> DNA

<213> Aspergillus nidulans

<400> 2168

atctcgcggc ccgccaccaa tgccccatat caaccggagt gcgaccatgc ctaccccagg 60 cggcggacta tatcccggcc agtcaggtta tcaagatccg agggagagta catatggagg 120 cttgcttgat agctactaca cctcggctcc cgacgaccct gacatgccga attttgatgc 180

aatgccggac tttgacaatg gcaaaggaac gattgacgaa gctctaccag gactcgaaca 300 gccaaagcca aaacctgatt ctcctgctga gtccaaaccg ccgcaagggc aatacaaagc 360 tttcaatccg gcaatgcata ccccgccaga aaccggtact ccttctggag caaatcaatt 420 tgccgatgcc ggattccagt ttgacctgcc cggtgagccc aattctgctg gtccttctca caacggaatg ggccattacg aaccttacga ggatcatttg cagtcgcaat acccaccgca 480 540 gcaggcaggc tatgttgaac cagaagtttt ggatccgcag caaaatcctg atgctcttcc 600 acaccaccc atgccatacc gcccaggtca cgattctggc ggaccaccgc ctcctgtgcg ccaatacaac ggtgcgatga actcccaacc acaatctgct ccaccacaag gggctccgga 660 720 aggeceageg ceaceggage eggtgaegea tgetgaattg gagegeetee ageageaage 780 gcgaggtaac ccttcggacc acaaacttca acttactctc gcgcagaaac ttgttgaggc ctccatagtc ctggttgagg ccagcagact cgacccgaag tcaaaggcga aagcccggga 840 900 gaaatacaat attgatgccc acaaaattgt caagaagctg gtttcagccg gctacccaga cgcccaattc tacatggccg actgctatgg tcaaggcctc ttgggccttc agaacgatgc 960 taaggaagcg ttctcgcttt atcactccgc agcgaaacaa aaccacgctc aagctgctta 1020 ccgagtcgca gtctgctgcg aaatcggaca cgaagaaggc ggtggcacga aacgtgaccc 1080 cttcaaagcc gtccaatggt ataagcgcgc cgcctcctta ggcgaccctc ctgcgatgta 1140 taaaatgggc atgatcctcc tcaagggcct cctaggacaa gcccgcaacc cacgcgaggg 1200 aatctcatgg ctcaagcgcg ccgccgagcg cgccgacgaa gagaatccac atgcccttca 1260 tgaactcgcc cttctctacg ttccgccaca gagaacgata ttgtcattcg tgacgaagcc 1320 tacgettete aacteetgea teaggeetee gaactegget acaaattete eeagtttegt 1380 ctggggcagg cctatgagta tggtcagctg ggctgtcccg ttgacgctag gcaaagcatc 1440 atgetetaca gegeegeegt gegeagggeg ageaceaate tgaacteget etgageggtt 1500 ggtaccttac tggcgctgaa gggatcttgc agcaaagcga tacgqagqca tacttqtgqg 1560 ctcgtaaagc tgcggcttcg ggtctggcca aggcggaata tgcgatggga tactttactg 1620 agacgggaat aggggttact gcgcacctag aggatgcaaa gaggtggtac tggcgagctg 1680 ceggttagte ceetttaget tetaataatt ggteeatagt tactaactea ttettagece 1740 aaggattccc taaagcccgt gaacgtctcg aggaactcaa gtctgggggt gcacggatgc 1800

aaaaaactcg gctctctgt tcagccgtga accagcagaa atctaatgat ggggactgtg 1860
tccttatgtg atgcgatgca atgtgatctg atctgacgcc aagcttatgt actacaacct 1920
cacccttctg tcaacatcta tgtccacctt caccaccaa acttacattc acgatacctc 1980
aattttttgc tatattactt aatacctcta tcttatttca ccttgactac ccttttggac 2040
tatgctagcg atgcccttac attcatgttt actttctggt aaatagaggt ttatacatct 2100
tacgaggcat cagacgatcc gaactatgac aatacaaccc cgttatggga gctactatta 2160
tttatgtaca taaatataga cttgaataca tataaacata tcaatcttaa tttgtctcca 2220
actttgcatc atggattcct gatacatcca aacaaccgta caataatacc tgcagcaaaa 2280
ctcgcgagac attatacaat ggatgtatga atcgtacata tacattacca aatccagtct 2340
gttccagaga atctgaaga cccttaagat ggatccaccg tccttgaggt gaagtgaagc 2400
gcatgactaa tactgcgctc aattccgcct tttcaatcac aattccgcc cttgacaaa 2460
gtgaagcaat tttttggacc agatggtagt acgagtacgg tatggtgaca gggtcagggc 2520
tgcttactat tgattaatta atcttatgat tcgagctgaa ccgtatatcc gaatcgtata 2580
tatggttccc ttacctccaa cttcctataa ctctagagcg ctacctctgt tta

<210> 2169 <211> 2377 <212> DNA

<213> Aspergillus nidulans

<400> 2169

ctttccttgc ttttttccga gtggcgggga tttttcagct cccgacatgt aacccaatct 60 tectectece egtectecte tettgetteg etttaaacce etatetttaa tegateaaga 120 aggaggccaa ggaggactgg gacgagcatg gatcagggta taactgtttt tcgcaagaat 180 gaatcagacc tccagaggca aacggaagca gcggtcaaca agaaacccaa gcgcggtccg 240 ctcaatacca tcgagcaggc cgctctgatc aaggtctgcg agaagagagc cagatacgat 300 gaggtttgca acataacttc ttcacaattc tggttcggaa tcgagatggc tctcgaaaga 360 gagattggtc gtcgctactc gcactattcc tgcagaaaac gcatcaacga ctacatcaca 420 aatcgtgcta tatatcaaaa cgacatcaag aacgggataa aaccggatcc tqtqcttctq 480 cccgacccag agatccgcaa gctgctagat cgatgggagg aaatggacaa atacaaggaa 540

600 cagctggaaa gagagaaggc attaggtcag cttgtgggac gggagcctga agtgccgacg 660 aaaaacaaac tacagagagt cgcggactgg gtcaggagcc ttccagaccc ggagcctcaa 720 gctagacccc tcgtcactcc gccctccacc aactcctccc aatcgccagt caaacaggat 780 gaatccactg ttctttgggc tcgatatcgc aaaattgaag attatcgggc cattgcacgg tctaatcaac tccgtgcgtt gaacaatgat ttaacgagca gtcgacagct tctatcgaat 840 atcaaagaac aattacactc gacactctac gatccgccgg ccaaccaaac aacgacaggt 900 ctaaagcgaa ctcgggaaga cgaggtctct cctgaccgag cagcgccacg tcctcgaatc 960 gaattggccg aattggaggc tatggtcaag ccaccattga aacagagtcc tggtaactcg 1020 aatqtcctta ctcaatccqa aattgcgccc gcccagatgc cgattgagac ggtattcagc 1080 aaattctggg aaagcatgct gccatatttc aaggaacgag ctctgaaaga tggcatatcc 1140 ctcataaaqt ctqaqtctat catqcacqac ctatttaaag aagttggggc cgccatgacc 1200 aaggcattta tgaaactaga gcagcaaacc tctcgatctc cttccgctta caagcctcct 1260 atataagtcc gcttcacgtc gcattcgagc atacgcatcg tcatttctgc tatctacgag 1320 cattttctgt cctatttccg tttccggcgc gcattgtttc gtcttcactt tcatcatagg 1380 ccacttttga gcttgattca gttttctcat tagactgcat agagtcgata ccccgttttc 1440 tttgggtcgt ttggatttac gatttgtttt acagttgcat cgcaagcatc gcaagcatcg 1500 cattgcatat ctgcttgaca tctcttactc ttctcttatt ctcctgtaca tacaagactg 1560 cctgcccaat tgtggtgctg gatatgaagc atcactcaga ttgatgaatg aattaaagta 1620 aacaaacacg aaacaacttc atgcccatgc tgagtactcg aatactcaat caaaaggttg 1680 caaaatcaca ttgccatctc tactaagtca tacttcgtga gatcaataaa taaacgccat 1740 gagagecaaa gtegetatae tataeteate caccacegee tagaaaegee egecetgatg 1800 gtatgcaaaa aaaagacgcc aaatgccgat cccaaaagaa atctaatgac ataaaataat 1860 ccactgattg acaatctcct ccatatcatg cgcaataccc cactgcgaaa ttagacaccg 1920 aaacagette tgeategaat teateteata aagaaggttg eggaeegeeg caaceceagg 1980 tggagaatcc gtccttccct ccgttacaaa ccggctcgtt tcagagcctg tagatggccg 2040 gaatccagac tcacagccga ggttcaagtc cgcatgcgaa agcagcgcgt cctgccatac 2100 aactgtgcgc gggagatgaa tattcgctat acccgcgaga gcgaagacaa cgtagactqt 2160

tgctgcggcg gaaagcgaag agggcatatg gatgacgtgg gcgcgggcgc ggggtggttg 2220
tgcgatgatg tcttctatgg cgatggcatg gagtaaggcg cggcgggcgt cttcggtgtt 2280
aacgcgattt agcatggcaa agcctggacg gagggtgcgc gaaccgccag gaactggttg 2340
cgggatgtcg taactggtgc agacgtggcg gcagggg 2377

<210> 2170 <211> 1918 <212> DNA

<213> Aspergillus nidulans

<400> 2170

atqctqqqca qtgqttqctg tgggggcgga ggggactgtt gacaattgac atgctcgctg 60 qacqaacccc ttgaactcca atcaatgact cgatcgagta ttctttttat ctcccagcca gtgttccgtt cacggccttg cctttgtcca gaatacgact gagcacatcg ttctctatct 180 240 caqteteatt tetatgaaga tettgeeeat tttateeegg egateeetet ateaatagaa atctagcage tetgeteaat eccetetatt caagteaaac geateeteac ggeacatttt 300 cgcttgcaat tcctgaatgt cctcgaacct gcatatcgct caacatgttg acggttgacg 360 420 aqtcqtqqqt taatqtqcaq caqaaqacat tcacaaaatg gtccgtccac ccgaaagcca teccetecgt egaageegge etgeteacce geacegeeca tgttteggag etegeeaatg 480 tgatctcttt tgttctctat ggctcggatt cagctgactt catcttctat tcttgcaggc 540 tcaataacaa qctaaaqqtt cgcgatattt ttgtgaataa tctggtgccg gaactttcaa 600 acqqqqtaaq tcqtctataq ctccaqcqcq aagcccqtat tgctgatact gcgcttgctg 660 720 ttattcaggt cacacttatc catttactcg agatcctcgg cggagactca ctcggtcgat 780 atgctgccaa cccaaagctt cgtgtgcaaa aattcgaaaa tgttaacaaa agtctcgact atatcaaggg gcggggaatt cagatgacca atattggtgc ggaggatatt gttgatggta 840 900 accagaagat catcctaggt ctaatttgga cgcttatcct gcggtttact attagcgata tcaatgagga gggcatgacc gcgaaggccg gcctcttact ttggtgtcaa aggaaaacag catgctatga gggtgtggaa gttcgagact tctctacgag ttggaacgac ggcctcgcat 1020 tetgtgeget ettagatatt caeeggeeag acetgatega etatgaetet ttggaeaaaa 1080 acgaccaccg aggaaacatg aagctageet ttgatatege egegaacgaa gteggtatee 1140 ctgatctact cgatgtcgac gacgtgtgcg atgtcgccaa acccgacgaa cgatccttga 1200 tgacatatat tgcgtactgg ttccacgcct tttcccagct ggagagggta gaaaatgcgg 1260 gacggcgtgt ggagaagttt gtgaacaaca tgcacggcgc atgggagatg cagaactctt 1320 acgagaaaag aatgagggaa ctcttacgat tgattcgcgc ccagcgtgaa gagtggaaaa 1380 acgcctcatt cgaagggaca tacaaggacg caaaggagca ggcctcccag tttgccatgt 1440 ataagcggaa ccagaaacgt cagtgggtag cggagaaatc agacctcgca gctctcttgg 1500 gaaatatcaa aacgaagctt agcacgtatc gccttcgtgc ttatgatcct ccgccagagt 1560 tgtctcccga agcctgtgat caagagtggg aatgtttgac ccgtgacgag catgagcgca 1620 gtcagctcat taacqaaacc attcgagata ttaagaacgc tctgcgccgc tcattcgcag 1680 ataaaqcqaa cqacttcqcq cttaccttga agacgctgtc tcttgcaatc tcaggccttg 1740 acqqaqacqt tqaaqatcaa cttgcccacg tcaagcgact gaacgacaac ttaccgccgc 1800 tegatgeett ettggaaact attgeggage ttgatgagea atgeeaggaa geaaatgttg 1860 aagagaatga ctacacaaca tatacattgg acgaactggc ttatgagttg agcctggt

<210> 2171 4158 <211> DNA

<212>

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2171

acggatctgt ctgctatacc aggttccatt tgcttgacta gacccctgct ctccacatac 60 120 gccgagtgca gaagcgggtc acaggaaggt attatagtaa cttgcatccg agcaggggta 180 gagagctgag agagtatgtg agaggatgta tttttaaact agagaagcct gcattggcgt tcatatacct gtcagtcagt acggatagcg agctgcaccc aacactagca 240 300 ggttgcaage atggtgaaag gctccaaccg agetttactc cactccatcg tactatatcg 360 tagcatatca actgaataca qactgqcaga gaacacaaag aggctggtat cgacgttgtc agcatggtca aggaccacta gaagcgctac tgctggacca gagctcggta gacacgtagg 420 480 ccgcactaat actgaacttc tgtgacgcag tcgatctaag atcagcaaag tgacatcaaa 540 ctacqqqctq ttttqtaaqt acttgggcgc taatagtgga cgggggccgg gctgggctct aatgacgaac ttcctccact ggtctggacc tagagaacgg cgatccttat cttccttcac 600 gcttgacaaa tacaaagagè agggattgac tcgtatagac cccagttggg catttgaggg ggccactaca gttatgcagc catgcattca gcagtttctc gatgtgcttt gacagcggca 780 gcgaagctgg catgaggata tgctgtccag aaagagacta cgtcagttta agaccgctat gatgggatat acgttgctgt gaaccgtaag gattctaget gcagactcat atactgtaca 840 900 agcagtgaaa tcgagaccaa agagagaaaa gaaaagataa ggataaagcc aacctcagct acatactctt ctaaacccac tgctcgatgg cagtggagtt cgcgcatgac aacggagctg 960 gtaggagagg tgacgattta ggtgcaagta gggcgaatat tatcaacgac ctaggttcct 1020 gctatccccg atagaaaccc cccaaaaaat tccaaaaatt gccaaaaaagg caaaaaagct 1080 tacccctgc tttccccaag tgacgggttg gccctttgac gtctttgtac tccgtatgac 1140 ggaccggctc tgcagtaagg ctcatactca gggtccagtc ccatgacttc atggggttaa 1200 gcactgcgat gtactgtgta ccaagacgac ggagacctcc accaggccta tgacatacgt 1260 cccatacact ctgtagcctc ttgccacact cttccccagc attgagtttg tcgctcatct 1320 cgatctcctt catccgccat cataatagca ggagcattat catcatcatc aatcatcatc 1380 gccatatcat caccatcatt atcaatcgct ggtgccgtaa tttgatgctc tgttgtactc 1440 aaagagtact ccgtactctg tcactctaga ctccactcta tactccgtag tcaccgtagt 1500 tctaggttga cgtcatcgcc ataacgtcgc cctaagagaa tcatgtactt tgcctcaggc 1560 acggggcccg tcagattcaa tagcgcgata gcgcgagtcc acaacgggta caaggcgcag 1620 acgctgttct cgcagacttt gcacagattc ccagataccc agatagccga cactccacag 1680 ttggctggga tgtatagcaa tcctcgtctt cgcagatctg ttcagatctg atcagacctg 1740 gaccggatta gatcagtggc attgcagtgg caacgcaatg gcaatggcaa tggtcatggc 1800 cgagtccccg tcagtcccaa ccctgaacat cgccatctcg aaaacccgct gtttctgctc 1860 cccacagtgc tattgcttgg caaacccgcg ggaactggat aatgggatgg actgtattat 1920 tgtctgctca tacatatcgt gtacggagcc ggagactagt tccgaacgat gtatttgctg 1980 gtaagtatcg cccgtaccgc atatggtttg tcggtctgta ccgtccgtgt cttctctggg 2040 cacttgaaca ctcggatctc gagctgtaga gtgaggtcat ctgcatctgg actccgccga 2100 tgaaggcaga gtggaggaac tgcggaagcg taacgcctta gggctcagga actgtgatgt 2160 cattgctgct cttctcagcc aatgactggg tctgcacgat gatcaccatg tggccgaccc 2220 tctgcgtctg caaaggtaga gggtacttcg accggacgat acgtagtgat acagtgattt 2280 gtcacaagta atatgacatc cctgtgctgc ggctcgctcg acgcctttta agcccatcga 2340 atteggacet geaateegaa etgeaeetat aatttetgat eeaaaetaae gegaaegtga 2400 ctgactgccc gacgattgac tgcccgacca actggtgata caacattcta cctcttataa 2460 ggtacgcggt gagagctagg gttccctggt ccctcatact gcttcccgct tccccttacc 2520 ctgccagaac ggccggtgtt ggcgatggcc tgtatcaggc tacccaatgt tgactgtcgg 2580 cetegacgtt egteteacet tggtteacee tteggegatg tetecetage ggeegacteg 2640 acgcttctga tccataccag catgatgtgt ccatgccagc atgactgact cgtcacagac 2700 atcctgtcca gccatcccca agatacactg tccaaatgcc ctccgccagc gcccatacag 2760 cgtccgtgtc ccataatcaa gactctggtc cgcctcccgg cgccatgaat gccaatgtca 2820 gcgccagcaa ccgcaacgtt atctaccccg gtcaatctgg cggcagcggc ggtcacagcc 2880 geogetegte caccacegte gaagactatt egegeateat getegagtae acceaaegee 2940 gcatggccgg gtttgcagat cgccccggtg acagcggcag aaggtcagcc actagccgca 3000 gcagcaggag cagtaacacc agtggccaga gcggcacttc gatgagcggc ttcctagcag 3060 gacaagcaac gggcccgggc cctggatctg gctctggctc tgcactgact ggccgcaccc 3120 attctccggc tgattctaag atccgccatg ttgactttgg cgcgggggtc tcggatggcg 3180 aataggaatt gtcgcaggtg tagtgcagcg cattacgttc gacagttttg ataatctagc 3240 acaggcccgg agtcttggtt tcataattga gcgagtatga aagcaggtct ttcagagaac 3300 gtcatcgcga tcagctcgac ctgatatcgg cagatgtggt tgcgactcaa tcggtcctta 3360 gattttgagc gttaaattct agcgatagcg actgcgggta tgacaacaat agcgatactg 3420 cgacaacagc aatagcgacg gtttcacgcc taccttgcat acttccctgc tctttctttc 3480 tacagcetee taccegteee ttetteecea getggggete ttgttttgag tgcgtttetg 3540 ctttacagct acattgacag cgacatcctt tcttttctac atccttattg atcgtccgcc 3600 tgcttcagtt gacagttata aacgaggcag gtccaaaata tcctaccgta ttgatctacc 3660 tgatgtgtgc gatacctgta cgacgtaatg acccttcgtt ttacgccgat gtatcctaag 3720 gtctcaggag acggtatggc agcttgctgc caatgctagc agttgctagc aattgcaatg 3780 ggatgcgttt gaattttgat cattgattct cgtggttctt tgattttctt gtttccttcc 3840

<210> 2172 <211> 1903

<212> DNA

<213> Aspergillus nidulans

<400> 2172

tcgccctttc aataatggga tccgcacaac taaccctaat tctctccagg tgtagccgga 60 ctgacaagac tcagcacatc agtaaccccc cactccttcc tggcagcctt cagtgcatcc 120 cgaatagcga aaaacgccgc gctgcccatg aaaagcggtg gctcgccgac gcctctactg cgctggatcg tccgcaggtt ctcccactct acgtccttaa ggagactaac gttgaatatt 240 300 tgcggaatgt cacggaagcc cggaattttg tagtttccag gacctttagt gaatatttgg ccagttgtgc ggtgccaaag gctttcttct gttgtgaaga gaccctggcc ctgaatgtat 360 gcgccttcta tctgaccgta gtcgatggag gggttgattg tgcggccgac atccattttg 480 atatctgccc ggaggggcgt ccagtcgccg gtgagcgtat cgatttcgac ttcagcggct 540 gtaacgccct gcgtgaagta gaagaacatt tgacccttgt tctcacccca ggtatagccg 600 atgtctgggg tgcggtagta gccttgggca gaaaggttga cacggtcgaa gtaagcagcg tgaaaaggtc cttcaagggt gcgttgggca tcttttcacg gtagggcttg agacgttcgt 660 720 tcagttgggt gcaggcgtta tagatggcat agccgttgag gtcggagctg gcagaagccg 780 ctqtaqaqqa tqtqtttqcq acggtgttgg tggctgtttc ggagatgaag acgtccgaca agggaacgcc tagggcttcg gctgctatca tggtcatctt tgtgtggaga ccttggccca 840 tttccacgcc gccgtgggcg acgaggacgc ttccgtcgtg gtagatatga acgagggcgc 900 ccgcttggtt gagaaagagg gccgtgaaag agataccaaa cttggtgggg ataatggcca 960 tgccacgctt ggaccacttg tgcgtgcggt tatattcctc cacggccatg cggcgctcaa 1020 aatactcgct cacatataga acctgatcgt acatcaacgg aacatgccag tccttaagtt 1080 cttggttgaa atgagtcatg tcacceggtt cgtacatgtt gagcctccgg agctgttcca 1140 cctgaaggtc tagtttatct ttgacttctg agatgattga ctcggcggga aagagacctt 1200 gagggccacc aaagccccgg aatgccgtat ttgagacggt gttcgtcttg catatcctgc 1260 cccggacgta aatgttcggg aatcgatata cgttgtcaat gtgtgaaaga cttcgctcca 1320 caacagcacc tgaaagatcc tgtgtatgtc caccatttgc gtacacgtcc gcatcaagtg 1380 caagcagctt gccctcctt gtcaccccga ctttccattt acaatagaat gggtgacgct 1440 gtccagaagt cgcaatgtct tcatcgcgat tgagcataca ccgcactgga cgcctgactt 1500 ttgcggctgc tgtggcgcat atacctgcga gctggactga ccgcgtctct ttaccaccaa 1560 agcetectee aaggegettg accettgaca egatettgtt ggeageeacg ceagtaacet 1620 gtgctacata tgattgcctg cccaagtcag ctttgctcag agaaatagaa atgaacgtac 1680 gtttccgtcg gattctgggt actgctccag atttccattt cgccgtcttc tgctttaggg 1740 atagccacac aagcttgtgt ttctaaataa aaatgttcct ggccccccat tcgagataca 1800 ccctcaaaga catggtcagc gtctctgaag gcgctttccg ggtctccatt cttgatataa 1860 1903 cggaagcttt aaatcgcgca cgttactaga ggatcagatc ccc

<210> 2173 <211> 240 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2173

acggaagctg acagagtgcg tgataaagtt antgattaga ttcaagtgcg cggttgctca 60
aggagatact gtggncnttg aaaacggcgt cgatttggtg aacaatggaa gagngaggcg 120
tttaacatga tagtgaatga gcatatcgct tgatggagtt agtgtagatg gtctggggct 180
agataatgtn ttggtagtcg agnatgggac agcaggttga canagtaggt gagaacgtag 240

<210> 2174 <211> 3337 <212> DNA

<213> Aspergillus nidulans

aatcactgcc ctcactcgtc cgcactccat ggctctcatg gttagcgcat atcgccctcc 60 ttggcggact tccactgctg cgtcaggtcc cggcttcggc cactttccta tcttgagatg 120 caagccagga cgcgctcttg taccccaacc cttcgtcttt ttgtctagct gtctctccga 180 gttctcgtag tccaataaca gctctgggag ggtcactcgt catgcatttg gaccgttgaa 240 gctctaactt ttgtgctccg caagtaacct tccctgatcc ccatacttcg tcttttacgc 300 tgcgacacaa atttttggcc gttcgcttct ctaagccgtc cgatcgcccg ggtcccgggt 360 420 aggtcgagca ggccgctatc gctctggggc aggtcactct tgcacctgta tcacacagtt ctctttcagc aaggggcgca aatagcacgc ccgaatgcgg tgcgacctcg aggctctcac aaaatctcac ttgagcattt tcgagccacc atctagccct catctctatt tcccgcgacc 600 cgtggttacc gattgggtgg cttaatttga gctattgcgg tcttgtgtgg cctagtaaac aacaaagagt ttacctgtaa actgcttgtt aaaatagatc gtcatgctgg tgcaggtgaa 660 ggctttattg gttagacaac cttagttcat gtgaaggaat ctatcagcat gtgtagctag 720 gccgtggaac ccaattgaca atatgccggt ctttatagag tcgattctgt ttcctgatgc 780 ggacggagcg gtctgacaac taagctcgtt tatatatata gcgcgcgggg agagcttgcc 840 gggcatgctc tgagtttatg cttgaattcg ctctttcatg gcagagacta acccgatcat 900 ccggattgat aacgagacct gtaggaatga atgttactgt gtggttgttc agaggaagtc ttgattacct tgatcgccct gagtcatgag gtcagttcgg gtgtcaaaaag gtcggcaagc 1020 attgttcttg catatggtcc agaatttgat aaacgtagta gatcgttagc ttgaatgaaa 1080 tetteatgat aactetatae agggtegteg etgetgaggt tgeagtagte ategteetea 1140 ggtcgagtgc atggccgagt gagcccaaca ctcgctaccg actatcaaga attcggcgaa 1200 gaaccaaaac ctttcatcac aatcagatcc agatcaaaga tcttcaatct ggcagatata 1260 acggcttact aagagtatag tagccgtgca ttccagaaca ctgcaccttg ccgttttgct 1320 ataaacagca gacaacggcg gatggccatc accaccgccc catgcatgat catttcatgc 1380 tcgctctagt cgaccatatc caaaacgcag gaaccatttt gaagtcctcg cttgcttgtg 1440 tatcaacggg cggtgacaca gagtgctcat ctcgcatctc aagctcagaa taaaagttgg 1500 gatgtagacc ggcttcaatc cggcatctca cccccgttgc ggggtattga gggcctgtgg 1560 acgtcgatca gtgaacttga tagtatatat cgtatgattc ccttcgctga aaaccgggca 1620 cageteacea geettgeage ttgeegggge gggggeegea tattgggteg ageteeeaae 1680 tatgcggtca atagcattct tgacagatac agcagatgaa actccttata gctggtactg 1740 tgagattgac ccatcaattc ctcgtccctg agctcttctc agctagcgtt gccaaccaca 1800 tacgaccaac tcgggaagaa gaatgaactc tctctctccg ctaaagcccg ctggcgagaa 1860 catctggctc tacgagccaa ccacgacggc taacaagccc gtccctgata aagatccagc 1920 acteategte ttatgtacet ggetgggagg tgegaegeet egaeggatat geaaatatgt 1980 gagecaceat egteagetet tteetgggte tgecateete ettateaega eeggtatgat 2040 cgatatcacg attcgctcga tcagcgccat tcggtctcga ttgaagcccg cacgggaaat 2100 aatteggegg atttttggge tetatggggg aggegetgga ggegetgaga ggaceeceaa 2160 aggagtgett ttgcatattt tttcccacgg cggcagcaac atcgccttgc agttgatect 2220 ctctatgcaa aatcccaggc acccgagcgg catccacaga cttcccttgc aagggatcat 2280 ctttgacagt tgtcccggag gcaccacttt catgcgcaat tatcacgcga gcgttcattc 2340 cctgccgcat gctcctccgc ctatacagtt gctgagcaaa gcgctgctct tcccagctat 2400 aggggccgtc actggacttc aagccctagg ggtcatgagt tccatcggcg agatgcaaaa 2460 gcagattaat gatagcttgg tgatctctgc tcgcgtcccg cggttatatc tcttctcgaa 2520 agcggatgtg acgatctact gggaggaggt gcaggcccat cttaacgatg ctagaatccg 2580 gggctacaat gtgtctagtg aaatattcca taagagccca cactgtgctc tgatagctga 2640 agatgaggaa cggtactggg gcgctgttca acggttctgg gaacagattg tggaaggcaa 2700 tgcgctggcg gatatgatga cgggtgaggt cgctttaagt gtcccagcgg gtgttcgagg 2760 aagtaaatta tgattatact gcaagaagct gtttcgcaat gatcagatag cgcacgttct 2820 atgctcaatt aatccctagg taaagttcct ttgtagagtc tagacacacg attcaggtac 2880 tgaacggcac cccacattag agtcgccggc agaaaacatc tctctaactt caacctctct 2940 cetetettee atggatette tatecateet eeetgaaatt tegataaaat egtteteeca 3000 tatcctcccg ccgctcgaaa gaagcagagt caatacagtc gacctcattt cgctggatac 3060 cctcgaaatc gcgaaacqcg cccacgttcc ccctgcagac gttcgccgtt tagccaacca 3120 cgtcataaaa gccctgcaca acgatgtcgg atttgaagaa ggcccccgtc ctgagcagga 3180

acagcctgat agcagcctg acctcgaatt accgctgatt tcaggaccgc gaacgaaact 3240 cgacctatcg caatggcgca cgattagcac tcttgacgcc gccttagata ccctgttgaa 3300 tggaggaatt gcaaccggat atgtgaccga agtgact 3337

- <210> 2175
- <211> 1255
- <212> DNA
- <213> Aspergillus nidulans
- <400> 2175

60 acagggctca ctttccggaa taaatgtacc ttagaatatt cgcctttgca caacgaggtt ccttgcttct ccaccattgc catatatcat tcttgaatgg tcaggctacc ttatagatag ttatcggcaa tcctagtcca agagcccgtg ggatcctcct tctattttgt atccctgagt 180 cgtatccact gttactcaca ccgttatcaa gtcaagaact ataaattaga cgcaaaagga 240 taaatcatgg tattggcttg ttatttcgcc gaccacgtat taataacact acccattcca 300 acataatata ctattttgag gggaaagagg ctcgctctag cgctggtcaa tactaatacc 360 ccaaagggcc gtcagttaaa ctgttgatgg atctagagtt tcatataagg atggtccatg 420 ctcagatgaa agtacaaatt ctggtgataa ttcgagcaac cctaacggaa ctatccgatg 480 accgatcacg tgcccggccg atcagggcga ttccgacgtc tagctaaacc tccgaccatc 540 ggcaaaccat cacttcattc tattcaactc acattcaaga taaacacctc aaaatgcttg 600 ctcgtgccat tcagcgttgc caaagaccca gattatctct ctatagacag ctgtcaagtt 660 teegtateag ceaateeage eteeeggeag cetattaceg eggeggaaca teeeggeegg 720 tcttcttcaa ccaagatgac ctccctaaga gccgggatga atgggcccca atctttcgag 780 gagtaatcgg cagtccagat ccctacgggc gccagctcga cggcctcggc ggcggaatct 840 cgagcctgtc gaaagtctgc gttgtcggga aatcagcgca tcccgatgca gacgtggact 900 atacatttgc cgcattagga atcagagata ccgacgtcga cttttctagc aactgtggca 960 acatggtaag tgcggttggg ccgtatgctg ttgacagtgg gcttttcgcc gcacacaagg 1020 acgccgaatc tgcggttgtg cggattcata atacgaacac tggcaaaatt atccatgcca 1080 ccttccctat cattaatgga gaggctgctg cggctggtga actagcaatt gatggtgttg 1140 cggggacggc ggcgcctatt aagctggact ttgtcaaccc agctggatca cggacgggga 1200 <210> 2176 <211> 1464 <212> DNA <213> Aspergillus nidulans

<400> 2176

tgatttgaat atttctacgc agaatgagca gtcaatgatc tcaccagaga tcccaatgac 60 caatgaggag cctgaagtgc ctgcgctagc ggattaacct ccaactagtg cccatctgcc 120 cggttgagct gtctgttcgg aggggctcgg tcgcatctcg atgctggata cggtgtagca 180 240 ctgttgacgc actactgcag aggttgcgct actctgtacc agcgttctca ggtcattctg ggctacccca cgtcctacca acaggataca cacgacagaa acaggggtcc cctgcccgcc 300 ggggtgcccg aggcgtcgag ataggtgatc tgcccgatta caacttgtaa atgtcacctg 360 420 ctgggacatc gacgcaatac cccttgcgtc aaccacagga cggtcagcct cgcatccacg 480 tttcctcaga gtgacactgc cctgataaca ggaccgtaac cagttcctct cttgcttccc ctcctttggt tgaaatttcc ctgatcttca ctgcggccaa cccagtccgt ctcaagatgg 540 600 taagatacgt acgctatgct agtcaggacg gatcggcggc gcccaacatg actaacagtg aacaccaaca aagcgtggag cagggcggtg agtattccca gcgaagatct gtcatgattt 660 cctgaggatc cttattgtcc tggcacgata gaggccgtgc tcaggtcgcg cactcgaaag 720 agctgtcaca atagccctcg actagtggtt ttttcggcac ggatctcccc atcgagtcga 780 tggctcgagc ggtctgagtg ggaagaacac ggttagctta gggcaagact acccatgaag 840 aagagtaaat ggaataacta atcaatatta ataatgtaag gatgcggagc cggacttcat 900 gacttggtcg aatcggtcca ggagaccggc tccattggga cacactctcc cgaccacctg gtcatcagcc caaggatgcg ctaaatcgag atttccaaat cactgggatt gcataggcgt 1020 cagattgaaa attatatagt aacaatgaca aggatgtcct caagctagac ggccgggacg 1080 catggacagg gactaagaac aatagtcgtg aaagctgctg cccttagcgg gaaatggaag 1140 cgatggcggc gggggttaac cgccgggcct gctcggtact gccttagttc tcaggcggag 1200 ataagcacag ccacatgcag gatcgccgac tccgaggttc gtgaagcaaa ggaaaaagaa 1260 agttacgaac taaaaaaaaa ttttgctgaa gcccaatggt tccagccaca gagtgttcaa 1320

gccacacaaa caagagcggc ggtgcgtgga gcagtggcgg agcactcgtg gcttgacacc 1380	
aactgacaat agcctcaggt ttccaaggtc gagttggcgc gcttctccag tccgaggtct 1440	
agtagcccac tgttgtcctt agaa 1464	
<210> 2177 <211> 1053 <212> DNA <213> Aspergillus nidulans	
<400> 2177	
gctatacttt tacttctgtg tcaagatcta agttctatcc accgcgtcta gagctcttgc 60	
gcgacacggt agtctccgac cttcagcaga gctccaagac agtttgtgag tgaagccgcc 120	
aacagtacac tetecacage catgtetgge gatactggeg caaaaceteg tetecattea 180	
acacgctcgt ttcctcgaat ggacaataat tcggacacga gagctcccac tattcgttca 240	
agagcgaaaa ccgtacagtc cgtggcgata ccagagtcgg aagactcgct tcatctggat 300	
ctttcggaga gcgaacacaa ccaagttact ggcccagact tgttcgagaa gtcagcatca 360	
tcatatgtgg aaaatggcgc agacggtgaa acttcagttc tctcgcagaa tgtaccgaat 420	
cagcaagagg agctcccgat tgagctgatc agtcttactg accggtatgg agttcgttgg 480	
gttctatatc acggccgctg attttcgtac agattcgtca gctccctcag cgcgcgggta 540	
cactcctccc ctccgaccat agaaagaata tcgacgctct tccaagactt ctacctccga 600	
gcggaatccc acatagcgac tcatatctct gcccttgctt cccggataaa ccgcgaccct 660	
tegeegeace taccagateg gaaagatace aacgeeteea geegeeagat gttgaegget 720	
tcggaagtga cagagaagcg aatagctcga aagcttttag cgtctaagca ggtcagtctt 780	
gaagaggccg tagaacggag agtttgcgaa agtatctatg ataagatttg gagacataag 840	
agtacattgg atgaagtcag agatgaaaag ttgcggtcaa agacggcagc cctgcttttg 900	
gtcggaatca acctaaatga gcttggtgtc gatatcgaca ttactgcgat cgacgaaaaa 960	
agccaaaaag atgctgatga ctgcttttca ctgcgcgtga ttctctcatg aaatgaacga 1020	
ggaaggtatc attggggagc ttcgacacct gct 1053	

<210> 2178 <211> 2750 <212> DNA <213> Aspergillus nidulans

<400> 2178

60 ctgtttacca tttagtgaga agtggctccg tagaggccgg aacattgcac ttacttttcc tttattgcag tgtttgagga tagggtggtt ggacttattg agcatcaatc tcagaatggt 120 gttcaccaca cgctctggcg ttttgatagc agggtcctta ttcgcgatga atggaatacg 180 atgatgggtg atcccagttt cttcaaggaa cttctcgtgg ctctgtgtgt agggctcatc 240 aacgagggta ctataaacca tatgtaagcc atagtcccac aatacgtgga caagctctta 300 cattatggtt cgcagcccta gagttttgag cgccggaagg ttccagggct ggggaaacgc 360 gcaacggtaa attcctttca cgacctcgcc aaaattctca gggagttcta gttttccaac 420 atctgattcc cccggatcca acggcgaaac cgtggtgacc tgtttctcta ttataccggc 480 aaccagcgtt agcttgcaag gaagatacag gtcttcagct gaagaaacta accttgctgg ctttcgttca cattattgat gattttcttc gtcaaagggt aagtcatcgt gaaggcgtgt 600 ccagagacga taggtgaata actcgacctg tcgtccaggg tcaaaagaag agacaccgtt 660 720 ggaactatcc agagctcaga agagagtgtc aactcctgaa aaccacctat gtgtcgaatt gagaggaaag aagaatgtga ttgcaaatct gacgtagacc ggaagtctag ctgtcttttt 780 840 gaaggccaac catgttggat gaaggcatta aatagtcgag ctgaacagaa cagacgacaa 900 aaaaagctgc tttttgatta acgttcagtg agtttcagtg agtggaagag atgttgggag gtaaaggttt ggtgttatag taaaggtacg ggggcggtga ggtgtgaaga gaagtaaaca agtgcaagat gctgcagaaa aaaaggtctc ttcgtgtgca gtatgaaaga gaagcaaatt 1020 aggcacgaac agtgatcaag gacgcttaaa atctggcaaa aaacaaagat gtcaaggtag 1080 gtaagaaggc atgagaatgc ttagtagcgg aatcacagta ctaaagacat ttctataacc 1140 ggcaatatga tagggtgggc tccgcgggaa ggtagagttg cttgatgagc tgcataggaa 1200 agtgctaaga cagagagcgc ccagtgaaaa tgaaagggaa gatggtggag aagggacgaa 1260 ggacggacgc cacaacgggg catttgtatg gcatggcagt aaggagagtg gccgtctagc 1320 aacaccggaa tcaacacttg cgagacttac tccagaactc gttttagttg gtggtgaaaa 1380 gctccattct tatccacaag cttggtatta taattcactg agttgctgag aaagcagcgg 1500 qtatqctttq aqqaaqqaac taaqqagcat cttctcccag cccgaacatc ttgatcgaat 1560 tggcccacgc actgagagtg aggattagca gtgaaaatat cagtagatgg gaaagaagac 1620 ccacgetteg caaacetett ecacagtgat teeettgacg ecageaatga catgegeaac 1680 ctgagctatg gcaacagget cattteggee tttgaccatg catecetttt gccatttte 1740 tttcttgact gccttcggta agggggtgc cccatctaag aatttcgacg aggcgtgcga 1800 gggacggatc tcacactgaa agtttaaaaa atcagtaacc atagataaaa tatggcaatg 1860 aactttetea eccaaggace ateegtetea atetgaatae geteeaatgg aatggeettt 1920 accactteca agttttette tgtetteaga etgeaccegt tgacceegat gtecagaeca 1980 agtgcgacca gtctttgcat ctcctccatt gtccctgtaa agctatgaac gagtcctcgc 2040 ttcqqaaqct tctccaqcct ctgtgtcaaa agcctctcaa agtcttcgct ggcggcccgc 2100 gaatgcagga agagtggaag ttgaatctca acagcaagat caagctgagc ctcaaagtac 2160 tttagctgcg gttccttggg gctcaagaaa agcctgtcat aatccaaccc aaattctcca 2220 aaggcaacgg cgtgacctgc ttgcttcgcc tccagcgcta acgaccgaag ctcctctaac 2280 agtttttccg ggccaccggg gaagctgtcg aaaagcttgg cttgacaagg atgaactcca 2340 acceptigcat agcagaagcc agctgctaga cetcaatctt tateetteta agaaaagee 2400 actettaaca taeggtattt etgagegatt teaatggeae gettggatte etetagatea 2460 gagccagtta ccatgaactt ctgacagccc acatcgcgtg cgcgctgaac gatgtcgtcc 2520 aagtcactct catggacttc ttttccatga taattgccct ggaaaaccgg atcgctcagg 2580 ttgattccga tctgagtttc aagcctctaa ttagctttca aatggcgaac taccggacac 2640 gaggtacaca cattcacata tttggggttg gacctgtctc acccatctga acaattggac 2700 agatgccgat gatacgcacg cctcccactt ggcaattgca aaaacacgaa 2750

<210> 2179 <211> 3751 <212> DNA

<213> Aspergillus nidulans

<400> 2179

agcaggtgag gattaaaata agatttttt ccccaacgaa agcaattgct tttcccacat 60 ttagccggat tttggggtat ctttactccg acactaggcc ctcctcaggg ccccttgggg 120

gaccccccc cagagaggtg gtgttatcat cacctaattt gttacagcgg cttcgtgtct 180 taaactgagc tttcacggta cttggactag gtttattaaa caggaaatgt gaatgctcat 300 tagcataaag cgccatttag gtatctgcgc gagcaggtta ccggagaagc tgagtaaata 360 agagttaaaa tgtgcgcttt gtgttcaaga aatctagtaa atcacctttt ggtttttgac cgttaacatg aaagaaagcc taggtcatcc atcgctggct atcaaggtac ggagaaagtg 420 gggagctatg acgcacgtga tagccgccgt ccttatcgat aagcttatct gaaaagaatg 480 cggcacgtga ctctggctgg ccgagatcca gtggaaagct gaaaggtttt gattgcattc 540 600 agcattacgt atgaaagtat tgaggccgca gtagatggaa accggtttct gcagtatcca aatatggtat gtcgtcttta acgcgatgtt cggtgggagg gagccagtgg ccggtcccga catccagatc aacgagcaaa cgaagagagc accatcataa tgcaagaaat gcacagatct ggccttgggt atacaatgga tagatcgtat gcatgcaatg caccttaaat ttgcggcagg 780 cggtcatggt cgccgccttc agagcccgac gacaagagcc tcacctccat ttgacagatc 840 atcctgatct tcaagaagaa ccccccagtc aagcgtcaag ccaaccaaca ttagggcctt 900 ggcttagcag atcaatgcgt gagagacaat agcgccgtcg aaattgaaaa tcaccagatg tggtgttgtt tcgtgaagcg ccgagagctt gagctgcgac ccatcagcaa gatgaggtgc 1020 agtcttagca cggaaaaggc gtccggacga aatgttggaa gccgatctat atgctcgtaa 1080 gctttgccac tgcgctggcg catagtagtg cgcttcggcc attgtccgga cttcggagat 1140 ttttggtata tgagtactaa acggttgcct tcttttgcct tgcgcgccgc caaatagaaa 1200 tgagacctta atgataaagc tacggcctaa atgcggctgg gctgttaatg acaggctgcc 1260 actatggtct cgagggctca ggccggctta ggcccaatgt cgccctgagg aagtggaaag 1320 tgtacgtatg ccagccctat cacctcaatg tctgtacagc tgtagcaagt cattcagact 1380 tgagggccat tcaaggcgtc ttacctagaa acaaagcgag gaaggagcca accaaccaga 1440 gccaatcgaa ccgatcccat cttggccgaa ctagtcgaga tcctgtacca cgtcggtggg 1500 tcagactcga tgctaatgca tgcaccgcac atggatgatg ccagatgact agatcgtgat 1560 gctccgtgcc gattccaaat catattcact cggaagattc ctagcctgtt ttcaaaatta 1620 ccgtcattac tgagacccac aaggcccaac caagaaggca gcaaagcaac gatccaacat 1680 ctgggaggtc tgactctaag aatgaaatgg cggttttgac ttaatcaacc cggtcaagat 1740 ccaaagcccc cttggccaaa catccccata cagagatagc gtagtaggga actcccagcc 1800 tagttcgcaa tcaaaccatt ggtctgatcc agatctggcc caggaccaaa cggatcgttt 1860 gcacccgcat ccgccggcgc cgcatttcat gtaagagaac aaaccactga caaacagctg 1920 attgaggtcc aagtcctgca ttggcagatg gagatcggaa acgataagaa ttgtcagaga 1980 ctgagcacta gcagcgattg cccgtcttgg atttcacctc caccacgcag taggcgtaga 2040 tggctcgata gtggatgcgg accggcgatc gctgaactga attcgccgtg aacttgatct 2100 gcgccttatc tgtgatgaat ggttaaagct agattacctg gttctgggta ccgatacggg 2160 acgcgaactg cagtacagat tggctgataa gtaagataag gttcgatatg ttcctgaaca 2220 ttactctggc tttgttgcac tgccactgtc gatctgcagt cacagatgaa agtctccatt 2280 acaaggaaaa agaaacgaag ctgagacctc aagctctcag acccaaggtt ggcttggttg 2340 aaactatcag atggaacttg aaagaggtca gtatttgaaa tcaaccccac ctcgctccca 2400 ttgaagcete caggageece etactggage tgtgteeace aacaetgaea egaagteeac 2460 actgttttcg agtagtgatt agaaacggtc aggatccagg acgaccggcc ttgaccctcc 2520 tgtatcctga tttgaagctt gctgctggct gctgcatagt gcatggctat gtaccaccca 2580 tgcagtaata agtcatattt gcatcgtctt ggttgaagca tatcataatc ccctcgtgtt 2640 cgtaaaaatg tcagacagca cggcaggacc agcgaccccg cggccccagt ccatactgac 2700 tetgaettge tgaetegeag caaattgaaa taaacegggt cagtgggtat tgaaatteaa 2760 attcatccat atggttacaa cctttacgca tgcgcaataa atctgccttc ggactctgcg 2820 aaaatgcata ggcccatccc gattcccgct tgagatccag actaagatac agactcgaaa 2880 cttgcggtaa ggagtatgga taggtccgat ccgtggcgca ggtctgcttc aaccttcaga 2940 ttcagatttc aagacatcat gaacaggtgc caacaaccac agcaggctta cacgccatct 3000 caacatgtcc atgtgcggca gctatacggc ataatatatc ccggagttgt attccgagta 3060 tttcaaatac tcgtgaccaa agcaagattc tggcagcagc gataaccctg aatatgattt 3120 actgttttgt gcaaccatcc cagacatgcc caaaaggaga ggcttggctg atgctgtacc 3180 aacatccaac gttgcgcgtg caacaccca tcccagatcg aacctgaagc gcgagtcaac 3240 tctgactgac gcagataaga cagacaccca ggccatattg aaacaatggc ctactgcagc 3300 gctccatgat catcaactgc ttgtccgcca accttgaaag ccgaagatga tgttgtgtta 3360 ccgtaacactcgatcaagctacaggaatagcagtgcatgatggcgtcaagcagtcagcag3420gttacgtatgttttcatggtttgatattcatgctctctataacatctgaatacttcagat3480atcacctttggacgtgggattgttttccgatgcccgccatccgtagctatcgatgaggat3540cgaacatgaatgcggtctcctgatcgtaaatacacgggtatgttcggtggccagctcgat3600aggtaagttttcttgacaaacgtgcgttgtcagagcatggaggaaaaacccaaaaaaaaaa3660aaagaaagaaagtaattagccgtatctatag3751

<210> 2180 <211> 3005

<212> DNA

<213> Aspergillus nidulans

<400> 2180

acagaggcag aagccggccg acatgctgtt agacagggtt tttctggcag caataaattt 60 atttgagtag gatgaatgat tgaagtgctt actgcagtat tatgaaccga ccgaggggtc 120 attcgggcta tataccagcc ttgggcgcgt cagtgccatg gaaacagggc tgcacgccag gcgcgagtgg aggtgggggg aggagaccca gtacatagcc ttatgcctaa taacttttaa 240 ttaattacct tgtttaagac gtatttttgt aacaggaagc gtaagcgccc aaggtaggaa 300 agggaagttt tactgagagc ggaacgtgct gataatcgag caggcccacc ggtcagattt ctgcagagtg tagaagccag aaaccttgaa ttccagttga cacgtcgagg tcagattgct 420 tcaggctgtt acagcaaggc atagctcaga ccatagggtg caatggatga tcaaggctgc 480 tgaaggaacg ctctctgccg acgagtgcga ttcgattttc cgccagctag acccaagatt 540 600 cattccttat gatggccaca aagtgatacg caaccggaca gtatcattta cattgcggct tgccttgagg gcttattatt cgccccttaa cacgcagaga tttgtggcgg cccagtgcag 660 aaatgtgctt ttgggcactt ggagctagaa atgcgctgcc gtctgtaact gtagaaataa 720 780 gaattgaatt tcaagtcagc ggtagtctct tctgtctttg tgctcgatcg agcctttgct 840 cgcgtggtcc acgatgagtt agcaaccctc gtctgtgaat gccccgtagc ctactccagc 900 cttctcagcc gggtcgaagt aaaccaagtt gttgaccgcg tcaattgatg gaatgccgaa 960 caggictacg titalcitti cetticica agiatgictg attgccgctc acciegtggc 1020 caaaagccca acgcccctct gttatgaggg gacgagtaaa ccgatgagga gtggctcctg 1080 tcaatcccag tttcgtcaat gactgagcat acaatagtgc gcacaagcca gccataggac 1140 tagcgcctaa gcggacaatc gtgtatattt tatatttcac gtatgtacag tacatgaaca 1200 tctgccctcg cggtcgaacg ccagtctcat ttgtcctgag taggtacata taacaaattc 1260 ttttcctgaa taagagccca aatccgttcc tcgtcacggg aaacgcccag tttcacaggg 1320 ctcaacagct gggccagtcg gaaggcaaag aaccctgtta ctggcaacga gtaataatgt 1380 cgtataccgc tctagacctt cttctcgtcc attgccgact gcctatggtc cgagattaga 1440 aggagagttc ggctttcatt gaaagccgcg tctacgcaca agcgccgctg gtcaatccgt 1500 ctccgttttg gaccagttgc attcagggat gcagggaact ggtaggaacg acgagccttt 1560 agagccgtga aaggaactaa ggtagatata ccatcaaagc tctttgagac gctgatcgca 1620 gggactgatt ttcactggct gacgctgact caaatctacg ccgatagctt gctcagcccc 1680 tgtgctttgg tattggctag ggcgatggaa gcgaaaaggc gaaagagaag cggtgtgacc 1740 gctcaaaagg tgctgctagc ttctggtgta gacgctacag actatcgcga ggcgtttcca 1800 gegetetaet tectaatatt teggetgteg acegtatagt ttaaggagaa caetateeag 1860 tctgctttga gattggctct ctgccgttaa cccttctatc ttaatattag gattaagact 1920 gaagatcggg ggcaagagtt gaggcccgaa gaatactctg aaatattacc ctgacggggg 1980 acggtggaaa cgaccaccac ttccagtata gtcccccaac tgagtttgtt ttggagtcga 2040 aatataatgt tatactgcat tctctagctt tgctttggta ctctctagtt tcggcatcaa 2100 catcgcttca gaccacatgc gggtgtatct ttttgtttca cattgcagtg catttggtct 2160 agtagtagca acttccctct acctactgca tatcaagaat atattactcc ccttcagtat 2220 acatggcatt ttcgttttga actctacatg gcccctttgc caatattttc aatccagcat 2280 cgtctacccc gagttatatt ataaggcatc ccagcgagtt attggtgtct gtagtacatg 2340 cttattgcct tgcccactgg gcaaacagat ccagcattcc tttgctcaca atcccgcaat 2400 catccctgaa ttggtccagc tcgccaacaa ctttattata agcagttctg aggtcgcgca 2460 actcaatttt cagccgcgag gttttcaacc gtaactcatt gtctcttgct gtttggcaac 2520 ttgggatagt cggggcattt ggggggcagc caatgttgat caggcgagcg tgtcactagt 2580 tecagegtac etgeggetge ttectactgea atgacagtte ttggagagee agtgaacagg 2640 ceggatgagg tggettgtee ttgcattgea tggtetgggt etggegeagg etggeettet 2700 atetgeeagt teaccetece agetgtgaca ggeggaetgg tttgtgeata tgagggteet 2760 ggaaceatet cagacagaaa tgatacgetg ggaetaacat ggtgegtaac gteggtgeet 2820 tteegteetg gegacatggt ggatgataet eegattteet eaacagaetg gegtggteet 2880 geegatgttg eeggeactae agteetetge tetatgtgee gttgeagetg teegggetgt 2940 geetgaggta eetaaattag ttagagaage gateagtagt gtteaatett atagetagtg 3000 gataa

<210> 2181 <211> 1617 <212> DNA

<213> Aspergillus nidulans

<400> 2181

cgtttgtgaa gttggcgatg tgacggagag tcgagggctg ggtgcgagtg aggagtggtc 60 gtcttccgtc aaagagctgt tgaccggatc gtggccagct gctgtgtgag cttcgagacg 120 gcgatgcatg cgctcgattt tggcgaactt gacgctcgcg tcgtggatca tcttcttcac 180 atctggtcgg gagagatacc ggcgcgtgtt ggtactgatg tctgcgaggc ggtgccattc 240 gttcattcca aactcgccga caccgacttc gacgttcagt cggtaatagt tgtctttgtt 300 gacaccgcgc ttggggaggt gctcccggag catggcgtgg tgaatgtcct cgcagccttc 360 gatcttggct atcagccgac ggcgcgcctc ggcgaatgtg cccagagcgt cgccaaagaa 420 480 gtcctcccac cactcgtgct ggcgattatt cgtgtctgga ggacgcttgc ctgtaccgac actgatgaac actccaatct ctcgtcccgg ccactcgata aatgctgctt cgtccaagac 540 ctccggtgcc ggattgtacg tgcccgctcc ttcatcgata aaataatgct gaccgatctg 600 aataggettg aatgegagee eggtegeaga egtegegega eeggeetgee agatagtaea 660 atgctgttcg gggcgccggc tccttgcgag agtcatagga ccgtagcaac accgagttgc 720 cgttcttagg cgtgccccga tacaccgccg tcacagccgt cttcgtgcgg ttctcccggt 780 tatcatacag cagcgcatct ggattccccc acctcaaccc gttgatgaac gcagaacttc 840 ggttgttaat gcttgaatgc gttgtgctct ggctcgcccg actcccggac cgctgcggga 900 ttgacgtcgt cgagaaattc ggactgaagg gcgcataagt aggggatgtt ggtgacgtgc 960
tgtcgttccc ctcggtctcg tagattgtat gttcccgcac gcactcccgg atcgcctctt 1020
cgagtttcga cgccttgaaa agcgtcgacc gaaaagggat accagcaaac gtcttgtctg 1080
tctcaaatac acggcgcgtc atgcgcacat acacatcctt gcaggtctcg aggtccaggc 1140
gtaagcgccc cagcatcaga gcaatgagtc ctccggttcc tgtgccggcg atgaggtcga 1200
agtagtcgca tggtttgggg atctggtcgc gtcgcggtgg tttgccttct atttccacat 1260
agatacggtg catcagttcc tggagcaaga tgagcatcga gtatccccgc acaccaccgc 1320
cgtctgttc atttcactgt tagctgcgt tcgtcattga agaacgatgg ttgccggagg 1380
aaggaaccct accgagggac agaatccgaa ggggagggcc cttggtggta tctttgcggc 1440
gaacttggtc catggcgatt cccagtctcg cacagcagag agtgaagatg agacccgggt 1500
tcaaagataa caaaagtgag caggcgtgag gaggggagac gaagttgagg tggtgcagca 1560
agacttcttg cacagccgca gtttgtgtct cagctggtgg ctaattttat gcctaac 1617

<210> 2182 <211> 2483

<212> DNA

<213> Aspergillus nidulans

<400> 2182

atogocatta otgatatoaa ococaagtao gtotogogoag gtgacgocat cactotogaac 60 gacgtggata tggtctggat cgaccacgtt actgtacgtc ttacttgcgc acgccatacc 120 ctaaccctat cagtggtcct acggccagga gtatatgcta acgttagcaa agaccgctcg 180 cattgctcgt cagcacatcg tcctcggcac cgaagccgac aaccgcgtga ccatctccaa 240 ctcgttcatc aacggtgaat ccgactactc ggccacttgc gatggttacc actactgggg 300 tatctacctc gacggctcca gcgacatggt caccatgaag ggcaactaca tctaccacac 360 cagoggtogt agtoccaagg tocagggtaa cactotgotg cacgotgtat gtoottoata 420 ccaacaattg aagacgatct gacaaagcta atgcgaatag gtcaacaact actggcacga 480 caactctgat cacgccttcg agatcggtga gggtgcctac gtgctcgctg aaggaaacgt 540 tttccagaac atccccaccg tggccgagga ccccattgag ggtgagctct tcgcttctcc 600 ctccgaatct gccaacgagg tttgctcgac ttaccttggc cgtgtttgcg agctcaacgg 660

gttcggcagc tctggcacct tcaaccaggc cgacaccgat ttcctcagca agttcgaggg 720 caagaacatc gcatccgccg actcctacag cagcgtcgct tctagtgtcg cctcttctgc 780 cggtaacacc ctttaaactg tgctgctcga gtgtcgtgcg ctggtcgagt ttggtgggat aagctatggt aaagaagagt tcgatcaagc ttgtaactta cttattcgcc ttgtaaatta cactgcaatg cacggaatct atgctgctca gtgggcaaaa aaagtgtgcc attaggttgc 960 tagcaagcta ccctactagc caattgcctt ttcgtctctt ttttttttcc atagtaatac 1020 atctaaggat acattccacc tgtgcctatt gcacaataaa caaagccggg ccatagactg 1080 tegetegage caetgeeteg geattggeaa atggteeeet gegatttaca acageeataa 1140 ccgtcagccc gttcatgagg aaatcgtcga atgggacaac gacatcagca gttgacttgt 1200 gecegteaca agegacaace tgeagegggg caacgatggg egegttgtge tggttgatgt 1260 atgcaaccca caggaggett teettegact egteggaace gtggetecaa gagatetgaa 1320 tettgtgtgt geggggttea gggegagtea tgateteaag aggeteaaag ateegeagtt 1380 tgatgtctcc gaggttgggg caggtgccgg gaagggcgaa gctgttcgcc caggtaaagg 1440 cgaagtcgac atcgcttgtt gtcagagtcg ggacctcgcg gggactgtcc tggaaggtcc 1500 ggaaccatcc ttgctgggcg cccttggtgc cgattatgcc cgtcatgatc cgcgcaaggt 1560 ccgcgtcgcc gtgagttgcc aagcgctctg taatgtcctg gagggtagca agcgagtgag 1620 aggtaaaggt ggtagccaga gcaatggctt catcgatgtt cgtgacaggg aaccagtagc 1680 ggcacggctc aatagttggg atgccgaagt gttgcagggc attgttggct gtaagagcgt 1740 gtatttcctc ttgctaagag ctagtcagcc tatgacaaat taataggaga tcgagacaac 1800 ctaccgcgag ggtggccatg aggctccgaa gggcaaactc tcgctcagca tcattgatga 1860 atacgtaacc aggaacattc cggctgatgt tcccaataag ctggtcgaag aaagcaacct 1920 caacgtgctc ttggaaggcg agcagttgca ggtttgtgat ccccgcggcg ctgacgttgg 1980 tgggcagagg taggccggga agtgtgccat gggcggcttg ctctatctgc tgaagctgct 2040 ccggactggg atgaggcaga ccatgtggga gtagaggcgt gttgtcaacg ttctctgctg 2100 ttggggcagc gaatgcaaat gagagggatg gtaccaaagc aagaagtggc gaagagaaat 2160 gcattttgac gatgggtaag taacaatacc aagatcagaa cgtggacaag atagaaatgc 2220 aaagataact gacaatggtc tgaaacagac tgtgccggga cgaggtcaat aatgaagaag 2280 aacaaaactc gagaaggaa caggcgcttc ttttaagctg ccggagcatg cccatcgagc 2340 cttccaattc tgtgctcctg gcgcaactgc tggctgcagg cgggccagta cccagaaggt 2400 aagagaaagg aatcagcatt ttataagtga accgttcgtt tcgatttcct ttgcgcacaa 2460 atctcacagg gagtcctggc ggc 2483

<210> 2183 <211> 1399 <212> DNA <213> Aspergillus nidulans

<400> 2183

gctgatctag agcaacaaat tgcccagctc aaagcggata tttctgacct ggaagtgctg 60 aaggagatta atgacgagct cgagtggaat catgttgaga cggagaagca attgcaagag 120 gagatcgagt atcgggaaac gctctataac gatcaggtgc acaagatttc gcagcaggat 180 gaagtgattg aagatctaga atacacactg acgcgttttc gagagcttgt ttctaatctg 240 caggcagatt tggaggatat gcgggcgtcg caacaaataa cggaggcaga ggccaccgac 300 cttacagcac gttctagagc gatgatggat ctgaacctca aactgcagtc gtcagtcgca 360 aaagcccaga caaaaacgat cgacatcgag ctcaaacgca tagaagccga ggaagactct 420 caacacttat cgattgtgaa gctgtattta ccggaatact atgagaatga acggaattct 480 gtcctcgcac tattgcgctt taggcgagtc aggtcgaagg cgtcattaat gggtagcact 540 atcgagggaa tgatatctga gcaagcgtct gtccctcctg ctttggagga catctttaac 600 gcgcctgatg tcttagagaa gcttctctgg atagactcta tctgcggtcg atttgggagt 660 tacatcgcaa attgttctgc tgagagcttt tccgatatcc aaggtgcttt ctacgaactg 720 gaaccggttg aacgtacgtt gaatttctgg ctcgaaggcc taaagaagaa cgagataaac 780 atgaaaaagt gtgcggtgga attacagaga tccattgctc tactttcgca tctggcagag 840 acacttctcc caacttcctt ggagacattt gctgatgaac tctgtatgag cacgacattg 900 acccagtcat acattgagaa ttcagtgtcc tcaatgtcgc gattgctctc attactgcag 960 tcgaaacttc cgaaagccga ggaaggcgat gaagaagcct cgtttttgtt taacaagatg 1020 gagggcttta tctctcaggc tcgcagcttg aaagttgcta cagtgaagat caaccgtgcc 1080 gttgatgatt taaggtcaag gtccctggct ctttctcatg atgcgtgtgg tcctttcaag 1140 caagcagaga atgctgccaa agatcttgca agcttatcgc gacaaatggg tgagaatatt 1200 gtgcaattaa ttagcgatga cagtcgtgcg gagcccattt ccttgcaaga ggttttgacg 1260 aacatgtctc aaatatctgc attgtaccag tcagaagccg cagagaacaa cgatggcatg 1320 tcgctcattt tcaccatgct acgcagcctg agcggcactc tcgaagaact cggttctatt 1380 tcgtctgact tatcaatta

<210> 2184 <211> 1258 <212> DNA

<213> Aspergillus nidulans

<400> 2184

tcagacaagc aaactctcca gatgccgagg aagaaatccg ccggcttaaa aatgagatcc 60 acgaggcgtc ttctgcactg ggcgtcaaag acaaaacaat tgaggagcaa gccattaagg 120 tagagetegt egaateeege atgegtgagg caageaagaa ggeggetget gtaagggaet 180 tggaagcaaa gattcaggaa atgacaacaa aagaatctgc tctccaagct gtagtggaaa 300 accagegeaa agaettgeaa aatetegagg eegaaeggga egaaattaaa geecaaeteg acagagtaaa acgaettteg ggaaccgetg gageegeege atceeetgge accgtegttg 360 acaatgctgc ctccctagca gctatgcaag aaaacgaagc tctccgcgca gagatcgcat 420 ccctccagtc cgctgtccgc ttcctccgcg aggaaaaccg ccgccaaaca atcctggatc 480 cgtactctgt gcaacgctcc tcagaactct acgcctggct cgatgcacct cttacgaaga 540 aacctgtccc tccagcccag cgcgaaaaga ttcagcaaac cgcatcggaa agccgtgatg 600 tectetegea tetteteaaa ettaetaaag agtetagtat tgetgaeete aaggeeagee 660 gccctaactc tggcaccgcc agcggctggc gcacgtctaa ggaaaagctc aaataccagg 720 tcctccagca gcgcgagaac tttgaacggt gggctgagtg gaagaatgag gttgtgggtc 780 tcgaacgcga acaggataga cttgtcgctg cgaagcagga gagggctgcg aggggtggac 840 gtgcaggggg ccgtggacat gcttcgcatc cgtctatggg atacggaatg atgggacgag 900 cgtggcaaat ccttgggatg ccaccggatc gcaaggcaaa aactgttcag cctgttgagc 960 gagcaattaa accaacctta tagcagacct tttctatggg atgcttagcc atctattttc 1020 gttgtttcgt gtggacatgg cacactgtac attgttctta tacccattta cacagtgtag 1080 attaaacttg atataccttg ccactatgtt attcacttcg cgcatgtcta cctactcatg 1140 tagacaaatc cagaaagtac aaaggccccc actatgtcaa tcatctagta tttaaaaaacc 1200 agggcaaaat agacctaaca ccaaggaaat aagggcaatc aacgatcaag agaggccg 1258

- <210> 2185
- <211> 3990
- <212> DNA
- <213> Aspergillus nidulans
- <400> 2185

60 accataagat gatggtaatg cacacggata cgttgaattt gggagcctta taaacattgt cgggcttaca tgaaagttcg attgggggac ggggagtgcg acaagcacga attcactatg acacaatatc acaaccacgt tagtcaatat acgcctgatt ttattctacg gccgttttgg 180 240 acgtcttatg gatagggaca gtatacgact cgaatcgcag cggcgatgcg atcaagacca 300 acagaaccag tagccgatcc cttagatctc tgttcaaact caatcaccca cgcttgagca 360 aatttcatct tccattcggc agcaaagagc gcgcgaagga tgatatcaat ttgtcggttt tgtccgaaac aaggtgtcat gagaagctct agtgtgaatg ttgtatcgtc atcgggatcg 420 tagcgaaggt tcggttggaa acctttttct tgcgcattag ccgagaagta gggcaagata 480 aagaaaggga ggatagctta cctgtcgaca cgttgagagg gagggaattg aggatcctcg 540 600 acgcggcata aagatcatgc ctagccccac gtgaccaact atgtcattgc acgttgtgga gcttcgaaag ggcagcaact tccacatttt cctggctcca cgaggtttga tgaacaaagc 660 tgtatgatgg taagcctcct tcttcattgt ggaacaccgt aactacgaga cgaggcttca 720 tacctgggtt ttatgaaatg cgatattgac aaacttccta agatctagga acagcacatg 780 atttgattga taccggcgca acggctcctc gatagaatag aacgatccac tttgagatgg 840 catcctggat ccaacgacag aacaactcac accaggtcca gctcgctgca actgcagtgc 900 tgtccggagc tgctgttgca ggcgcgatac tcggttttca aaaataccgg agacgagaag 960 ctgtgaagcg gttaaaggct tctataccaa caatcgatga gaagcaccgt gcagagagcc 1020 tgaatgaatt tggcgccgca gtcccgggac catactggag caaagaggat gaacgtggtg 1080 cagctcttgc gcggagggcg caagaggggg actacgatga gggtgagaag ctactctttt 1140 ggaatgagca tggcaagcgc acaagctaac cctgttctct ccggtagagc ttatcctcga 1200 geagetegee egaaacegeg tettetaaag gatgagggte tegeaaaact eegegaegeg 1260 ttcataattq ttqttqqqtq tqaaqqcqtc qqctcqcatq ctqttqcttc qctgqctcga 1320 tcgggcgtat ccaaaatccg tttgattgat ttcgatcaag tcacgctctc ttctttgaat 1380 cggcacgccc ttgccacatt agcggatgtt ggaacaccca aggtacattg cattcgcagg 1440 agactgcage agategteec gtgggtgaag ttegactgce gaaacgaget etttggegea 1500 tetgetgeeg atgaettget ggeaceatgg actetggaeg atgeegaeaa aggaeagaag 1560 cccgtctatg tgcttgattg cattgacaac atccaatcta aggttgagct gctgcactac 1620 tgtcactcgc attccatccc ggtgatatcc tctatgggtg ctggatgtaa atcagatccc 1680 acqcqcqtca tgatcacqqa tatqtcagtc agctcagacq accqactttc acqcaqcacc 1740 aggaggagge ttaaactget gggagtaact actggtatee cagtggtgtt ttecacggaa 1800 aagcccggcc ccggcaaggc gacactattc gcgctggcag aagaggagtt cgccaagggc 1860 taggtaggeg aegtateaga aetgteggat tteegttete gaateeteee egtaettgga 1920 accatgectg cegtetttgg atacaetett geaaateaeg teatttgega gatetetgaa 1980 tacccaacag actatagcat gggtggtaag ggcaaagaca agctctacga caccgtccac 2040 gcacagetae tggtgaeeet tgaacgaete getegagegg aaagtgaate aggeaeeeag 2100 cctattggac tgcgtctccc gatgagcaga gacgatgtca tctatctcgt tgacgagatt 2160 tggcggggca agagtgtcgt tactggactt cctagtcggc tagcacttac cctatggaac 2220 cgaccatcca atgggtttaa gccggatccc caatgggaga aagaagggca aatcttgatt 2280 ccattcaagc ctgaggattt agtgcttatg accaaggagg aagccacccg ccatgagaag 2340 gaagttetta tgggtggaaa gaaggtegaa gaeetgtaca gegaggagat tateeagaag 2400 gtgaatcagc gccagaagga gatggcatac tatgagcaat ttcgatgatt gtatattaga 2460 attcgtggtg atgattctta agttagagca tggccgttat ctactcaaca tgataagacg 2520 aaaatgtaaa tgcctagtag ccctgccaca agatctgtta caaggcacaa ttccagcgcg 2580 gcaacgaacc attggtggtt agtacaatat taatagtaat aacagtggaa actaggacga 2640 cattgtacaa tetgattgac tgaagtgaga aacttggacc cettaaggec aagagetaag 2700 cctgtgtagg gttgatctcc aggccagttg tcgctacatt ggaacccagg cacacgacac 2760 ttgacctcaa caacaactct tcacattcaa ttgaaactct cgtattttcc cgtcccacgg 2820 gaatatatcc acattaccca aaagaaattg tcgaatcgac ccaaggtatc gccaaagttt 2880 gcctacatac tccagtcaaa tggcagaccg cgaccgctcg cgcgaccgcg aggccctcga 2940 cattlecgae gacatetetg aagaeggtet ataceeecet catecateat cateace 3000 gccaacgcgt ctcagccggt tcgcgcggcc gttaatcgac tacgtccgta acgagtggca 3060 atcaaattct ggtgcaaaat acagccattt agggagcgcc tcgtcgaatt ccgtctcgga 3120 ccgaaccgac gctccgagat gggtacaaat cgtgctgtcg atcgttctgc gccgcgtttt 3180 cgacgatacg tgctcgttta ccttgctctg ttgggggctt gcatattggg gtggcagttc 3240 ttccctgttt ccgcgtgtaa aggagaactc ggcgatattg acggcgctag atccgaagga 3300 gaagtcaaaa gttggaggtt ggttcggcgc gaatgcggtg ccgcagttgg aagacatgat 3360 tcaacttaag acattagatc cggcactgct gccggccagg gaggcgaagg aggatgatag 3420 taagcatagc tcaaggagat tagttattgt tgcggatgcg cacgggtgca aggaggagtg 3480 tgcgtatacc ccagtctctt tacccattat tttggtggcg ctgacatcta ggcaaacagt 3540 ggaaaaactc ctcgacaaag tctccttcca ggaagaacgc gaccacctaa tcttaccggc 3600 gatctcattg aaaaggggcc tgacagctag cgtcgtggac ctcgcccgac actacaacgc 3660 ttctgtgtcc gtgtaacacg aagaccgctt ctgtactcgt aacacatgct gagtcatatc 3720 actgcgacta tggacatgtt atcaagccgc aagtccggac taccgtagtt gcgcagcaag 3780 aaagctgacc tgccgtctcg atgtgacaac acaaatggca gttggcccag ccgtttccag 3840 ctgttctgag agtcctcagg agaataactg attccacccg cagcttttaa aggacggtat 3900 gccaccctat ttatataaat aaaccctgct aaaaaaccct ctgaaaagta taacttattt 3960 3990 ctgtcatgcc ttcttttttc ttccctctac

<210> 2186 <211> 1205

<212> DNA

<213> Aspergillus nidulans

<400> 2186

aaagatgggc tgcgttcaag ccgcttagtg acctgttcgt tatccatttc cattgacgcc 60 tctgtccaca agatgctgtg tgcttatcct acgcctgttt ctcgtcatgt tcaggctttt 120 ccggttcttc attcgatgtt ttctccaaac cctttgcatt ttatgttata tctcctgcag 180

ctcctgttat accgatgata aggcctagcc tgaacagtca ataactcaac cagaagtcgt 240 ttgttgactc tattcatgtg caagaatggc agtatcactt cgatattgga tcattcctcg 300 caaccaccaa gtgaagaatt acctttctcc ttccggaact cagggtttgg ttatcagtat 360 cgtctttact agccttgcgg cattcttagt cctcgctcga gtatacaccc ggacaaagct 420 gatcaaacgg atggaagcta atgactgggt gataataatt gctttggtac agcatatgac 480 aaacttacaa ctacaacaat tgctaataaa tctagacaga tcctctcatt cttcttcatg 540 tcttcctttt tagtggaagc cttaaacggt atgggcatgc acttggtcga catccccact 600 ccgatcctct taaagcagat gaaggtaccg atataagccg tacggctcaa ttgaccgtga 660 tctaacagat gagctgaaca ggccttctgg ttaagcatcc ctttttacaa cgccgcgctc 720 ctctgcgcga aggcatcgat tctgatgcaa tactttcgcg tctttccgtc cagatgcatg 780 cgccgcattt gctggaccat gatagggatc ctcgtcacat acggcacatg ggctgtgctt 840 agegggttet tgaactgeat accagtagea egtttetggg acceaacaat eeegggatea 900 tgtctcagtt cgaaggctct gtggttctcc aatgcttcaa tgcatattgc gacggacctt 960 gctatcctag ttatccctat acctgccttg tatagtcttg atttgccaag gaagcagaga 1020 gttgctctta ttgcaatttt tgcggtgggg ggtttgtacg ttttctgttc catggtcggt 1080 gtgtgcatct gctaatcctg agtaattcta gcgtctgcat aacaagcatt tgccgtttga 1140 tgtcctaaaa agaatcgctg actcttcgga cccaacctgt acgtccctcc atcaacccaa 1200 1205 aaaaa

<210> 2187 <211> 2415 <212> DNA <213> Aspergillus nidulans

2187

<400>

taagaccgtc ccctgcaaac gaggagacaa agactttgcc gtcgacctta agctgcgctg 60 ggaggttcgc gtattgggcg atcttctgcc caacctggta tccttggccg gtgttatacc 120 agttgaaatc gaacgatatg aagactttca tgtcattgtt ggcagcggac tgataggcga 180 gattgagttg ctggtcggtg tagggatcaa ccccgatgtt caacgcgaaa gcatcgattc 240 cgagagactt ggcacgtttc atatcatcgt cgtagtcggc tgcggaattg cggttgctga 300

360 cgattccaat ctgctcccgt cagtctgtag aatcgtaaca aggccactag aggtaccatg aagtgagcaa agacaagccg gtcgtccgag gactgcctgg gtttgttagc gactgcattc 420 480 ggggcagccg agatcagctg gggaagagct cccagagcag agagaaatgt gctgagcttc 540 atttttgttg gtcttgatgc tcaacaatgg gattgctgca cttgatcaat cgggcctcct aagggttata taccetegtt geatacteaa ceacaceaae ateaacaaet aaaaetateg 600 660 acagatgatg gactgattgg ctgccttttc caccccttgt agcatcgctc attgttcgct 720 acaaacaaat ggcagcgagc gcaattattt cactcagata gcaacactac agcgaaggtg qttataqtcc acqcqcacaq ccatqqccaq qaacaqttaq attcctccqc gcggactgag 780 ttcatgcggc actaacctca ctaacccggc ttagacgttg ctgggtagta tcggtaagga 840 ttagccctat agctctccgc attatgatcg gggccatcag ctgcaggggc catcgtcatg 900 tggttcctga qtgagacaca tcgagcattc ctgtaataac gctttgtaat caaggtattt ccagcgaaag tttagacgaa gatcaggcat atactacgct tggggagagt atccatagaa 1020 accordagge tegeogacgg atettgtaaa atacccaaga atatggattg tgttacatet 1080 acceptctgga tgtgaccatg cagtctgcag gcatacatcg atgggtcggc tgaccgattc 1140 gagcggggcc cagtetgtaa gccatggtat ccgactetgc atctcagcga ggtgatggag 1200 tgaggccctt caaatgcttt gacagttcat tatgacagac atcatccagc cggtcgggac 1260 acctgagaat ttgcattgcc cagcgctgtg acaggggaac caacaatcct tattaaaaaa 1320 gtaggggacg qcqagqattt qactcqcqat qctcqcqqca tqctcqqcat aatqcttqta 1380 ttaagettaa caattgaatt aatgetteag aegggeeatt aeeggeatte attatggegt 1440 cagaagttgt teatgeactg gactgegget tagteeaccg geogteatta teegttetag 1500 gaaacagaca ggctgtcctg tcgtccttta tgacggagtc tactacttca gtgcggagat 1560 tggggatgag agcagtctca gggattgctg cactcgtaat ataaataagc cctgtagcgc 1620 aggggatccc ctggtatact tggtacatgt atgccagatg gcgcatgtga ccactatcaa 1680 tttccttttc tgttttaact actcacactt gtcccctgcc gatgctcatg tggtaacact 1740 teggageatt catetggeea gtgaaaceee tgetggteat ceaggtatat agaegaatea 1800 atgaattcca ggtcgagagg gggctgttcc aggagccctt gcaagaaatg atagaagagc 1860 gccgtcccga gtgacacatc cgtggatgta gacgacactc agtgattgct gcatccagaa 1920 ttgaattata ggcagaatct tgtggcgctg tggcattttc acttgcggat tggacgccta 1980 ggcggacttt tgtggagtgc atgaggtcag tagtggcctc gatgtgttta tggaattcgg 2040 cagcggcgta gttgccatta ccctgcagct gtaccaggaa gctgaccgct acttcgaact 2100 gctcttcgtc gctctggcgg tctttccgtg gagtaaggtg gaaattgcta agacggtagt 2160 agctgagaat agatactggg tgtagaaaaa atcgaagacc agaaaggag cgtttgtcca 2220 actgtcaacc aacatactgc atgaatgacg agcgcaacgg atgcaagtt tggacagagc 2280 agtggctgag gcagttacac tagtctctt gcctagttgt gcaccagttt caagatgcac 2340 gcagtaaacg tggaggagga tcaggctaga agcgaaggat gtgaggttga cgcccagtt 2400 agtagaagga aaggg

<210> 2188 <211> 2228

<212> DNA

<213> Aspergillus nidulans

<400> 2188

tgaatagccg aatctaccgt aggtgcaacg acagccgggt tgcgggggaac agtcggagta 60 ttgtcgtttg gaacactaga cgcgtctgaa ccggcccatc cacctaacgc atcgagagca 120 tcgttgctgt cttcttcata gctggaatca agggcactgt cgcggccagt ttgcgtccca 180 gttttactat cactgcggcg gcgcataatg acagggccgg agctgcggtc acgtttgtcg 240 ttgtgggaat tcgaagttct tcgtctagtg agcttattcg cagcgcctct agagattcgg 300 cgcatcaagc ccgtaccctt gatagagttt gggataaccg tatctcccgg gtaggaagca 360 ctgatggttg cggggacagc catgatgcta tccccaagct ctagagaagg cgcagaggtg 420 ggaggaagtg gtgtaactcg atcccgaagg gagtcgactg ctgagaggaa aggggtgccc 480 aaagggcttg aatcatttga cggagtgcaa gagggaggta gagatgttgg agttgttgtg 540 tatgaagacg cgtaggtagg tgccagagca gcaggtattg ctgatgaagt aaaaatatga 600 tgtagcttag gcctggggcg tgaagcagca agctttaaac ttgcttgagg gtcgccatga 660 acggccgagg ttgatgaggt agctgcataa gtcattgcgg ctactgacta gggggggtaat 720 cctgagctgc aaccgtaaga ttgtggccct gtcgtgggtc gagctagagt cttgagtcac 780 ctggactcgt gcaaaaacga ataaacagtg aggcgggacc cgagtggccg tgttggggca 840 gggctatagc tgatgtgcaa tacggagcga aagatcgaac gtgtttggct ggaattatgc 900 aaaaqccacq tecttaqeqq tattqctctq tttttgatat ctgcattttg gcctgccttg gacgcgatgc ggagagccct gcctgagagc actcgcagtg aacgggatcc gatttcctaa 1020 taacaaccaa cacaggegee tagagtegtg taacaatgge tttatetgga egeetgetgt 1080 tegttetege tateaggtte actetgacag tetetgegee tgatgttett gegeaactgg 1140 ttcgagacac gataatttcg cagacgtctc agtccttctc taatcacctt tcgcttcttt 1200 tgtttgagcc tggttgtcgt tcagccctct ttgagtggtt gatctttcta aagacgcggg 1260 qaaaqctqtt atcctqtaqq taaqqaagcq tgcggagacc gaccaattgc tagtcgcgtt 1320 gctgaaggag tgaagtaacc caccgggggg aaataagcaa atagagaatg aaaagcaagg 1380 aaattaatgg taaatcaaaa taatatgcaa gtcagtagtg gtgtccgccc tgcacatgta 1440 ctctgatggt agcagagcc ctccgcaagt gtctttcacg gtgacagcga ttggaggtaa 1500 gagattgacg teggetetgg ttggtgaact ceaeaggtat gegeaatgge aegagagtea 1560 aggeggaatg etcaaggatg ageteaggea atgggggtaa gegtegaega gggatgagea 1620 ctgccaatgc aggatcgcct gccagcgcag tgatgcaggc ggtccaaagc ggaaggaaga 1680 gqacqaqcta qatatcggaq attggaccga ggaaaagatg gtgagggttg taagcgttta 1740 gtgcgaatta ggcgatccct gagtgtccca atttcttgca gttacttgag caaggacctg 1800 caqcagaacc cqcaqqqatq aatqtaaqaa agaqaaqatc atgcgacgaa agacagggcc 1860 ggcgctgtcc tttgcttaga ctgcggggag tgaagaaggt tgattcggga atcaaaacga 1920 agatgteggg aagcaatata agaatttete gatgtteegg ateteeegta gtgtttetga 1980 atcttgttct tagtcgattc cgcggcagag ctgaggttgg gagaaggaag cgtcagagaa 2040 agattttgga agggettaat tatttcgaga aaccgatgga tgtttcagtt gaaagaaagc 2100 tgagagagtg gagcctgcgg tgacgtacag tattgccagg tattggtaat gaatcaacca 2160 gtatggtatc ggtaacggtc acgttggtaa tgcttgtctt ctatcgaaag gaaaaaagca 2220 2228 aaaggaaa

<210> 2189 <211> 2061 <212> DNA

<213> Aspergillus nidulans

aatgtctgat cccgtccgac ctaggggcag gccagcccgt aagttcaact taacctgacc 60 attaatgcag cgcttacaat aaacgaacct agacacaccc ggaacgacgg ttctgacata 120 180 tacccctgac ggccgataca ttatcactgg aggctcgaat tccgcgatcc gaatctatac 240 cgatggagaa gatggggaac ccaaaaccgt ggaagaaggc gccgatgcac atctcgctat 300 aggagctacg gtaggcgcag cttgtattct tagcagctta gggatgcagg ctgatatgcg cagaatgagt actttttat gggcgccgaa gacggcacag tctggcagta cgaagtcaag 360 420 tcggggagaa tggacaaact ccttacacgc actgcgctgg cagtgcgcga tatcgccatt acgaaggata atggatgggt tgctgtcgcg agcgagtaag ttgactaccg cttaccatga 480 540 ctttgacggt atcagctgat gcgggctagt gagcttactg taaaactggt gaacatcgag 600 gacatgacca aggtcaagta tatgagggaa cagacaaagg gaacgaaaca catcaccttt 660 gacccgaatg gaaggtatgt tgcggtgtcg tgtacggatg gaatcgtata tctctactca atggacaccg aggagcccga actggcgcgg aagctagacg gtgtgatccg gcggctcgaa 720 cccgaagatg aagcgaccgc gagggtggtc tggcatcctg atggtactgc atttgcgacg 780 gcggatgcga gccgggatat tgccttgttc tccgtgggcg agtggaagaa ggagatgtcg 840 ttctctggtg gccataatgg ggatatcacg gccatgagtt ggtctcctaa cggggcgctc 900 atggtgaccg ctgcaaagga cggccaggtg ctgctctggg aaagtaagac gcagaagatt ctccatcgat acaactttcc aaacgtgatc aacctcgcat ggcatccgac aaagaacggt 1020 gtctcactca ccacgtcaga cggagagata ttcatcttcg acggatttgt gcccaaggac 1080 taccaagete taetteagaa geegetacaa geageaceta tattteeegg egeattgaet 1140 gagatateeg ataatgtgea gegaeeettg gegagtegge etaaggagge actgegeagg 1200 ggcagcattg actcgctaga tgatatcctg ggttacgacc aagacatgga agactttgtc 1260 gaagacgacg atggagctgg ttatgttgag gatgtcaatg ggttcgggaa gcgcacgaac 1320 aagcatctgg gtgatattga gggtcatatg gataaacgga cattgacatc gtttccgaag 1380 ccaaagatcc accegecact tcaacetggt ageacgeett ggagggggaa tegeeggtat 1440 ttatgtaaga gcaccgtctc ctaacatgtc acgtactgac aggataggct tgaacttgac 1500 gggtgctgtg tggactgtgg accaggaaac ccataatact gtgacggtgg aattttatga 1560 ccgggaactgcaccgtgactttcactttactgacccgtttttgtatgatgggcatgct1620aagtaagtcaactattccggatgtaatcgcctactaacagcatcagatgaaaatggggct1680cttttctcaaacaatccagttgatgatagccctgccacgatcttgtatcgtccgatgaga1740cgtggacaacgcgagcagactggaaaactactctgccaaaaggagaacacatcgagggtt1800ggggcagtttaagttttgggattagaaattaccacgcggcgctgggcttagtgattcgac1860attgtcgcataacccaaaaacttggtagggttttcctttttggccactttaggggtcca1920tcagaaaggcacttttctttcaaatttagccgaaaattccaaaagggtttgtttccgg2040gggttgttaagatttcaaatc2061

<210> 2190 <211> 2079 <212> DNA <213> Aspergillus nidulans

<400> 2190

catctccaca tgaagcttga cagtgcaaaa gtgcttttca caaacttctg acttcttcgg 60 gtgtgccaca gagccgctga tgagcgcaaa cagtctgctg aactgggagt gtgtcaaaag ccagaactct tgggcgtctt tggttcggtt ggggtgctcg tatccagcca caagcaggcg 180 cctgagaacc ttgagagcaa taagactttg ttccatagct tccggaagcc ccgcagtgcc 240 ataattaccc tgctccaggg caggggccca tgtgttcact ttatccacgt atatgccacc 300 gagaacatga agtatttctg gaacaattga ttgcaggctc tgtcgtgttc tctgcaaccg 360 agctgtcgaa agttccttga cgatttgtag gagaataata agcgtccgcg gtaactgcaa 420 cgggttcgcg ccaggttgga cagatgcgcg gagggaatcg atgacggcag gaattccttc 480 aggeetttaa eatattagea acaagttaee agtaegtgag aaagaetgea eteeteaeea ttcttgcggg tactcaagac gcatgatctt cgcgagcacg aacgcgttgt gaagagccag 600 gaggggggct ggttcgacaa caccggcttg taaggccctg actttgatat ggtctttttc 660 ttctttcttg attgcactgc aaagctagtc agtaagctcc gcgattcctt tgtccggcag 720 gtgtccctac tttggtgctg tcttgcgcca atacttgtcg atcccgttct ttaactgtat 780 aatggcgagg tatcgagctt cattagggac tgtctggtct agaaacacat cctacatagg 840

ttagtacatt caaatatgaa aactgtaaaa cctctagagc aaagacccgt tggaagtgca tacctgaaga aacgtatagt acttttcctg cttctcccag ttctggagct gcttggtacc 960 ggtctgaacc tgctgctgcg tagagctagc agcttgcgtc aaggagttca ggacattctg 1020 cggcgtcaga ggatttgact ccccgccag ctcaatgacg tgagccataa cggaaatgca 1080 agaggagccc cgatctatta acaccgagat agtagctcca aggcgaactt atagctcaag 1140 ttcaatgtat gtgacagtct ctaagaccga caagccatag aaacaagaac gtcgaagcct 1200 aggagcgttt agctggttga cggtgtttgt ggcgcgtttt cggcgggcct gcagctttct 1260 tgcattgtac tctttatgct gactccccac ctgcggcata acacggaatt tagtttttcc 1320 gaaaaggagc cctaggttat gacccttgac gctagaccat attgagacag caacctaggg 1380 cttgagctct gttatacagc aaatcccatc tcttccatct acctgcctcg gtcaatacct 1440 tcacccgtca tgctttgaaa cgccccacat atgagtattg tttattaccg tgtagcaatt 1500 gaactcgaag ctccgcacct ttctgaatca gttaaagcgt accgcccct ctatcaaccg 1560 tacgcgggac atattgtgta cgccccatcg accaggtcag cgtcgagtaa taatgtggcc 1620 ccaccaagta accatcttgg actaagcatc ttagtgcgcc atccaggttc ttatattctt 1680 ctatgttttg cggagaagtt tgcggaccca cgcctccaat ttcagaacaa cgagacttta 1740 gaggttgaga cgggcctggg actcggaaat aatggagact ataaaaccat ggtcgcggtc 1800 cttggtttgg ctaatctgcc cagtgcttgc gctctgactg cttgcaaacc ctacatcagg 1860 atggcccaag tcgaagttcc aagcaccaac ggcagcggga agtctgtcga gactcgtctc 1920 tttatcaatg gcgaagtttg tcaatggccg tgctgcatca gtttgtgaaa taataatcta 1980 atggatatag ttccaaccct cgtccgatgg gaagacattc agtctgatcg acccattcac 2040 2079 gcagaattca gttgcagaag gttggcagaa gaattatag

<210> 2191 <211> 3386

<212> DNA

<213> Aspergillus nidulans

<400> 2191

taataaaaga agaatgaata caataataaa agtgaataat cataaccaat gtttaaagct 60 tgaacataac aaaaaaaggg tatccataca caggaaagga cagttagggg tgaaccatgt 120

caataaatca gtaaatgcac tccgggacag taatccgatc atgtcttcac atagatcagc tcgatcaacc tcgcagtcgt agttgacgaa tagttcgacc atgaagctgg gaatacgtgc cagtacgcca atgctctcta ccattgcttc tcgggtttct ggcttcctgg agcccccttc 300 360 cagtcccagc ttctgtcgat ctttcactgg cactggggtt gaccgcccgc tgctactctg cgagggaggg ggcttcacca atttaggcgc ctgtgggact ccttcgtaaa gggtaggatc 420 480 aatgcccggt tcccggggta tttctacccg tgggtgaaga cacgcgacta ggtaggagag atagagetet tgttggagtt teaataegga aegaeaggtt aaaateageg taeeagetae 540 600 tctgagagag ctggtgagaa tagccaggtt ctcagagcgg acaagttgga agaggtgacg gcaaaggtcg ttttgagcca aggatgctag gctcggatgt cttgcaatcg aaggtcctgc 660 aacttccaac gccacgtcaa ttatcctcaa ggccattact cgcatggggt ccgtgtgttg 720 780 tcgattttct gggtctagaa ggtcgatgag cacgcggaac agctctcgga tggaagccaa agagtaaggg ctgacttcct cgcccaggtc atcttcaggg ttcggtgggg cagcgactgc 840 gtttccattc agtggttgat cagtcgaact atcgtagctg gcgtgatcac gatccgtgac 900 cgcggtgtca gagcccatag ccgaggggtg ctgagaagcg actgtggttc cgtccacaga agggtccatt ttcaagtttg tttgttcggc gtcgtctgga cgttcctgtg gtgaagtctc 1020 gtcgtctgca gttgttgaag tggcatccaa cacggacagg cgcatgaata tgacctggca 1080 catattgacc atggctatct cggcagacct ccgcagcact tccgagagac ggacctgaca 1140 acacatgete ageccegttt ceateatete acagacaete teateteeca ggagttegee 1200 ctccggcccc gccagcatgc cctccatcaa tttcaggatc ctcaacaaga caatctcatc 1260 ggcggcggaa tcactggctt cgaaccggca gtgggtgatt gctgcagata gcagctgcat 1320 agccatcgag atcctcggag agttacggtc gatgatcttg taggagaaga acttggtcaa 1380 ggcgagcaaa gcaagagag tgattgcggc ggacgtcgaa gaggagcgaa cgacctggag 1440 gaacgggtgt aataacgctg gggcgtcaaa ggtcttgata tctttgcagt ccttgaggtc 1500 attccgtaac cgagtgaagg cggatatcag agggttatcc tgtatactct tgcctctctt 1560 cccctcaga ccccaccgat tcgcgagggc gtgatcatcg tccgcggaga gcctcgacct 1620 agagcgggta ggtgtagccc cattgagcgg actggaagaa ggagacaaat cacggtcata 1680 gactcgagaa acagtactgc tgccgagaat ggccgcaacg gacgagtgtg cccaacgggc 1740 atgtttccgc atggccgacg tgaccgtaat acattctgtg gtcactaagg ctacagggtc 1800 aacggcaatt ggcagagagg aggaagacat ggcgggcaga agcgagcggc ggagaatggg 1860 agtgcccggt agaggaacaa gctcaaatca tggccctgtt gattgcgtag tatatagatg 1920 qtcccaqqcc gatgtggatg tggacacaat tcagcagctc caaaggcgga gagggctgtt 1980 tacccgactg ggattagege attetttece agttaggett agecgttact attactcage 2040 aattaccgaa cacatacacc aataatgagt actctaatgt tagagctcag tcgtttggag 2100 tacaaggaca tgacaatgat cgctaatggt tctgtgtgga ttcaggagaa taattgcaag 2160 agttgcgaat gatatacata gttttggcaa cgagagatgt tggatcaagc attctgctga 2220 acqtqatqct qttactagta ctgttggggg atccatagtt aagcggtgtg gttcaggttc 2280 aggtgttgat agcttcagtt ccccacccgc accccgtaaa caaacccgag agctgttccg 2340 acgtgcagct cettgettea gagtecaata taategaaat cataataata atggccagga 2400 acaagggcga ccaccagcag cagcagtaca cgtgttggaa gtgggtgctt tctggtctcg 2520 aatggaatta cgccaggatg aaattatgtt agatctcgag taggcccaat gcaatagatc 2580 tacttaagcc agtcctctgt ctggagactg cctacgtact agtattactg gaaagccgaa 2640 tgcatcaqcc aatgctgggt gggcgcaagt catctggagc tgcatctcga ccacaacaac 2700 aaatcaccag ctcccaagaa cctactacgc cttgccttct tctgctctgg tggtctcagg 2760 qtctttttag qatcttqctc tqtttctqtt tcagaqaaqa qqqtqtqcta qtqactqttt 2820 ttctacactc cttcgtttct tctcctcatt ctcctcattc taattgccac cctcgtcggc 2880 ctcgatggag gggctctctt tcggcttccg tcgcattgac cgttcgctca ctcgttgact 2940 ctttccttct cqtcaqqcct atcqqctata atatttacac caccettctc tatcatqtca 3000 ctcatcgatt tcctatgttt ctagttttct agttttcqaa ccttggatgt gtctcgtctt 3060 egtegetete teeteacage tgaeettegg getgeettee aggtggtace ttggeeette 3120 cagcagtcga gettecaget caacgattca gtteetteee tegettttee tgagecaget 3180 cttttataaa tactcaattt aatactcgat ccatcgctct ttcccgctcg gtctctacgt 3240 gtcgcgcgcg cggtcaacct tccttgcccg ccatggctac cgcttcgtgt gccccctcgg 3300 accecetet egaacaacte ageetgtace atgtaaaaag accaategtt ategteegta 3360

<210>	2192	
<211>	2405	
<212>	DNA	
<213>	Aspergillus	nidulans

<400> 2192

ctggctaatt ttggaggatt ggcgtcgcgg cttgcccaac cacagcgcac ctcccgcagg 120 catgtggctc gatctggctt tgacatagtt atttacagag aagcccagaa atggccgttt caacccacgg agaaatctgg caaagcacgg ttgacagaat atttcggaat gagaccgtcg 180 tatctgagaa ttcccctcgg cattctcatg gcgcctcaat cttaccttgg tatttaacag 240 300 attaacagat taaagccagc atcctatcgc ctcgactaga gaaaaaaagc actcttggat atccaaaatt gatcccacca tgaagacggc cggaacacgt gagctctttt accgcgagca 360 420 aacaataggt atgcctatac ccttctgcgt tatcaatcaa gtagtaactt ggaatcccag 480 cgaatcttcg cattgtattt ggtaaagacg ttgatgtcgt gacctgcaaa caaggctatg 540 agagcagatt tgtcgcctta gcatatgtgg ttggggccga gggagagcga attcaagtca 600 tgcagtcgtc ggctttggac gtcacatatg cactacggga cttgcttgct ctatcgtcac 660 ggcgtgttca ggcttatttt gctgaccaca accatcaagt ggccaaaaat gagttagcaa cctgcagcat tgtcttgccc cgaaaaccag agtcattatt agagctcaat caacccacgc 720 ccctgaagta tgacqtqctq cccqaqqatq aqqcqqctct aqaqqaaqca gqtgqqgact 780 accttgaage tggtaatgta attaagateg geaactaata tgteeteaga ageaaaceeg 840 gggggtcatg aagcagagac aagttcgtcg actccacaat acctagaatc atgtaatgtg 900 gaacaaaaqq qctattcaat ccttctqatt attgagcatc ctttccatcc gccttttggg ggattgagat atattggagc ccctagccgt caagtgattc tgcaagctat ctccaagatc 1020 atgtccgaga acgggttgtc gaacaccgtg tatcatatga agactttgtg cgtcaaatcg 1080 gataccggat catacgatat ccttggctat gagtatgacc acatcgaaga cttacttgac 1140 catgtcctca aatcagaaaa atttgcaaag attgagtgtg tttatgggat tcctgcagcc 1200 taatgcccat gttgcaatgg ttcttaccaa tgcataccgc aaccacgcta tctgcccctt 1260 caaaccttgt cgtcgaatat atctgcaacg atctgacagc attccttcct tatcgttcca 1320 gttcgaactg tttcccacat cgtctgtttt atcttgtcat cgccaaaatt tattaaaatg 1380 ccgcgcaatt tgagctttcg ttttgactta tacgcgttga tttcccctca gctcacatca 1440 aaaagtccag catgaggcca tggcgatctc taaggtgatt ccacatagcc ttatgcgaat 1500 caaagcttcg atggttattc aaatacttgg attcacaatc aaaacagtac cagatgtgtc 1560 catggctatc cgcagctccc aggcgtccag gacggtggat gaagctagca tgatggcggc 1620 gtaagtgctc gatcgcttca tccatgccac aaaagtcttc ttcatggtct gtacacgtat 1680 attccatgat attggacgat taaaagacca caccagaaga aacctggtat ctgtgagaag 1740 gcagagtatt gtagagcagc ttaaattcta gatcataggc tcttatattt tgataatagc 1800 acggcgacag atgatattgg gatgcgtcat aatgacacgc tggtaatatc cagggtcttt 1860 cgacagaaat gtggacacga aattgataag caagaatctt ttgaggcctc atctccaaga 1920 tttcactttc ctcctccct acagagagcc aagttgcccc agatctgaag cctggagaaa 1980 ctgaatcttg gcgaatcatc ggcccactcc aaaatatata tccccagagg ccatacacaa 2040 gctcctgcca atagagcacg tggttaccaa gctagatagc aaagtatatt atgagaccta 2100 tatgtctcga cttaaatctc tacctactcc tgtgttagct gaatgccgtc tagtaaggtg 2160 aagctccggc aggtgatgat gtccggagta tcagcgaagt ttcaattgct tggtaaccat 2220 ggtttgtttc gtagactact ttagcaggac cagtcgcgca acctggagga tcaatatgag 2280 tgggatgacc agtgcggtga cgggttaagc cacgatcacg ctgatagcgc aagagtgggt 2340 gactatgggg cacaacaagg atgaccatga tggccgctaa atccaccttc gtccccaaac 2400 2405 tgaga

<210> 2193

<211> 1832

<212> DNA

<213> Aspergillus nidulans

<400> 2193

atgcgtcggc ctaggggttt tgtttctttg atatgttgta tttcccaact ttctgtctta 60 ttataatagc tggtctgtca cacagttcga ttatgtaata atttagatca atgattcgat 120 tcatgacatg ttctataagc tattaccatt gtacccatga caatatgttc tgtagaattt 180 agaaatgtaa aaacgtaagc acccatcata tcatcaatca ttgcagcgcc cagagctagt 240

atatctatat ccaacaaccc gtctatgact tcttgaataa ctgaggaaag catgtccgca gctcctccaa gcttcgaatc tggaactgcg aagccggagt ctcagggaca ggaagtcccg 360 420 gctctacaag gtgcgccacc tgccacccgc gagccgcggc agccttgcaa ttcaggccgg 480 agtcatcttc gcatccgtca gcatctagtc caccccaacc ctccacagtg agaagaaaga cataccaaca aaataacact gactettate egtagegeeg gegteettet eegeettate 540 600 atacatcaac tgggacggct tacaaataag cggcggattc gcgtagtcgc agtatgtgat gccctcgaac agatcgtcta cctgaagcag cttcacaacc cgcttgccgt ggttcacgta 660 tgcgtttgtc agaagccaaa gctttacttt gtcccggtcg atatcttcta ggagctggcg 720 cagcttcggg tccggcttga ggatgttgtc tagtgggagg gcgtcatcga caaggcggtt gaattcgagc gggtcaatct tgtggtggcg cgtaaggccc tctatggcga gaccgtactc 900 tttgtagtat ttcatatgaa gcatgtgggc gtcttcagag ttgagggaga gatggtgcac gaagaatcta tctgcgcgag aaggtgttag agggttgact ccagacttct gtacgacttg 960 aagagttgca cgtacgaata agcttttgca tctcatcgtg aatgttgttt tctgcgccaa 1020 atctcgggtt agcaggcaat ccaacgcatc gttaccaggc gcggggtcgg aaaggggagt 1080 tegaacttet tgagtaaage tggattgage acttgteage ageggaegag ttaattetgg 1140 aatctgtgta cgcacacaat tgtctatatc aaagaagaag actggacgag tgtccgtcat 1200 tgtgctgaaa ctgttgactc tatttgacgc aagtactgat ctccggttgc gagagggaat 1260 gcgggttgag agtgagcaat atgcgggggg tagtttgtat gcgcggaata cgggaatgga 1320 gttggcgaag cggagaggcg cagtaaaact catcttctac tgccttatga gtcacagtcc 1380 gcttaccaat gtctatatga gcggccttta ccaattttgt atacaaccct ttggtaaact 1440 cgctacagtg tcggaatcct tgaaatgcag ctcatggaag cggcaaaaag ggtttagcgt 1500 catttgcggc caagaatctg ggcaggtgat cggttttcca gtcgccaagc gacccgaagc 1560 tacactgcgc cgactacaac tctcgagttt tatccagctc agttcggttc agcttaactt 1620 cagectacte gegteteagt gactggttga tecetaaaga caeetggeaa gggeeaaagg 1680 gacaggagaa ttctgaagtc tgaactcgaa gagggctagc aagagtgcta attgactgtc 1740 tggatttgtg caggtgcagg gatacagtat tcatttttta ccagctccta gaacatggca 1800 1832 gcaacccagc ttccggcgag gagcgctgga ca

<210> 2194 <211> 3541 <212> DNA <213> Aspergillus nidulans

<400> 2194

ctttctattc ccaggctgaa catgctttgg cgcgactgtc tcttatatct ctctacagat 60 aaccttcaca gtgggtatta tacccatctg aaagccagtt ttatctatgt tatagatatc 120 ctccttagtg atcctatact tcttaatagt actggaaaac tggcagaacc actcctggaa 180 tagctcagga ttatcatatc ttacttactg atagttatat ttttatatat atttagagct 240 tagctctgca tgtcagttaa cataacaatt tacccagttt tcaccaactg taggattctt 300 tgatagagat aattatgctg caagtagaag ccacgctagg tagtgaacag ttgatatttg tggaggaaga ccatgctgac ccatatcaat aatccatttc ttcaatgttg attcctcaag 420 atctgttaat tttctgcaat tggcaattac gtctttccga gaagctgttc catgagccgg 480 gtcatcaaag tccttggtag tatatcaaat gcctttgcag cagcggtttt tgacggaaaa 540 aggcctgagc tacaagcatc gatagctagc ttcatacgcc cttcttttga aagctcagcc 600 atgttgttgt gtttgaatga tgaactggta aaggggtggc cgcgttgttt ggcggtgacc 660 gcgcagctcg gtggtggatt acgttacggc tgacggctga atcagcgttg gttctcccgc 720 gaatggccag ttattagcgg gagtctagtg tagacggcgt actaggaata agtagcgccg 780 acactgccgt atctggctcc agcgcgccaa aggacgtaca atagcatgag tccgctggct 840 tettttegaa agtttaatat actateatet caaagtaeta tggtegeatt ttatggtege 900 attaggattc acactccgaa gctcgagaca gctcatgtag gttaagcctc gtattgcagg 960 gccattactg agggttcgtt gtctagggag cgcacatgtt tggagagatg tgccactcaa 1020 aaaccggccc tgagaacatg ctaggagcga aggttttaga cgctaagact attatagctg 1080 ctttaagcta tctcgtgaga atgatcatag gaaaggtaga gagaaatgtt gcgccgagaa 1140 ttcccgctaa ccgcgcgttt ccgacataaa ttatgtatga agaggtctct aatacctaac 1200 caggcggtcc atagtctttt tatgctagtg gtcagcgtac gcgttgactg ctcaatgagt 1260 ccccggctc gttgaacttg ccaatgggcc gtgccatctt agccattagg caaccctact 1320 ggtaactagt tcagcgtatt tggcgcccag agagaatccg atcagccagg ttctattacc 1380 catttctgca ccgacgaaga catgtcttat aactacgagc agcagcatcc agactggggt 1440 gtttcttggt tgctacaggg cactagtcaa actgaacggc agaccgaact gcatccctga 1500 gqcqqqaata aatgtactgg aaagttgtgc gaagagaacg ttcaccagta atcttatcag 1560 acaggteett gaetetteae egtegegage agggatgeta aactggtggg aaatategat 1620 getgtteege eetaggeegt tagggeatgg geegeteegg eecaegatag etegtgatga 1680 agaaatagac ctgatggata ggccacacag cagctctgtt gatactgctc gtcgtcgctc 1740 tccttactca actatttcca gtcctttgtt actaggcccg ttctttccgc tatctttgaa 1800 catcttaaat gccaatccct teggtgatec acceteatae ateaagatgg cegaettgge 1860 cqacttqqcc qacttqagtg ttgtcagatc atgtcagcat cgccggtaaa gctgatgtag 1920 gaatccgtgt gaaaactgat atcacagtgt ggatgaagta tcaatagctt tctaatcttg 1980 cctaagggta acaccaacca gaacccaaat tagacatacg ctactccttc aacgcatcat 2040 gtccccaatt ctttaaactg cgatagctct tactccccgt atcctgcttt gccttctcct 2100 cctgcgcaag gtgtctcttg cagtacgaga ccacgcgacg catatgatcg atgtcctcgt 2160 ctgaataccc atcagggtct ttcgacgggt tatgctcgag gatggagacg attttacggc 2220 cgctacgtac cgataaacga acattactca acgtcacagg gatagattgg gggcgaattg 2280 ggaaggcaag gatgggtaga taggtacctc tcatgcccaa tcgtctcgcc cgaacctgac 2340 tegttettee atectgaega etgegagtgt teetetttea geeagtegeg aagetegtea 2400 gcagtcatgt tgaccaagcc gttgaattcg ctgcagtact gttagtctgg gctgcgtggc 2460 ttagggettg geagateage eaggetagaa geaggtaagt aeggaeteaa taaeggtaet 2520 gctgtctttg accattgtgt gaggtgtgaa ctggaaatat cttcgtgagg agagagctgg 2580 gaaqaqtcqc aqtctqatca tqtaaqaaat accqtacqaa attqtaqctt cqcaqqtqaa 2640 atgacggcgt tgcgatggtc ttatggtagg gagcacggtt gacgtcatga ccagcgattc 2700 ttaaqatgat cgatcgcgga gacgtcaatc ccgagtcaga aacagaaaat atgagtaaat 2760 gagetagtgg gaagtgeggt cattaaaagt gatagataac tacctactgg gttggttctt 2820 ccatgcatat ccagacccat atagtgggaa ttcgggaacc aacgcctggg caccttaatg 2880 accoegetge tttcgacetg cegecageta agaacetata gaaatggetg tgaaagagag 2940 ttcccgtatt ataccggaca aatcctagga ccctgaattg tatcagattt gagtcgtgta 3000 gggcccgtcg ttccagaaac ctacagttct agattagttt catgcaatca gccaaaccgc 3060 agttcagctc tcgccaattt gtggattctg agcaaatctc ctgtgcatgt gctgtctgtc 3120 atttgcaggc agtcaaggct tcctgcaaat ctcacgaatc tggaagcgac tcaccagcag 3180 agagcttata gcttggctaa tcttttcagg ctgttaggaa cagcttgcct atcgacacta 3240 ttggtataca ctggcgactg ctagtctagc atgcctattg ctaggcttt tagtggtggc 3300 tattgccttg aggatatagt ctaacagcta acttatatgc cctggacgct ggttattccg 3360 gatgtacatg gtctatatat tcctattctc gatcatacta ttcccggatc tatccgttg 3420 gtggaatctg gaatgagca atggatcacg agtcaggtga cgggaatgat gggcatttat 3480 attatctgag tgggtgagag gtacatataa cctaacccta tactcacaag agcctagaga 3540 g

<210> 2195 <211> 2121 <212> DNA

<213> Aspergillus nidulans

<400> 2195

cattcaatqt cgaqcatqtq cacctcatca atqaataaqa caccaqgaat aatctctgcc 60 ttaccctcct ccttccactc tgcaacttta acattgatct gatctctaac ttcactccta 120 atctccccag tgtcaccaga gaagagcgcc aagaagccct gcgaacgcga gttgatgaca 180 tcaatctcat gcaagctcac tgtgtgtaca atctccttcc ggacctgaag ctctcctcg 240 gggcattgga cgaatttgac gtcggcqccc atagcatcgt aatcgcgaga tcgggcatag 300 gagegeecca gettggttat ettgeeagae gaettatega tegagatgat gteteeagee 360 ataacccttt cttttgtcat cgaatcgatc atcttcgttc ccatgtcgta aattgtctcc 420 atgteggtgg tttttatggt gagetteect tgtttgttge eetggaacga gteagtacag 480 tottaacgcc tttccctcaa gtgacttacc ccagtaacgc tccgatcaat ttgaatctct 540 accacttcac cctcaataat ctcgctctct tccttgattc gcacaccgat ggattttcgg 600 aaagettgtg teagggeett egtttttgae attteeatgg agaaaattte ggaggeagee 660 aacatggtga acggaacatc gggcccaagc gactgtgcca tacccatcgc aatagccgtt 720 ttacctgtgc tgggcgggcc tgcaattagg acagcccgtc cagcaatttt gccttctttg 780

840 accatctqqa qqataactqc agctgccttt cgagccttct cctggccaac aagaccctga qaaqccqqtc tcqqttqcaa cqaqtcaaca tctacqccga gcccccgaat gtgtgagtga 960 gcagcgatga ggttcagacc ccggagttcc ttggactccg cgacggtaga aattggctat ctcaqqaatg agcaatgaag aatgataaga cacactatag agacaaactc accgcagcca 1020 tgattaaacq tcgcaaqtaa aaacagccac tatcagttaa gtgtctcagg gaattggatt 1080 geteacegee tggcagaace egetegecag acgegteaag cegtateaac aateaatgaa 1200 ttagagtcgg cgtgaaacct ttttttgata catcacctca cttccattta atttcgcttc 1260 qtttaaqtqc ttcaqccact ttctaatcta tcaacccaat tttctctcaa atcgccgtga 1320 ttcttctcqa gaatttttca tgagaagttc cttggtcatc tcagagatgc aattcccaca 1380 tgaaqtqqqa aqtqaqttca qcaqaaaccc gcattgagag agatcacgta ctgactcttg 1440 ctcttactcc tagattaaaa ggctattctc ctacggtctg atatgaacct cgattcctcc 1500 gtttcgcqat cacgcgaccc gcgccgtcgg cctcccataa acactaacct gagtcaaaat 1560 gaagtggccc agcaacgacc teetteagge ecetggaate acteatetee agaageacaq 1620 catgatgtat ctgacgaccg gtttatccgc agcatttcca acttcatcga gacggccgtc 1680 aaaacacgaa caaaagtagc cgaaagggaa catctatcga aaaggacagc agaaaccaag 1740 gacttgctga ataaggcgag ctcccacgca gggtttccct cgactgtaga gttctaccag 1800 cacaccaaqg atggcgaaga caaagctcta catagtctca acagtgagat caagggtcat 1860 gaaaccgagc ttcaggaatt ggagagcgtt ctcagagacc aatgggegge ctctgcaaat 1920 tecagaaeet eeaegteega tgacagggta egacaaetgg agcaateeet gaaaetagee 1980 aatgataaaa tttctggttt gcgtggcgat attgcaggat cccatcgatc gtaacaagtc 2040 attggatgcc gaactgaaaa atcgccagac ttgataggcg ctcaggaaaa gtcatttgga 2100 2121 gggggtttca ccataagcct t

<210> 2196 <211> 2185 <212> DNA <213> Aspergillus nidulans <400> 2196

60 ctttcctcct ctctacctct cacctcgatt cacttgacac tcgtgtgcgc ctcattctct geeteetett ateceggege acceaatete tetetettt ttacetttt egetetettt 120 cacttctctt acttcaagca ttcctccctt ttcattggtc gattcattat tgacttcatt 180 cttcgtcaag ttgttcgagc gccagcgtcg ctctacagat tagatcgcta tctcgctgcg 240 tocagaacco gtttaccoto accoatogot tocogatata gtactgtotg toggtttact 300 agaaccatga gctcttcaga tgatgatacc ccactcgtca aaatgaacgg tagatcctct 360 ggtaagtcgc ggcttgttct tgtcaaatct gatgcgcttg cctcttttcc cggctttcct 420 tgatatttta ctcggttttt tacttcgtcg attcaatctt aattaatata tcttccggat 480 aaaggtggtc aatcggacgt gaaggtgaac ggcgcagcgg acaccaacgg tcacgtcgat 540 600 cccggtgtct ctatcagatt tgggccggtg cagaaagatg aggacgttga aatgaatgat gcgaacggcg ccagtgcgag caagaggaag gcgcgatcaa gtcgccaatc aggcgcaatc 660 atacgcggag cccgaaagca gtgaggagga cgaacctctg gtacggccac ccaccaccca 720 gatcactacg gcattcttgc catcgttgtt tgcttcaacg gctgactccc ccggcagagc 780 aagcgtcgac gcactttggt gaaacacgag gatccggaga ctgacgacga tgtaccactt 840 900 gcacttaatg ggcggaagct tcccaaggct tgggagggag caatcggcga agaatccgac tctgatgttc caattgaaag gaaattagct gccgaaaaaa agaaaattta agtcaaggga 960 gaaaaggacg cggatccatc tgcacaggcc accaagtcag cggcttttgg aaaaaagcaa 1020 gcgaatggag tgaagaaaga acctgccttt gctaagcaaa ccctgaagca agtaaaggcc 1080 gagccaaagt cagcgcagtc aaccccagca aagaagaacg cgaaggctac ggcattgaag 1140 aaggaggaaa gcgaagaagc tgaagagcca gaggaagaag aatacaggtg gtgggaggat 1200 ccaaccaagg gcgatggaac aatcaaatgg accactcttg agcacaacgg cgtagttttc 1260 ccgcccccgt atgaaccgct tcccaaacac gtcaaaatga aatatgacgg cattcctgtc 1320 gaccttcacc ctgaagcaga agaagtggcc ggcttttttg gcagtatgtt aaactcgact 1380 cagcatactg aaaaccccac gtttcagaag aacttctttg cagattttaa ggaaatcctc 1440 aaaaagactg gtggcgcgaa agatcagaag ggtaacaagg tcgatatcaa ggagttctcg 1500 aaatgcgatt tccagccaat cttccaatac tacgatgcac aacgtcagga gaaaaaggcg 1560 ctgccacccg ctgagaagaa acgtctgaag gccgagaagg atgcacagga ggctccctac 1620 atgtactgca tgtgggatgg tcgcaaacaa aaagtcggca acttccgagt cgagcctcct 1680 tcccttttcc gcggtcgtgg tgagcaccct aagacaggtc gcgtaaaggc tcgagttcag 1740 cccgagcaga tcaccataaa catcggcaaa gaggcgcgcg ttccccctcc acccgaaggc 1800 cacaagtgga aagaggtgaa gcatgaccag gaaggcacct ggctagccat gtggcaggag 1860 aacatcaatg gcaattacaa atacgtcatg cttgcggcta attccgacgt taagggtcag 1920 agtgactaca agaaatttga gaaagcccgc gaactcaaga aacatattgc tcggattcgc 1980 aaggattatc agaagaatct aaagcacgag ttgatggtag agcgacaaaa ggccaccgcc 2040 gtttacctta ttgaccagtt tgctcttagt gctggcaatg agaagggcga agatgaggct 2100 gaaacggtcg gctgctgctc tttgaaatat gagaatgtca cgctcaaacc tccgaacaaa 2160 gtgatattcg atttctcgg taagg

<210> 2197 <211> 1838 <212> DNA

<213> Aspergillus nidulans

<400> 2197

aatttgcgtg ctctatgatc ccactgacgg cgtcgacgtc gccatcccac ctcgctaccc 60 agacctgtac agcccgacct tccgcgttga cagcgtcatg atcacggcgg gagtcgttga 120 gggggcgaag tgcgttgtct cgggcaaccg cgtgtctgac aacgcgcctg tgactcttgt 180 cacggttgat ggccggaaga actacgccaa gttccctcag ggagttgcga agccggagag 240 tctgaagatc aactgcgttt aaatgggggt tgtactgtta atcagttctg atatttcgac 300 aaatteetgg ttgtegttee tteatgggtt ggeegeeegt ettateeaga tggtgttaat 360 ttctttatat atcttatata gtctctcctt taattgctgc tggtagaagt tgtttatatg 420 atggatggaa ttgcctacta tggtcttttc gtaattttca agtgctcttt tgactacgta 480 ttataaaaat gaaaagccta atttcctttg agtcagtctg cctctggagc agtcatgctt 540 gtgccgactg ctccgtggtc tatggagcat cgacctcgcg taatgcctaa gttggttgta 600 ttggtcaaat tccaaggcag acgctatacg aatgaaatgc tcgtccactt atcaatacct 660 tgtcctcatt acctaacaac taagatagat aagccaggta agggttattc cttatctact 720 tcagcattga acaataagag cagcaagccc ggcaaagggt cttgaccctc cggttggaga 780

agaagagacc aatataataa tctctcgtat tgactccagg ctatggacga atagtaaagt 900 qaqcaqaqtt cattetetaa tatcaactte ceteaattte taaaatagag etatatgtaa ctgggaaaaa gcaatccaaa gatcgctcct tcagctggcg cgagtaacca cttgccgaca 960 agtgctattc aactgcgaga acaagagtag aatacactga ttacgattct taccaggtaa 1020 tatggttcat ttacgcatat atacgcttca tcacagcagt taatccaggc gtccagtgga 1080 atgctggtat gggagataaa acattcatag cccacttgca ctctagaatt ttggcaacta 1140 tatggcatcc gatatactaa gttatcttat taaagctctt gcacgatcct atctacaata 1200 gtgttcgtgt agttccacaa catagtcgag taatctgtac aaaacgtata ccccgtgtag 1260 aacgtactag cctggccctg cagcccataa agcttcttat agaatccccc tttgacatct 1320 tetacegaaa ceateaatgt etegggegag tgegaegeaa atgetgeaat eteeggetee 1380 tggccgtcct tgatcccgaa ggtcccggca gagctcatcc gctttaggtc gtcaatgatc 1440 agggcccgcg cctcggcctc agtcaggttt gcgtcgccga tgatcttgtt catgaagtag 1500 cccgggacgc cggagtactc gagcgcccag ttgaaagggg ttgttggcag gctgccgggt 1560 tgattggtgg gatcggcgtt gaggatgttg aagtcattgg ggacggcagt gttggttagg 1620 acggcggcat agtagttcac gtatgtccat ttggagaaca gggccgactc ttgttcggtg 1680 aggtetaaac eggeeeggtt ttteageace agtgggaace egataggggt ttttttggge 1740 aattcatttc tgcgcgcccg tccggcgttc ggatgaccac ctgaccccgg tttgttccgg 1800 1838 tggtcgggcg gccttggatc taaaaaaagt gttaccct

<210> 2198 <211> 2171 <212> DNA

<213> Aspergillus nidulans

<400> 2198

caaagtctgg gggttcattt tactggcatc agtctccgaa cgctcatgga aaatctcaaa 60 cctagactta cgaagggtgc agacggcagt cagctttcca cgcgggagac ttttcaagat 120 ctttttggga ttctatttcc tgcaactggt gggatatttg cgtaagtatc tgtctcaagt 180 ctgctggata tcaggcttat ctgggtagtg gtgcaagcat gtcaggcgac ttgaagaacc 240 ccagcagatc aataccgaag ggtactctct atggactggc tctgaccttt atcctctaca 300

360 cacttgtgat tttcgcaatg gcggcttcct taacaaggga ctctctatac aataatgcca atatogtgca gattgtaagc ttccaaacga ccttgttcat cacaatctga catttttagg 420 caaatctctc tggggctatt gttctttcgg gcgagttcgc aactagtttc ttttctgctc 480 tgatggggct gattggatct gccaagctgc tccaggctat tgccaaagac agcttgcttc 540 600 ctgggctgaa tctgttcagc aagggcacga ggaagaaaga cgagccggtc cgcgcaatta ttqtaacttt catcqctqct caactgacta tgctgtttga catcaaccag atcgcgtcgt 660 tcgtcacaat ggcgtacctc atgacattct tagtgatgaa ccttgcctgt tttctgctaa 720 aaatcqqatc tqcccccaac tttcqtcctt ccttccacta cttcaattqq caqacqqctq 780 caaccqqtac cttqqtctqc qqaqctaqca tqttctttqt qqacqqqqtc tacqccactq 840 cgtgttttgc tgttttgatc acactattct tgctgatcca ctatacttct cctccgaagc 900 catqqqqcqa tqtcaqtcaq aqcctgatct accatcaaqt gcqtaagtat ttgcttcgtt tgaagcaaga gcacgtcaaa ttttggaggc cccagattct cctctttgtg aacgacctcg 1020 aacacgaatt taaaacttgc gctttctgta actcactgaa gaagggttcg ttgtttgtgc 1080 ctggccatgt tattgttacc gacgatttct cgttcgccgt gccggaagcg cgccgacaac 1140 agaccacttg gacaaagcta gtcgagagct tgaaggtcaa agctttcgtt aacattgcag 1200 tatctccttc agttgaatgg ggagttcgca atattgtact gaattctggg ctaggtggaa 1260 tgcgacctaa tatcgtcatt atagaccagt ttcgggaggg tcggtctctt ggcgagtcaa 1320 tataccacca taaccaccat tcacatttat tatcgccaga tgcttccaga tctgagtcgt 1380 cgaagaaacc ggcagactgc cggacctacg ttagggtgtt ggaagatcta ttgttccagc 1440 tacgtataaa tgttgccgta gccaagggat ttgaggagct caagctgcct gggcaacgtg 1500 gatcggagtc caaaaaatat atcgatcttt ggcccatcca gatgtctgct gaaataaacg 1560 ccaacagtga aacgaaacga aacattttga ctacgaactt cgacacatac acactgatcc 1620 ttcagctagg ttgcattctg aatactgttc cttcgtggaa aaaggcatat aagctgaggg 1680 tagctgtttt cgtcgagtat gaaattgacg ttgaggatga gagaaagagg gttgaaaccc 1740 teettgagaa gttaeggatt gaageggaaa ttetggtett etggetegea tgeggtgatt 1800 tgaaaacata ccgcatcata gtcaatggag accccttcc agaatgtcag gacgtccacg 1860 agacggtcca caaagtactg aagaatgaaa attggtggga ggatgttcag cgaggccgca 1920

ggagctcaga cgagtcgtta ggtttgagtt tgatgaacag gtctaggagc tcgtcccgtt 1980
ttgatgtctc gagtcaggag catcgccagg cacgccatcc gctggcgggc ggggtgcgga 2040
agttgataca gtcttccaag cgcaggcgat ctatttccag cttcagaggc atggggggtg 2100
ttaatttagg catgcaaaca caccgattgc tagatgcctc gtcgatgatg acagtagtcc 2160
gagcgacact t 2171

<210> 2199 <211> 2455 <212> DNA

<213> Aspergillus nidulans

<400> 2199

gttcaaacag ggtcgcagca tcagggcgcg caaggccacc gttctcctga atcttggcgt 60 tcagaacaga aagaacctca tcgggagtaa ccttggccac ggaaccggca gcaatatcct 120 tgtccgccat ggccttttcc ataacatcca tggcgcgagt ggccagctca cgaacctcgg 180 240 gaagagaage acggtccttg actgcctgaa caccgggctt gagcttgggc aagaaagtac 300 gagectegge ggggtegtgg acgagettgg teaaattete cacaacaaca acagtetgae gcagagtttc ctgaggagtg gttggcgcat tgagagagcg ctctagtaga ggagtaagta 360 gagccagcac gggagaagtg acaatggcga cgaaagtcgt ctgcgatagg gcatggatag 420 ccttctgcag ggtctqctcg gagggctgct ccatggtttt gatgagcagg gggatgcggg 480 gctccacatc qtcqttqqac aqqagqqtqq tqaqqqcqtt catgqccttq caqqcqcact 540 tgacaacatc gtttttgaga tcgtgcatac cagactcgac caacgggatg aggtccttca 600 gagtettgee catageetea eggaggaeat cettetegag etectgttee ttggteeetg 660 720 agcccatctg cgcatcaagg gccatctttt caatgagaca gtaagcacca acgaaaccct 780 gccatttgcc ggtcccgcgg ctcagatagc tggagatggc agggagtagc gcattgacct tggcctcggg tttgagggcg gcatacaagg catcgatggc gtactgggcg gcatcccgca 840 cgacggcacc cttgtcggcc agcgcatcga gggccaagtg gaaaacacca ccgtcttgga 900 960 gaaggaagac aacttcacta aggggatgag ccggagggaa acgctcaacc agcgcgccga ggattagcat cgcgctttcg cgtctggcgc cattcttctt gtcgagggca gccttcttga 1020 tttcagggag gataaaatca tattgggaaa acgagaacgg gccgacgctc tggatcagaa 1080 ggttggccag cgcatatgag gcatcaagcg actgctgaga agtctcggcg ttgaagatcg 1140 tctgaagaag ggaagaaatc tcctggggag cgggaggaac ggccgaggga gttttggcga 1200 caacggtagg catggctggg gtggactcaa ggtgcggcat tctcttgaaa ttctctatct 1260 tegtettgtt ageeteeaac tgaegeaceg etcaaggete ategaetgaa etcaegggga 1320 taataaatgc agtcaacttt tgcgggtata aaacaagaga aaaaaagcag aaattatgaa 1380 agggacaacg agaaagaaac ccaagaaacc acaagagaac gcgaaggccc ccaaaataca 1440 gggagagagg agatggtgag atttgatgga ggggaaactg gaaattttcc aggcgataaa 1500 gaatccatgt gcgcctcagg cagcggcggc ttaagttaat ggccaatgag agtggcaaaa 1560 cagaaaactc tgagtgtcca atcaggctcg cagccctgga ccggtgggtt cgactgtgac 1620 tgtgtccctt atcacgtgat tttagttaag gcctaggtta tcaggctatt ataaggcaat 1680 aattaggcat attaccccat cgaacctttc cgctttgggg ttaccccgca cgagacctac 1740 accepttet geteaaggge tteteteceg eteteegtgg ttgatatate tgteeetaeg 1800 tgtaattcta tggataattc gatgatatga ttaactcaag tgcaagagat acagcagccc 1860 aagtggtata gggtcgccgt actgttattg agctgtcata ccccataatt accccgtacg 1920 gagttgccga acccctcatg tgataaccga gcgacaacac caccggttta ttgcaattac 1980 acggaggaag ggaaatagaa agtacttcaa tgtagactat gagaggctta gtaacggtgt 2040 ctgcaagaaa ccgtcgatca ctccgttcat cggatgcatt gtaactggtg cagctcatgt 2100 gccggggaca gcctcggcct gtgcattctt gactccgcgg ccaaccggac cgcctcttca 2160 gctccgatcc tactgtcctc ttaaacattc tcacctcatt tccgtcttat ttctctcttc 2220 ttctctcctt cgcacagagc ctaatcactt cctcattgat tcacattctt cagttctcat 2280 acttetecaa eegaateaga ttettetega gatggetett eegeteegea eegetegtea 2340 tgcctcccgg ctagcccagg tatgttgctt tgtttagacg actctttttc tttttcatct 2400 2455 tttcttttcc attgctcaaa taaaattcaa tgagctaaag ttaatgcttg ataga

<210> 2200

<211> 1706

<212> DNA

<213> Aspergillus nidulans

<400> 2200

gccctcgatt ttcaagaact catcgaactc aagaacccgc cgtttacagc atgaccagcc 60 tttgctgcct tcatgaaaaa cgggctggcc ggggtggtag acgcatcgct cctcatcccg 120 cgacacgtcg ggtttatagg tgccgccaca tcccctcctc cggcaggtag cattctcagg 180 gatcgcaagc tcgggatcat cagattcagg ctcttcagga acaggcgtag gcgcattcga 240 gggaggaggg atagcaggcg agtgtgcgac aggccgggga accccgctat ctctgacagg 300 aaccggagca gccacaggag gctgtgactc ggctggcgta tccttctttt gggccggcgc 360 aggagtatcg tctacggcgg agtgttttcc tgtcgtgcag ggggggattt ccataaattc 420 ctcaaaggtg aggacgcggg gcttgcagca gttccagcct acattaaaaa ggtaagatta 480 gcgatggctg cggaggcact aactcagagg gtacttgcga gtaacatatc cccaacatca 540 aattagaagg accgatagag gaggtctact tacctttctg tccttcgtgg aatactggcg 600 ' ggcctggatg atacacacag ggctcctcgg ggtcggtgaa caccttccca cagcctttgt 660 gtacgcactt ggtggccatt gtggttcgcg gatattacta tctcaccgaa ctgagacaga 720 aagacgattg ggaggatttt aagaggacaa tgagggcgcc gtagaagtga aaggtggggg 780 agtcttctcg aaggagctga tctcgtcaga gcccaaaggg gtttagtctg gggaagctcg 840 aaggttccat tcggcttcct ctctccgacc ttctcagctc aacgccagtt acaacgactt 900 caatcaaccg aacaatcgaa ctattgtcct ttatacaatg tttcctacag cacgcctact 960 ccaagcccgc gtcacgctct tcacccgtgc cggctgcgga ctctgcgaca ccgcaaaaca 1020 caccytgacc cagctgcata agcgccggcc cttcgactac tctgaggttg acattatggc 1080 tccaggcaat aaggaatgga aagatgtgta cgaactcgat gtcccagtct tacacgtgca 1140 gtctggcacc ggggcactct ccgacccgaa gaaattgttc catcggtgga ccgagcagga 1200 ggttgagacg cttgtcgaca acgccgagaa aacaccatga gagtcaactc gtggattatt 1260 atgctacatg tgctacagca gttcttacgg cggccgacgt tatgataatc caaacgaccc 1320 gccttccgca tcgctgttcg ccgggtgcaa tatgaagtat attcagaatt ggatttatcg 1380 tgtccgatca taatgcaaat aaaacccgcc aacatgcgat ggcttatact tgaacggttg 1440 gatagcaact ggatctttca atccgttcat tccacccgaa tcccttgtga actgtgagca 1500 ggttaaaagg gtcgacccaa tttttgatcg aagaaaccgg taaagtactt ctggcccaaa 1560 atgaacaaag tggtgggctc caagggtcgg cctattttgt atgaccttcg tgggagtaaa 1620

ccccacagga taaaaaaaag tgtcctctgc aaatttggat acttgctcga agtggcctat 1680 1706 attcttgaaa aaataccaat tctccc <210> 2201 2236 <211> <212> DNA <213> Aspergillus nidulans <400> 2201 60 ccatatgaat geegegeaga gagtgatate gageegagea etggeegega eggetttttt accgcgacge caggcaaata cctcagctgg acaagcgcat acatcctcgt agtctcacgg 120 gtcatcggca gcggcatctt cgcgaccccg ggctcgatcg taaagtcatc aggcagtatc 240 gggctctcgc ttttgctctg gggcgccgga accgtccttg cggcatgtgg aatggtcata 300 tcgatggagt acgggtgcat gctgcctcgt tcaggcggcg ataaggtata cctcgagtat 360 acctacccta aacctagata cctggcgtct acgctcgttg ctgtgcaggc cgttctcttg gggtttacgg caagcaactg catcatcttt gcaaagtaca cggtgtttgc gttcggcggc 420 480 gcacccacaq agctcactca taagctcttt gcgacgggtc tgctgaccct catcactatt gtccacggcc ggttccgtca gacgggcatc tggatccaga acgtgctggg atggctgaag 540 atcttcctga tctcatcgat ttccctgacg gggatctggg tcatcctcct ccggccaagt 600 ggaattgaga geggtgeegg egetgeatet geggeaatgg ateagggett gatgaaetgg 660 720 gataccetet gggagggete aaactggage tggaatetee tttegacete getttteaag gtcctctact cgtatgccgg cctgaataat gtcaataatg tgcttggcga agtgcgcgat 780 cctatcegca cactcaagac ggtttgtccg gccgcactct taacatcggc ggcgctgtat 840 ttgctagcca acctctcgta cttccttgtt gtcccgctta acgagattaa gcagagtgga 900 gagettgttg eggeettget tttegategt etgtteggte egegtgtagg aggaaegetg 960 ttcccttttg ctatcgccgt ctctgcggca ggtaatgtca tggttgtcac atttgcgctg 1020 gtacgtctta tctcactttg attttctttt tttcacctcc aactacagtc ctaaagaaag 1080 ggagaacagg ceegagteaa eeaagagate geteggeagg getteeteee ttggggegae 1140 ctcctctct catcgaaacc attcggcacc ccctctggg gcttgatagt gcactacatc 1200

ccatcaatcc tggtcataac cctcccaccg caaggcgacg tctacaactt catcctagat 1260

gtcgagggct acccgggtac gattttcggt ctcgccatca cagtcggcat gctgattctg 1320 eggtategeg ageegtacet gaeeegteea tteaaagegt ggttaeeege tgtttggeta 1380 cggatcgttg tgtgcttggc cctcctggtt tcaccgttta ttccccctcc agggcacaag 1440 ggtgatgtgg agtttttcta tgcgacgtat gccgttgtcg ggaccggagt gtatgtccat 1500 teatettttg catteteatt etteetegta ggtteegaag tgatgetgae tgateatgea 1560 ggcttgcctt tggagtgatt tactggtacg tgtggacagt cttgcttccc agatggggcg 1620 ggtataaact cgaggaggag gagaaggtgc tggacgacgg aacagctgtt acaagattgg 1680 taaaggtttg agcatctgta gacattccta ctacatttca taggcgtaaa ctactttact 1740 acgggtcatt attattttca ttaatatgtc catacggaga tcgcttccaa agcatgatct 1800 tgcagcaaag tagtccagca ttaataatca gctgcttagt agctgacagc taggttgtgt 1860 tagcctattc ctgcctattc aaatgccttg gaaatctaac gtcattgatt agaaatcaga 1920 caaaacccaa ctgcatcctg tacatgcaac ggtatacagc ttgattcttg atcactcagc 1980 acagaatgga agctatccaa tcgtgccgct ttcaacttat cagcatactg caagcatctg 2040 tcacactgat gattgcgtgc tggcctgaca tattggcatt gcgcattgtc tgacccccca 2100 tgtggagaca tataatagta accggcactg agcacactaa acttcaggct cagatctcaa 2160 gactgcactt gtccataccg gttcaatact tagacctatt cagatacttc aggcattaca 2220 2236 ctgtcaaact gctaga

<210>	2202
<211>	4950
<212>	DNA

<213> Aspergillus nidulans

<400> 2202

ctgtaacgct ttagactcta aagtccccgc tgtcgtttcg ctgctgtact tctggtcgct 60 ggtgcttcga gacacgtgga ataaccggtt tggcgagaca ctgatactga tcgacgaaac 120 gaggtcatcg agggtaccaa tggggctacg gaagggaaga tgctgcagat caacagcttg 180 gtacgcaccg ttcttagtac ggtagaagct ccggtatttg cggctgcagt ccttgccatt 240 cttgttctcg gcgaacggaa tttcttcagt cacccgtga attttggaac ggagccgata 300 gccagtatag ggcagtgggc gccgattgta ggtacggct ttgcgatatt cgggtcgctg 360

tacctettee teacegaega eggegagaaa eegtetteag eetgeaagtg cacttgeeat 420 aacqcccaaq gaccaagttc acqcqqcaca gacccaqcaq cqtccacaaa caqcaqcqaq 480 ttagcccatt gtgagataac ggtcgtagct agccctgaac ccgcacatac ccatcctacc 540 caagaggagg cccgcgactt tggctaccgg cgcagcatcg gacgagctct caagcgcctg 600 gcagacacga teageattge egeteacgae egteteaceg actatgaett caaacaagge 660 720 coggecetty actiticoga gataccageg gaggageage ggaacagtga getaccgeag 780 atcogtgate agtataacct gaagcgagac tecaetgeca geegeaccet etcaagggtt ggctcaactg tcagcacagc ttcctggagg gatggcgagc gaagttcaac gacgtctcac 840 qqcatctctc cqcqctcqtc cagacaqtct acqcqgtcqc gatccccttc qcccttqccc 900 teteegtete gaagagaega tgaateetge acettteegg getegeaega tggeteteet tecteaageg atectectat ceteaacace egtaggegte agaacaceet agaggteeca 1020 ccccaccatg gtccggtgag acgcagttcg tcaatatcgt cagcctcaag ctccaacttc 1080 acaatggctg gaaatctaca atcgcctacc attcgggtct cagcagacga cgacggttct 1140 cctgtcttcc ctagacctgg ttctccagag ccaaaccaag aggtcccqcc tcacgcgttc 1200 cgtcacggag ggcggttcac ttcggtaata gatatttgaa tagagagtgc atatcttgga 1260 ctgcataact tetaaaattc geegagaget atattgactt ecagtgatec etatttett 1320 aaggacatgg ctttacggct agtatccaat cgccaactta tgacaaaacg tctacccaga 1380 acctagaget aaacgetgat ceggeagagg ceaacaattg tacactagaa ttagtegeet 1440 gtcggcgctt tcgcaagatc attggccgat ttgtcgggat tcagctatcc ccgcatattc 1500 tccagagtac tccaggtttt agtacttgtg ggtcgacgat ctatctcccc atactttgga 1560 gaagatacaa aggccagttc ccaatccttc gccaattgct ccttatccgc gatgtagctc 1620 tgtggctttc actggtggcc tgatttcgtg tattagccga gctgctttct gagtattaac 1680 cgcggatata cgtattgatt tacagtatca tgcagaatat ataaccgcag caccggctcc 1740 accaccaget gtccgttgtg gaatggaget cacacttett tgggcagate tegteattea 1800 cccttttctg caggcagtat gacatctcaa cgtgtcgttc cttctgaacg tgaggtcgct 1860 gagettegga gggtagaggg teagaeagee gateteatee geeaggegea agagagegat 1920 gaagccgatc gcaagttgac catccgtcag gccgtgaaga aatacaaaaa agcagtcttc 1980

tgggccttat ttctgtctac tagtttggtc atggaggggt atgacctggt gatagtatga 2040 ggccttggcg atcaatcctt gacggatact gactggcatc agatcacttc attctacggc 2100 caaacccagt tcaaggagcg tttcggcgtc tacgacccag cttcagacca gaagctgatt 2160 ccagctgcat ggcagtccgg tatatcgaac tcggctctgg tcggccaact agctggtctt 2220 gttgtcaaca gcatctgcca ggaccggttc ggctgccgtc gaacaatgat ggtcttcatg 2280 gtgtggatgg ctgtcgccat attcgttcct gtctttgcgc catctcttcc agtgctcgct 2340 tttggagagg cattttgcgg tataccctgg ggcgtatttc aggtaaatat ccgcgaagga 2400 catgagettt tettgtetga etttgettat agaegetgte aaccacatat getteegaag 2460 tagtgccaac agttctcaga ccatatgtca ccgcgtatgt ctgtatgtgc tggggcgccg 2520 gcatccttct ctcctctggc gttgttaggg ctgtagcagg actccagggc gaattgggct 2580 ggcggctccc attcatgttg caatgggtct ggccccttcc acttttcatc ggcgcatact 2640 ttgctccaga atccccttgg aactcggtgc gtcgggataa gatcgacgag gcaaggacaa 2700 acttgatgcg gctataccag gatatgccgg agcgagagca tcaagtggaa caaaccttgg 2760 cctatatcaa atacacgaca gagatggaga aagccgagac tgccaacgct agctttctcg 2820 aatgcttcaa ggggaccaac ctgcggcgaa ctgagattgt gaggttcctc actaccgttg 2880 tttctctggc ccaactgact ggtctcagaa ttgtgttgtt tgggcagccc aaattctctg 2940 cggaaacgcg atccttggat actcagtcgt gtttctccag gccgcgggct tcagcgaact 3000 gcaagcattc aacatcaaca tttcgttatc ggcctgttac attgtcggcg gcatcatttg 3060 ttggttcctc ttcccccacg tcgggagggc gacaatctac atgagcgggc tgaccttcat 3120 gttcttctgc ctggtcacca tcggaggact agcttggggt ccagggaaag acgcccagct 3180 tgccatcggt atcctccttg tcatttccac gttatgcaac atgattgcca ttgggccgac 3240 atgctacccc attgtcgcag agacaccgtc cggaaggctg agatacaaga caatcaccat 3300 tggtcggttt gtttataacc taaccagcat attcaccaac tctgtcacgc ctcgcatgct 3360 ctcctccaca tgtaagttgc ctcgatcgtc cttgtgcgca attctgactt gggaacagcc 3420 tggaattggg gagccaaggc cgccttcttc tacgcaggga ccaacctgct ttgcaacatc 3480 tggtgctggt ttcggcttcc tgagacgaaa gatcggacgt ttggtgaaat cgatctgctt 3540 tttacccatc gtgttccggc gaggaagttc aagtctactc atgtcaaccg tacgtacttc 3600

tcaaacttat tctgcttcgt attcattaac tgattgacag aattcgccca tggcggcgac 3660 tatgtgtcga agcaagaggt cgaacacaag gagaacgtgg aataggcaga gaagactttc 3720 gcagtattac catgaaactt ggaactttaa tgaatacttg ctctgtataa tggccgtttg 3780 ggataggagt gttgtgatat gagtgtcaga tagcaatgca tttctttacc taaacaaata 3840 tctatcttct cgccacacat tccggagcta gataacaggc attgtgacca acagtactgc 3900 tatgcctaag aagcatggcc gagagttctg tttggagaat aaatgcccgt tcctatacag 3960 ttgagcgact gaacgtgtag atggtctcgg ctgtaggcta accccacgtt ttggaaactt 4020 atactgacgg agaaagcgac caatcagcgt gcaagagccc cgacgccccg gttggagtca 4080 gcgcggggaa ctcaagttgt agacgcagta atagtcatag gatggccatg caaactgcct 4140 aagaggcgag atcgatgtgg aggacttctc atccactttg gacggctaat tactccacgg 4200 catcageteg gtetgattge agetggagte atacegeaga tggagegteg tatttacega 4260 atggaaagtg atatgttggt cttccggacg ccagacaaag ctttaaagtc ccatcacttc 4320 tcacattccg ttaagcgcaa ttcacagtct cagtaggtga ccttgtttgt ttaccatggc 4380 tttccagcaa gtgcctgtcc gtaatgtcaa cattacgtcc gccttctggt cgcaaatgcg 4440 gcaatgctcc aaagaaaaga ccattccagc cattatcaaa gcgcaaaagt ccttgcagca 4500 ttggtactgc ctgacgtgga aagagggtca cgagatccag cctcatgtga gtgagcgcat 4560 tcgcacaaaa tagagccagt actgataatc ctgcagcctt tctgggatag tgacatatat 4620 aaaatcgtcg aagcggcatg ctactttctt atgaaagaca aggacgacga gctgatggct 4680 actgttgagg aggcggccga catgatacga gcagcacagc acccggacgg ctatatcaac 4740 tcttattata cagtgcttgg aatcgacaag cgatggacca acttacgcga tatgcatgag 4800 ctttactgtc tcggccatct aacagaggct tgcgtagcct atgagaccct cacaaacagt 4860 ggacggttgt tggaaccggt actgaaggcc cttcgacacg ttgattctgt ttttggagcc 4920 4950 gagccgggaa agtagagagg aattgagaga

<210> 2203 <211> 2879 <212> DNA

<213> Aspergillus nidulans

<400> 2203

ccgatgatcg cacaacgtgg atcgtcgcta caacggcgta gtttgttggt ctccggtaca 60 cagectette agagatgaat tgetegteaa cagtgeaggg taggteggta tegeagtett 120 180 ggtcgttgat cagtactggt ttgcccattt ccaaggccat gatcctgaca gaaaattagt ccacaacaaa aatacgacag ttcttaactc cacaaaccta tcccaagtat acatccccca 240 300 ccaaacgcgc ttgcgcattt ccccctcaag tacaggccaa ggacctgact ccagatgtaa tectatttee tgageaaett taaeggegga teegtteeae acceagetag etgaegtega 360 attgacttcg taaagaaata tgctagctaa caaggcggcc cgcgcctgat ccaatgtgaa 420 gttatcctgc caaacatcga tcaccccgca agatgttctc acgtactctt tgcccttctc 480 ttcacggttc gggtctgaag tatgtaagga accaagggcg aatacactga acaaaacagc 540 tgcccactcg cgaggaactc ctatgagtga cccgcgacgg tacacctcct cgtattcttt 600 660 cataaacgtt ggccagtgaa tcacagggaa ggtggtatga atatgggcat gatactgagc gagaaggtgg tgggcaacgt cttgcggcgg aaggggggga gggtctgctg tcaacaggga 720 tatggagtcc gactggcgat atggcgtggg gactttccag attccccttc catagcgccg 780 840 tagattagcc ctagcattgg agagatcttg tgaaacagga gcctttggcc gacgcggcgg tctgtaacct aagtcaggta aatttatttg gagctgtcct ggcccgtccc cgtccagatc 900 cgtcaggtta tccgacctca tcccggaccg cagttgctgg agctgttgtc tagtcgacca 960 gagttgtttt tctagatctt gaacctgcct acgatcctgt cagaatgaca actctttatc 1020 gategagaat geaaggtaeg aacttgatag aggacatgeg tetgttggtt tetttagtga 1080 attggcatcg aaccttgcgg tttgtacatt ccgtacaact agcagactcg gaggcatcgc 1140 actagaagaa gagcgtagtc agagcataga acgaagacgg gaaatagtaa agcctcctgt 1200 accttgacct tgcgctcccg gcaggcatcg cagctagggt ccttccttcg ttgacggtac 1260 gccctcttct gctgtaatgg ctgctgatgt tgcgctagcc cgcctccgtg ccggaaaatt 1320 ccaectgege teacecegga gecattagea gatgeatect ggaaagttge ggegeeeget 1380 tccgatggag agacgctaga atcatatggc gagtatttcg ccgtagatgt tggtgcaggg 1440 ggcggctgta ggatgtggga catcggcaac ccgccgctgg gccttgctga ttgagtggaa 1500 agaaaagcac tcggctgcgg gcctggctga aatggcatcg aggaagtaac ggactgcacc 1560 ggaggcagct catagggagc gccattggta ttctgattag tccacgagcg tgagtaatgt 1620

ggctccatat cggtgtctca tagaagcctc ataggaaaca acacgcagag caagcgctga 1680 aatttgtcca gatccagaag gacctgtgat tgctcctcaa gtaaggggtt aaatgatttt 1740 cgtgacggaa agcagatgta tgtgcaggag cggggattca cacgaggaac aagatgacgg 1800 gcttggggtc aaggcaggga accgaggaaa aggcacgaca agaatagagc aaatcggaat 1860 caaccgtcga gaccgcaaga gagctagaga gcagcaaggg cctccccgat attcattaat 1920 gtgggatcaa gcgccagtcg cattaacaat aacaaaaggt gggactgagg cttatccgtc 1980 aacgacgccg ttggacagct gggggcatga agcaagcaca aattccggag ccagtatccg 2040 cagtaaagag ggtctcagat aaactaatgg cggcagggtc ggttcgtgaa gagaaaggat 2100 ctaagcgacc tttgattggt agaggagttg cgagattgag gaataacggg agaggtggaa 2160 aaggaggggc acgaggaaag ctaaagaagg aaagggactg gaaggaaaga cagaatcacg 2220 aagagaggaa gagtgagaga gcaaaagagt gagagaaatg aacgtgggag taacagtgac 2280 agcgtgggat tggaggagag gaagaaggat gatggtggtg gatggcggat ggttatagga 2340 agcgatccga tggcagaagg aataataaga atcgggacta catccaggct tcactggcgg 2400 agatgcaggc gacttcgaaa cgacagcccg actgcaagca aaaccttctc aatgcttaat 2460 ttggagaagg gaaggactgt tcactgtgat gatactggga ttgtagaata ctcgtgacag 2520 aagttctgac cattcatcca tccatccttc cgtccagatt ttgttccgcc caatggcccc 2580 aatcccatat tattcgcatc tactaggctc tagctgctct agctcactct cagttagaca 2640 gtaatccaca gcccctcagc ttcagtcaat cagcggctct cgtcagggtc catccaagcc 2700 caggaatcaa ctccgacagt tccaactcgg caggccccga tggccagcga aagcacgcta 2760 aatgctgaaa cgccggttcg ccgccatgcc agatcgagat tagaccatgt ccaaatcatg 2820 tgggtggaag gggaggggc ctgcagtctg cagaattcca gtcagcattt cgatgtggc 2879

<210> 2204

<211> 2306

<212> DNA

<213> Aspergillus nidulans

<400> 2204

tgccaaccgt actgcaccag tggacaccga acaaccctag taactggtag accagcagag 60 tttccggact ttctggactc ttttgactct gactcgcagt caaattaaaa ggcaaagcct 120

ggtttatccg atctcgcttt ggcttcttaa ggctgagatt gtaggagaat tagggaatag aaacgcaagc gataagctca atatcaaccg agcagttctc gactatggaa gacagtctga aagctcatat accgcaaaga gtctcccgaa tcaatattgg acaatctctg cagcaaattc 300 catctgggtt cactcaacct tgattgacac ctaatgacgg gttggtctag ttacagcttt 360 420 tgattggctc gccgaccata ttacatcacg tgatatcagg acacaaagaa cgtgagatcg cattcagtat gttggaaggg tgttgtgagt ctatatctac caaccactga gttcatggat 480 aaatgcccaa taggtatgcc atttgaaaga tatttatcaa gcttagccgc aggtcccggt 540 600 ctgaattcca tacctgttgt atcttttaca gcgtgatcac gaagtagata tatccatccg ctgctgcctg aggcgggaac gagagtcggg aagagacgtt tttccataca gctcgcacgc 660 ccgctgcttt agcgaaactc cgatctctgt ttgcttgttg tgattttacc atatgaagat 720 cgatcccact tctcagacca cgccctagca acaccccaca aaaagaatcc attcgaaggg 780 aaaaaatttc attccctttg tcattaataa aattgacaat tttagcatgc aataataagc 840 tgtcattggt ccactactca tcaccttcat cgtcttcgtc tcctaattca gcgtcgagat ccagtactic atacctaatc gcgccggcgt acaacacaca aatcgccctt cggccctgcc gtccattcac atcaatccta attggtcgag ctttggctgc gaactgatgt ttgactagct 1020 ggagggttga gatatcaacg tccgtccttt ccttcacggc atcgacgtgg tgaacgttgt 1080 gataattgat tgtaaattgg taagcagagc ctggtgggta tacatgtcgt ggtggttgga 1140 atgggagttg caggacgtaa gaggttccaa ctgcaggtat gttagagtga gaaagattcg 1200 ggattagttg atgtagacgc cacataccgt tatttgacca taggaccatc atattgttgc 1260 cttcggcaaa atgtacctgg cgaataatgc cctcatgaag attgattact cccactcgag 1320 cetetegggt ggaactgaeg eegtttteea tgttgaggae caeteggtaa aegtgtagta 1380 gatgetttga egtegetaat ettgaageaa eatatateae aetegattge teteegette 1440 cyacatecte gtagegeate gtegaatega aaacegtttt ateacattea tgatgtageg 1500 taagcggtga ccgatgcagt ataccgcgtt tctgggtcac tgcaatctgg ctgaagacct 1560 tgtcgaactg cagcccaaga cgttttgtga ggttattgag cttggggagt tcaaccagtt 1620 ccgcatcagc agatgctttg ctttgctggt tcaacagttt cttgaatttg tcatagaacg 1680 atctggtatc tccgtctgta gggacccaat tgtcctctga agggggaggg ggtcttgcga 1740

agcccatcat gggtaactgc tggatgtagt ttegtagcga getettggte aaggegeete 1800 tgatgtactt tagagtcagt ggatatteca etagateagt tttetecate aattettega 1860 gagtttgtga catgggttet gcactaagca teteaatttg gtgacgcage caacgegaaa 1920 atgcatggaa etgggteaac tettegtteg eggtgatgag gatgtgatgg getagaagat 1980 gaagacagte gagegteteg acgatagcat tgaggteega ggtetetage ecaaggacet 2040 egeteagett etggaactte gaaaggeega ttageegget aagtagaace teegtgtge aategeegge caatetega eegeteegge eggtetetage eggaagaegega eggetettet teeatettt gtgaceetge atecegttag eettetage gagagteeaa 2220 ggaagaggeg ttaactacte gtteeceeae gatgacegta aaaaatteete aagggttaaa 2280 acaggaccag tgacateaaa tatage Etgatges 2306

<210> 2205 <211> 1326

<212> DNA

<213> Aspergillus nidulans

<400> 2205

tatcgcgcaa taaccctact aaggatcaag ctcgtatcat tgatatctta aagagtgaaa 60 agtccagtac agacaggtaa agactctcaa caacgttaat ccaacgaaca ggagcaagtg 120 ccattatcca tcatatcata cagtcggtct agacttgatc accattattt cttttgttgc 180 agcactttca cctcgcggcg taatcgggta tcagcaaatg cggggctcga atcctcccag 240 ttcccgccaa acaccctccc aatacaccgt ccactcgacg agccgggtgg atggagcaat 300 ctgaaataac aaaccaaaac agaataagaa tactcgagaa aaggaattag atagttgtag 360 ctcctcaggt tcccttaacc ttgcgcttga gccaaccaaa gaagccgctc tttcgcttgt 420 cggccttgga ggtctccgat tgagcagcag cggtttgctc cgtggtggtt ttgccctctt 480 cggactgcgc ggcgccatcc gattgcgctt tatcagcaga ttgtgactcg gcagccttgg 540 cctgttgcga tttctgggtc gcagcacgcg ccgcagctgc gctctcgctg agtcccgaag 600 gcttctcagg ttgagtctgg ttggaagcag ccggcttatc agcagcgcta gaggtggccc 660 cagtggcttc gctgacaacg ggtgccgcat gggccttttc cggtggtgtg acggcagccg 720 ggggcttagt cacctcaggg gtctccagct tggacttgga aggttcctca accttctgct 780 tgtcatcccc agtcggcgca gcggttgcag ctgcagcggc cgctgtgggc ttggacactg caggetectg ttgggetgag ggaactgtet tggattette etgageagta gtaccaacag tagcagcagg gectgttgtg gcatcagegg tagtettgee gactacagae ggeteettet 960 gggccgatgg cgtctccttg ggcccttcta acgtggcggg tgcctccgag gtgccggcgc 1020 ctacagccgc agctgcagct gtgggctgag tgaccgcagg ctcatccgtc ttggggagag 1080 ccttcgcttc ctccttggcg ttctcagtgg tagagtcaac agcagtagtt gtagcagtgg 1140 tggtcagagg cttttcctca gccggtgcgt tctcactctt ggcaggttca ggagccttcg 1200 cgtctgaagg aattgtctct ttctgagcag taggaacttc ggaggtagca atagcctcca 1260 cagetttagg etecteegag gteteaaceg caggagtage etecttgttg ttaacgaegt 1320 1326 tgctgc

<210> 2206 2331 <211> <212> DNA Aspergillus nidulans <213>

2206 <400>

gccatgtgtt aaagcgtttc cgtttctgct ctaaccggaa ggcagtacca caaccaaacc 60 agcataacac ctctatacta aacaccacat ataacatcat gcctcgcgga gtcgaatacg 120 ctcaggacaa ccaagtgtcc gacaacacct tcgaagccgg tgacacgaag gttcacggca 180 240 caaaccccga caacgaccac atgaaccgcg tcgaccgcac agcgcccatg cctgaggtga ccggctcctc ggaaccgtac agtggacagc cccattacag taacctgcat ggcagcggca 300 agggtggaca cgagcctaag acactgggcg agaacaaggg ggtcggtgcc catgggtgtt 360 taaacggtta tgaataggat tatgaggatt tggactagtt gggccaggcg cctaacttcc 420 aaacacatat aatttttttc tcgcaccttc ctgtcggccg ccattgagtg gagggctgat 480 attggagttt atgcattata taaatatatg attgaaacga agttaagaac ttctgcatcc 540 gaggaaacct gtttcaatcc gatttgtagg atatattgac acgaaatagt aaaaaatata 600 taatctatgg acgcatggaa ggacaataat taatatatac agtcgctgaa aggcgcacac 660 atggtgatga ttataggtac aatatcagtg ctggccctgt cccttggcct cattttgaga 720 ctggggtgag ccttgccttg aggatctttc aggggactct tgagctggcg cttctgtcgt 780 cttcttgtcg accagttcca acaaacgttc gcccaaatct ccgaacccgt ctatcttgct aagtttggct tgaaagtact ccgcgtcgcg gtgcagccta cacaaatcag tataactttc gacaaatgtg ctggaacggt gtatacctct gctttccaac ttccgtcttg atttgagcct 960 cqtcaaacqc ccqqqtccac tqqtctcqat aactcttgaa gaccgggtcc atgatcatta 1020 tgactgtcat ttccggcaga tgtttgctca gtactcggtg taacgtgccc gtctccttcg 1080 taagggtete catgtaegga etaacaeeeg egggeeggga getggaatee eagtegattt 1140 gccgcatcgc gttgacatgt atggacgatc gagatcccat gatatccaca agcttttcat 1200 ggatgccgga ctgatgttcc tggtacaacc gcttcacctt gtcgaaatca gccatcaagg 1260 aagcaggcgg tgaatgtcga cggacaaatt ccctaatgta ggggaccagc gcgatgataa 1320 aactcaatgc ctgcgaagac aacgcaagat gtttcgttgt gatgttcttg agaccagcgc 1380 tectqqtaqe ceceqeacet aggattaget gegatgaeeg egagttgaat aattttagtg 1440 attctagaag accagacgag atgtctggta tcatgttggg tatgtttgcc atcaagaact 1500 gatactette gatgettete ateategeea gtgetgagte tgagagaata taettttget 1560 categateae ggeagacegt gtetteteet teteettgga geeattgaet geaggagaat 1620 gtggtggctt ctgctccttg gcaacccaaa tcttagagac gtcaatccag gtgtcaacgt 1680 cttttgtgct cgcacttaaa atacggtcaa gaacctctga ctcggattct ccaaagtctt 1740 ttgcgtccca ccgatcagcg tccattacct gtacgatccg atgccgttgc tcgttaccga 1800 accggttgat gaagtcgcgg atctggtttc caacaacggt cttaaaggca gttccacccc 1860 gaccagaaat agcctcgcat tcgtctgcaa agaggcggtt caggataaag tacttgacaa 1920 aatctteett geagagattg geegtetget eggateggae etteageaet ttggtegeet 1980 gagactgcgc gatgtcgacc gcctgaccga gcagactgga catgtccaag acttgtagga 2040 teteatettg agetgeatge ggtatatece gegggeegge attteegaea ggegaettag 2100 gactttgaag acttcccagt ccactggcta tgtcaaggag gacttttgac ttggacactt 2160 aacccgtcgt aaagattcgc taacaccagt gtacacttgc gcagcatgtt gtatgcatct 2220 teggeateca tageceggag ggtaegggea agaatggaeg aetteteetg egagetaage 2280 tgatgagatc tgtgagtaga aaccgacacc atgggactcg tatcgcgcat g 2331

<210> 2207

<211> 2665 <212> DNA

<213> Aspergillus nidulans

<400> 2207

60 gaacaatacg aaggactttg cctttatgag ccgacatgct cattcgactc attttactga attgactggt cgtttcatca tcccggcggg cgggagcggg tgtgggagcc tccgaacgcg gagteggett gttaaagtea tetteetett eeteggaeat gttaaceteg teateegaat 180 gttcaatagt ggacgataag cttgctttct gagcgtccca aattcgccga atagacgttt 240 cataagactt ttgttggcgt gcaacgttat agctgtggcc gcccagctcc ttcaaacgtt 300 gcgcgtccaa tttgtcttca acactctcac caattgcttt gaaccctcct ttcattgatg 360 tettgatgaa aetgaaaeet teteeaegte etgtagggte teeetegeeg tgeagtttea 420 gcatagcttt teettgegae geeagtaaga agtttegaet ggeetteeae ggegeeattt 480 540 gttgctcaaa actttccgac tcctcatcgt tatcgtcgtc gcctccagtc tcagcatcat tgccatatcc ggtatcatgc agatgttgtt gaccgacttg catcgcctca agaagacaga 600 660 cgtcttccgg ttgcacccat gatcgtatga catcctgctc tggtacgggt tcaagaggca 720 cccaatattt ggtgtcttta tcatgttgaa ggaaatcctt gaccttctgg cgattctgca tgtcactcgt gccaggaatg tgagcagtga cgtcgcttat ggacagccga agtcagggct 780 cttcttcagt aggcggtaaa ccagcatctt catccggttc tttgcaaccg tcgtaacctt 840 ccgagagtgc ggacccggga tatcgacaga aggaaactgt tgcccagcca caaatatgtt 900 atcaatgttt cgaatgtagt agtcactacc acctgaacct gtactattgc gaatgacaag 960 gaaatcagtg gattttggtt ggtgggagaa caaaggcgcg cgatacatgg cgttagagat 1020 ggcgggtgtc acttecccag gatcaacgtg gccgaagatg gaaaacgggc tettgteetg 1080 aggcagaaga actgcggttt ccccaatctc ggccttaggc cgggtagggt cttccgcgtt 1140 cttcttccta taataattga tgatacggtt ggccataccg aaatttgaga gggtgagtgg 1200 tgactcctcc gaatattcaa ccaatagaac atgggagttg tctgccatcg aaagcgattt 1260 ggtcgagtcg tagagctggc gaatatcctt gcccttctgg tgcttgcgtt taatataagc 1320 aggattettg aaccaacage tetgteeagg tetaaatgat aatgetggae ggtggaaaga 1380 tcttgcttcg gccttagcta gctccgtctt gtagtaaggc cactgcaaac gtaatgcggg 1440 catactgtgc tctagagtga cattacccag agtgctgcga accttgttct gatggttttg 1500 tttaagcatg tcgtaggcct ggtcgtttga aatgttatag cgcgctgtga gacgccgagt 1560 aacgttggca tccatctcat ctctgctgcg gacgcctgat gctctgggtt tcgatgcagc 1620 agtatcagga cctcgctcat caagcagcat gtatgggtcg ttcaagtcca aagtgacctt 1680 ctgcgcaacc ttggagcttg cttgctccgg atcgtcgagg agaggcaaat caatatggga 1740 taatgaaact atttccatgg gatctcggcc gagtttgcgc ttcttggctg gccttgttgt 1800 ctcaaaaagc cagtcatcct cggcgctctc tacaattgca ggttcgtcga tatccatagt 1860 ggggatgtca tcccgaacat cccagtccgc gcagaccacg cgaagatcat ccgcggtgat 1920 gcctccagga agtggttcgt cagattcgta atcaagatca aactcgtctc gagcctcttc 1980 ttcctcttct tcctgcgatg tctcggcaac tgggacaatg ccatggtgct cggcttccaa 2040 cgagcgcttg aacgtttgac cgccagacct gaaaactttc tcctgatcct gtgctaattc 2100 gatattcact tttcctggca gaaccggctt tggcggcttc agtggcgttt tgcctacgaa 2160 ataggccttc ttgtgtggaa tcaattcaag aaaacgaggc agggtattgc gctcgaacat 2220 gggaaataaa gattggagca gttcttcgac attctcaggc ggcgccggag gattgtctgg 2280 accaacgttg gacatggcaa acaaagcttg ctgtaacttc caggcacgta gagaagcagg 2340 atccatatca tcagcaacag gacttaacgg ttcatcatcc tgcagtaatt cctgatcctc 2400 gtccatctga atcgcctgtg gtcgctgaac tgccgtcggg cgttcgttcc tcctcaaaga 2460 ataaatcccg ggtctcgtcg gctaagtcag ggcgcggtga tgaaggtgcc tccccaaaca 2520 agtcatccag ctcgtcgggc gcacgtgctc atcttttcca ggcgcttcaa ataagtcatc 2580 ccgccacctc cgaaaagggc atcatccgat gtttccggag cttcaaggcc attttccgcc 2640 2665 actgctcgtg cgttgtgttg ggtga

<210> 2208 <211> 2545

<212> DNA

<213> Aspergillus nidulans

<400> 2208

cgcactacgg atcctctctt actccccac attcggagaa gactctgcga gacccaccag 60 aaggatacag tcggcctgac taatgcacgt ctgcgtccac ggggagttca cgttggtatc 120

agcgatatat agaaccatcc catacttttc ctccaaatcg gccaaatact gcgacagctt 180 tagcttcccc attctgctaa aagcgtgtcg gcccaggtgg ttcaagatag ctgcttgatt 240 cagcgaagtt acaccatcgg taacgccaat ttgctgaaga gcactcagca gccgattgcc 300 aaactcgaca actgggacgc cggtcgttat gggaaggata ccgacagtgc ggagattgag 360 ggttgacgtt gcggttttga cactaccggt attgccaggt tcgccttgtt cagtcatggg 420 gttttcaacc aaatctcgca ttcgttgggc aatgagcttg gagacctgaa ttgttatccc 480 agtgtgttct tgcgcaagac tgttgaagag cgatcgagga aattttgcca gctcggtatc 540 600 tegtattgeg tgeaacgtag eeggeegtgt egattetgte ateaetteea actegeeeac gctctctcct tgtccatgct cgccaaccac ggtcatttta ccccccttgc cctcgtgaac 660 tgatcgaagg cggccgttta gagtaatata aatagcatca ctttcgtcac cctggtggta 720 aataacttgg ccagcattta cctggaccca ctccagagcg aaatcgatgt ggaggaggag 780 gcgcggaaga aggcctgtaa gtctctttgc caacgttaac agggcaattg ggtaccgctc 840 agctaatctc tctagagagg cccgcggaag gaacccaacg taaacatccg tctttgcaac 900 aacatcggta taagaacggt aggatgccat ggcacccaca tagccttgca ttccaccagg 960 cttgatcatg taaagagact tccgagaagg tttcttgcgc ttagattcgt tgatgggcgc 1020 tgcagcagtg gcgccgcgtg atgtagccgt ttgggttctt ttcagcgtcg gaaataattc 1080 ttcatcaggc tgggcatgac caggcctgga tgccccaaca agatcgtctc ccttttcgtt 1140 aacctgaact ccaacgtcca gaaagccgtc tataacgtaa tagagccccg ggtggcgttc 1200 acctgttcta ccagaaccgc tccttttgga aagtaaacga tctctatatc attaagtagg 1260 tcttcccgga gatagacaat tggtgatgtg ccaccagcgc tcgtgacaga cattgacatc 1320 attgactcgg tatcgccgtc gccagaccct tcgtaggcat caatgaatcc aaatgcattg 1380 ttgctgaaga cggctttctg gcgacgggaa tcatatgaga ccagctttgg ggatagttcg 1440 ccggagtgac tccctttgcg gagcgcatta tgtgagctgg gggttaaccc tatgcctttc 1500 atgatacaat ctaatattga ttcacggaat aaagcatctt cgtcgactga gtctttccgt 1560 tgaagggaag agcgacgcag aggggagcgt tctttctcag tcagcggaga atgaagtcta 1620 ggggtagtag cgaactgatc atgtctaggc ccgaaacgag aaagttgaat ggtggaaagc 1680 aagtcacctg ggctaactcc agccgtgtcg taaccatgaa aaggcctttc tgggtttata 1740 agetgagttig gregettigg tagtggcate tittgettiga gageageete titteetaca 1800
aaaeteateg aceggegtet teggeeggeg taggggttat gragtgeaat teecetggte 1860
acetteeteag ageetaaacg gretitetet titeagaaatt titteetaa teggetetaaa 1920
getgeteeae ggatateatt eggeaagtea taagtigtaa acettigteat etgeteteaa 1980
atgeegagga ceteatiggt gagacegagg taggagtgag eegitgeaaa titteeteet 2040
tigaaggegtig taaggateae etggatataa tigggeggtag eeetggggata gageeggete 2100
aagegtegaa aggeaettige tiggtatigate gegatiggtig tigteeaceat tigeeggeta 2220
tiggeegttig ggtggtatga agaggeaegg eteteeceta gatgeagagg tiggeaeegge 2280
ggeagggget eageeteaee attaatiggeg gaactateaa etteagaate teetgggtagt 2340
aceatiggeg ateeateea eatteeaeet ggaetateea eteteagagte gggggttigt 2400
eggaeggggae titggetgaae getggaeatg ettigagetag ageeeteaet tigeeegtaa 2460
egaatateet eegtaaacag ggataggatt gaaaacaagg atgaeatgga agegeegtte 2520
tteaetteeg tiggeegetg ataae 2545

<210> 2209 <211> 2055 <212> DNA

<213> Aspergillus nidulans

<400> 2209

atttcgccag aacaaagggt ttatgactct ttgtgagaat aattttaata agaccattga 60 eggteeettg tgaatgteaa gttgttettg tettetttgt eteeetgeag tateeteact 120 cgcagaactt tgtgacggtg cattaggaca tggccagcga gcttagtctg tttgacaaat qaqatqactq qqaaacctat agaaaagagc aactaaaggc atactacact gccagcccac 240 300 agcacataac gacaataact caaccacaat ccatgattcg gacattgaat gaaacatata tacaaggcat ctctagccac ggtagcgcgt tttatgtgca gtaatcctag tctcctactc 360 aagettettg etaageacaa caecataaaa aatagtageg ecaagggtea eeaggttgae 420 caagctggac agtccatgta gacgaccaaa cttcttgttt agagcaatca tctccttgga 480 gtgaggtggg gggtegtage tettettgee gtegegggtt tettegeega geatgteagt 540 gatcctaacg acctagccag agcattttt gtttatttgt gagacatgta cataccctga tgctttctct cccgcatcgt atcgacagta agcttgcgca agacaccaaa gtttaccaga ccagtgatga atgccgccgc gagcgggagg aggacactga attggttctc tcgttccagg 720 agccccgaaa taccaagcgg ctggccgccg cgggaggcag taagtgcgac tacgacaggg 780 840 agcgcggtct ggagagcgaa gtaggtaggg aatatcttgg cttggagagc tgaaaactga gggcgcggaa gggcgcggaa ggcaataatg ccggagacaa agctctataa ttgttcgtta 900 gagaccattg atatgtatgc gaaagagatt ggcatgtacc tggtagagct ggacaccgag aagggagccg tagctgagtc gcagaagtca ataccgggct cctcaatgtt aggttgtcga 1020 gaacagacct taaaatgtgg aaagggcggg ggtcgagcat tttgactgct attattctag 1080 atagtggaat tgtgctccaa ggtgacggag tgctgatggg gcgatagttt aaaagctgga 1140 agtctaggcg atgcagatgc atggtgaatt gcgggaccat ccgaggttcc gcggaatgat 1200 atatccacgc gtgggctgac agatgagcat tatttccacg taaagctact catgatagct 1260 atacaaacgc acaattacta tgtacacgca cctcatgatg tcatgtgcca acgtgttgag 1320 gctgttccca atcgggaaat atcgcgcgtc tgcctaggct tcgcgcgatc catagcctgc 1380 tgcctttggc tgactcttta tcaatcaatt cgccgcggac cccttgtatt atcttaatgt 1440 ttgcgtctca cacatatcat ggcggataag gaagcaacag tctatatcgt ggacgtggga 1500 aagtccatgg gcgagcggcg aaatggccga gacttaacgg accttgaatg ggctatgaag 1560 tatgtctggg actgcatcac gaataccgta agtagctcac gctatggtta taactttttc 1620 tgaccgctat aggtggctac tgggcgcaaa acggcaatgt tgggcgtgat tggcctcaag 1680 actgacggta agatatacct cccgtagaag aggttcttat actaaaacgg ttgacaggta 1740 ctgacaacga actgggagac gaatcccact tctctcatat ctcggtttta tcggagatta 1800 agcagtatgt agctttctag gtggatatgc ttgaatcaag ctgaccaccc gtccaggttt 1860 cttatgtctg atattaggga actgggtgag cgaatcaaac caagtagcgt cgacaaaggt 1920 gacggtaagg aatcctatgg cctaatttca acctatactg attatccagc gatatctgct 1980 ctcattttgg caattcaaat gataatcacc cattgtaaaa agcttaagtg gaagcggaag 2040 2055 attgtcctta tcact

<210> 2210

<211> 2803 <212> DNA <213> Aspergillus nidulans

<400> 2210

ctcaatacat aaagacatta agggagtttg ccagaaaggg ccgggaatac cgcaagcagc 60 aagatgagat tgataaggaa aagggcgtgg ttgttttaga tggtttaaag ctttaattcc 120 tctgcgcatg aggtctgctc tttttaccat gctgtactat agacaaattc taggcgtaca 180 tatgttgtac cctgtattat aatccatatt agacgtgcta tggtctgaca tgcctggcta 240 acattctaat attattatgt ttcgttctcc ggcgcaattg tccctgtgct tgagctagtc 300 ctcttctcta ccttgtacag ttatgttagc caatgatact aaaattgatc aaatctgcct 360 atgatccgat tcatgttgac aatcgacact atatatacaa gtctgctgcc taatatatgt 420 acacccagcc tgcagatacc aaaatgctag taagtagtag gtaacaacta atatgtcaaa 480 caagatccca accagacagt caaatacacg aataaccccg ccccgtcaaa aaaaataaaa 540 600 tgccattaat atgcaaacgg aacctttgat gtgtgcgtgt ggttatccca acgctgttat ctatatcatt atcgattaat cgtgctgaga catatgaagg accaacgtta tgaactgctg 660 720 gacagcttca agatgatctg tgtatggtca tagaaggcca gccagatcgc gcattcagga acgaacgcaa catgtataac atacagacaa atatctttgt ctgggttttc agatgattca 780 840 gagcgcagaa caacgctgtg cacagaataa acgagatcag tgagggtatc gagcgcaagg 900 ggcagaattc caagcatctg cttatgttaa tagcggacga aggaatccaa gcgagtggtg 960 gcgtaaacaa agctttaatt ggtataacga ggagtagttc cgagtggtga gtagcagcaa 1020 tgatatttgg gtcaatcaat tggctcgttg gtcaattgca agaaccacat tcagagcgag 1080 gtgtctcagg acttgtgaat gagttaacgg agctctccaa ggtcaaaacg cggtggtgac 1140 caatctaaag ttggtggtct gtctccaacg catactgtgc ctttcatggc ctccattttc 1200 tttcgctctc tcgaagatag caagcctctc agcgtagagg aggctgcccc ataagtgctc 1260 cttgcgcttg cgcctgttcc agtgcttgtg gagacagtgc ttgaactccg ggtactgcgg 1320 acactgctgg ttttgctcac agcggatggc atcgtaggaa ccggaagtgc agaacgagaa 1380 ttcgaagctc cgtagtctgg aaagggctgt gaagcgatct ctggatttga tgataggtac 1440 ggcgatttct ggagttcatc gtccaggcca ttttctacat caaggctttg gaatatttcc 1500 aggtgcggac ttgagtctgc gacactgatt tgcggggcag actgtggcgg catttgagat 1560 ctttgttcct gtgtgtcatt tgtagatagc gccacatcga gcttgagctg ttctagcata 1620 gtcccaagac ttgcagcggt tgcaggtcgt ccatcgctct cggcgtcgtc gccgacgaag 1680 tcggtgccgt ccttgctgag accattagcc agattgaaat tcctaaatag atatcgacgc 1740 agacgagaga cttctgcgtc ccattttgca ctcaaagact gcatgatagc ctcgacctga 1800 tcatccatgg gtggtttgga gctctcaaca gccgaaagcg agcttgcagt agcacggata 1860 tgaccatagg aacgtgagtg cttggccagt ttactgttga ctgacatatg cttggcgttg 1920 atcgcagcat gtaatgaccg gcgtagagaa cttgtcgaag gctgagagtg cgtcaagtcc 1980 cgtttgacat tggcgatttc ccggcgaacc ttgtcaagtg accgggctct atcgcaatcc 2040 atacaagaca agcttaacaa agatcgatta ttctgaagac cattcacaag tactgtgaac 2100 gattgcagat tgatatcatt gttttcacaa tagacctcaa gtagactggt attgctttcc 2160 aggacagaag ccagagtatt agcgccttgt agcccaagtt tttggtgttc gatcctcaag 2220 actttcaggg agctgttttt cttcagacca gttagagcta gattgaggcc aattccgaac 2280 cgcgctacat ccagatgcgc attatccccg ctgatatcca ggtcctccaa agtatcattc 2340 tcttcgaaca tcaattggag cgacttggat gtctccggtc cagcgtcgta aggaagagat 2400 gctttcgaga tatcaaggta ttttagagtg cggttcttgc gcaacgcttc aaccaggtct 2460 tgaaactgtt gctccttctt gaaatcgatc atcctcatcg ataaatgagt tggcgtttta 2520 tcttgagcaa ttgcatcaca aaggtacgag cagccaagat ccagccggtt gtcattcaca 2580 tggaggtgga ggtcgcggct gtgctgcaaa gccgccagtg agtgcaagaa aatagctaca 2640 tcctgcccgg agaggccgca ctgatcgagt cggataaccc gcagacattc ggaccgatcg 2700 cttgcgaggt aggtggcaat agcatcaact gtctccctat tggctggtgt ttggttcata 2760 2803 gagagetett egageegeea gttgaacagg acttgageeg gaa

<210> 2211 <211> 1414 <212> DNA

<213> Aspergillus nidulans

<400> 2211

acggccgcca gtgtgccgta tagcagccgc ggtgcgcgag gccgtgggga cgcagcgggt 60 120 ggtgcatacc ggcgattcgc tgccgctccc tctaccgccg catccgatca cctatgctcc agcgcctcca gccctaattt ccttctgtga accggtctcg caaggcctcc tgctgcccac 180 caccaagate gtactcatte aggeaegeee acaeggeaat egegeeeage gaagettgeg 240 300 gccagcgtcc ggcttcctca aacaagtggc cgaggacgag gcagacgaca cttccaacga gcagttctac tcggctgctg aggataaacc ggttgatgac agcaccgaga tggagagcac 360 atccaacgcg gaagaatccg aaactgaagg atccggcggg aacacgagcg atacgtcaga 420 cgactcgctg gatgacatga tttcgcttag tgcacccgag ctaccgcagc cggccacagg 480 tgtcatgtct gggatgactt ctgctacgcc tcgcgctcga cgcatggatg ggatccatac 540 600 tectgggteg atggtgtega aceteaette etceaetete egteetggee ggeagggegg 660 cqqqaaqqtq ttcaaagcag agggcttgct gcgtagggtc ccgaacgaac tcctctaccc gaagccaagg gacgatgacg atgtggaggc cgtagtcttt gtggacatca gcacattagc 720 780 caagatcggc tgcttttccg gggactgggt tcgcattgag gcgtccgaag agccgcaagc 840 aaacattttc tcctctatta atctcggaag ctttaatgaa caatacggag agggcgattg gcgcgcagtc aagatttacg gtctgcctgg gcttccctct gccaagcctc gctattcgat caagcaatct ggtgataggc gtttaagctt ttcccaacgg cctggtgtgc gcatgacacc gtcagtcttt gtaccaccat tactgctcaa taatatggat aatccaagat acctccgtat 1020 atctccaatg agtctcggtg gcatcggggt tcccaagtcc ggtgttttgc atcagatgaa 1080 aacggcagct cgcagccccc ctgtggcgaa ggaggtgacc ttgctaaagg tcagcacgcc 1140 ggtttcaatg gatcgtgcgt tgcaaccagc cctcttttcg gccctaaaac agtatttcga 1200 gtcgaagcgg cgactcctaa aaagtggcga tctacttgga atcagcatcg atgaaaccct 1260 cggtagggct gtttttgcgg ggactggtgc cgatggtcag gacgatgaca ttacaaccaa 1320 actagggcct gggcttgaca ctaaccgagc tgggccgaag aaaatcggcg ttgcttggtt 1380 1414 ccgtgtcggt caagtcattc ctagcttgcc cgag

²²¹² <210> 3904 <211>

<212> DNA

<213> Aspergillus nidulans

gagtacctca gagactgggc gggttgatgc gttggctttc ttaagaaagc tgcccagctt 60 gcgcatcttg ttgagagtgg tctttttcca gccggcatcc tgggcaatta cgtcgttgat 120 180 ctcctcgcgc aacggctcaa agtactcggg atgttggcag agatcgtaga agcagtgcgc 240 cgccgccatg gttgttgtgt ggatggaagc caggcttagg aggagctggc ggtgcgccag cttgtcgggc tgcccgtcgt tctcgtttgc gccgtccatc atccactgga ggagatcgtt 300 gggctttaca tagtccgggt tccgcttggc ctcttctgcg cggcgctggc gcaccatggg 360 420 actgatgatg cgcttcgcgg tccgcaggtt cctgtggatt gcccagtagc tggggaggag gtgtcccaca atcgggtgca tccacttggg gaagcgccgc aacagcatga cggtcgcaaa gacgttctcg gtgtagtgaa tagaggtctg gagccattcc tcattgcagc atgcggcgga 540 cgccgaagaa cacgcgtgcg gagatgcgcg ccacgatgcg aagaacgatg tggaacacat 600 tgacgctctg ccagtcgtct aggttcgcgg ggatctcctg gtccatggcg aagaggagct 660 ccgaactcga tgacctcgat gaaggagccg agattagggg tcagcttggt ctgcagcatg 780 cgcgtatgca ggtcgctctc caggaggatc agcgtggtcg agtactttcc caggagattc 840 ttgatatgcg cgcggatggc gctgatcttc tcgtcaggca gggatcgcag ttcctcgaca tacttgttgg ggataaccag gatgtctgag tcgttgcggg cgaccttgaa catggcgttc ttgtactgtc aagcgcatta gacagagtcc tgggggaacg gtagcattgc gtaccttggc gtatccttca ttgacctgcg ccagagcgcc ctgggagaaa cgtagtccta ccaaccattt 1020 cggctcatac cagaatcgga agcccacgaa aggggccttg aaggatttgg aatatgcgac 1080 cagggtttgg agcaggtaga ccacgctaag aacgccgagg atctccagat agagctgcga 1140 gcgatcaatg gatgatggtg aatcggaagg gatgagggtc ccagagtgcc aggtatagtt 1200 gtccatatct gcagaactta gcgtttctcc aagtttgttt tagctgtatc aacaatgcac 1260 atagtttagt cgacatgttg acgggaatac tgggctaaat atgcccaaac tcgacgaccc 1320 tatacaagaa tteetaetat acaeteetae etgtaateaa teetaegaet eeeteegaeg 1380 gatggtgtcg gcgggtcggc aagggatcat cccttgaatc cttcaagata atcctcaatc 1440 cacaggcagt aaccattcat agtagtgtca ctgactagac caaaagaaaa cgagatgtca 1500 accggcaaac gctcgactta ccaataaaga tgcaggacct tctgtcctgt aactattaac 1560 ccattattat ataactctgt ttttttttgc aaagggacga tcacaccgct tagacaatcc 1620 acagctatcc atagaaactg agctacctac agataatgag gatttttttt gaagctatcg 1680 aaaagctata tattgtttat atagatcgta gttaggagat caagactctc aatacagtca 1740 ttcgttgcaa tgttagtcac atgaccagac tcgacaggcg gggcatattg ctttcttgac 1800 cgcctgccct tggggtctga atagcttagt cagtatttag taagctatat aggcggccaa 1860 ggcggccatg tcggccatcc aataattacg aggacttcgt ctctatcctt atcgacgcta 1920 gtaataactc caccgcccca cgggagtcgc ctgggatagg tggccccgcc gacatcagcc 1980 tctctaccgt acactgtccg cctcttccct tcgtctattc ttctcctgtt agattacatt 2040 gacgacccac cacaatggcc acatatcggt acgatcatca tgatggaatc cagactcagg 2100 agctaatcca gtacatagcg aagcttgggg tctcttccaa gacgagaata ccgtcagtat 2160 atctacagga acaggccttg ggaggaagac gatcagcccc gatcagagcg cggcatcgag 2220 cacaacgata ccgaaaacag aactcatctt agagctccag cggcttcgac aagaattgcg 2280 agaactacag teggeeaggt gagtatteee atataceeag tteaageget tttageatgg 2340 cgctgattcc actcttccaa ccattccagc caaaattccc aacccaccga ccaaccagaa 2400 caaccaggca atggtctccc ctctcgagaa acagcatccg aaaagtctga aacattccgg 2460 tgctgggaat cctgttgcaa tggccgatta ttttccaatc gaagtaacct gacgcgacac 2520 cagcgggagc gaagggggga atcggcgaag ctgcggtgtt ccttctgtga tgcggttttc 2580 ttacgcagct ccgcgcggaa tgcgcacgag gcggcccggc gatgtcgtcg gtgaatggta 2640 acgggaaatt gcatagatca atatccgaat agagaaacaa atcgtctaga gcatcagcta 2700 gcattggtca tgcacgagct gtcccctctt gcgttactcc gttgacgtca gagcgtcaat 2760 agatgaacaa gttctatatc tgggactcat catggccata taatgagcta gcatttctgc 2820 gtgcatatgc atttatcatt ggttctgccg agtaaaagtc tagacatgat ttatcaatag 2880 atagcaacac accgacactc aatgctctga cgagctgggt actgatcttg atcaggcaaa 2940 cagaacgcac catgtgccgt gccgatgatc gcctttccat tgcggaagcc agatgaggag 3000 aaaaccaacg cttcggtggg ctcctggtcc ccgatatacc accagctatg ctttccatca 3060 ccgctcagcc catccgtcgg gccctcccca gccgccattc gaccatcata cttaatgaca 3120 aagttggacg aatgcagccc gttgtaatac ttccggctga ttagaagcag gtcctcgggc 3180 ggcatctegg cegeateage caccateagg gggteacget geaecegegt caaegggege 3240
caaacgttga teaecetggaa actgeegttg eggacategt eegegagate gggaaacata 3300
aactgcaega tgetgagege geeetggggg gtetggteaa tgtgtaegeg ataegeggge 3360
ceetegaege eetggtageg gtetttgate tgetegeega actegttgee ggtgegggtg 3420
cgcactgcat ggtggaagge aageaecege ttggeeeegg tgetgeagta tteatgeaga 3480
ttagaetage gegteatgga ggegaaegag cacaegeaca tatettggae eagtteeta 3540
ateteteggt agtagaeete tttgatetgg gtetegtegg tggeateegt aagegtggag 3600
tggategteg egtaetggaa geegttgega teeagegaat acteeteett gtaagggeg 3660
agategegga ttegeattt gtgggaaate atgteettt ggeeeageat gaeggeeatg 3720
tegttggtgg eaggeggaga eeeategetg ttgggeaegt agtaatteae eactgegttg 3780
acgeeggggg gagaegttge ateaaecatg gtteagaeag tgtagaeagg taeegaetg 3900
cgat 3904

<210> 2213 <211> 2347 <212> DNA

<213> Aspergillus nidulans

<400> 2213

60 agagataaaa gagggtaaga agggagcaaa gatacaatta taaaaaggtt gtttaaatgg agaaaaaacc gggtgtgaaa aggagctttt taaaaggggt aaacaaccaa ggctcgtttg 120 aatcaaatag gggccgctaa ccgtaagggg gttggttgcc cccccctgt gaggaaaagt 180 ttgtaaaaaa agccaaaagg ctttttcaga aaaatttagg tcgggagctg aatttctgtg 240 cccagtctgt tatgctggct ttgtttaagc tcaatttcca cagttgtgga aactggggta 300 gtggaaaacc tccggtctct agataatatg cagtgaaagt gcaggaaagt ctatcttttc 360 agggcaaaac tcgtttcaaa gaactggaga tctggcgcag cacgggctag gcaaatattg 420 tgaaggtgag ccgcttgtct cctgctgggc gaagtggtgt gagtgtttgt gctgagaaag 480 actactgtgc agattccaac atcaatgtca tagtcctcgc cttcctgatg actatcaatg 540 gacccggcgg tgcaccggaa atcgacttct caatatcatc tcaagggtgc acgacgttca 600

acgggacgaa cttgaaaaac tgtcctgaga tcgggtatag ctttatcccc aatcccattt 660 720 gatacaaggc ggctaacctc cccagcgagg acataacgaa atgtcaagcc gccggcaaga caatcctcct ctccatcggc ggcgcaacct atagtgaggg cgggttcgac tctgcaaccg 780 840 cggccaacgc aggggcggac cttctctggg cgacgttcgg cccagaccag aatgatacga aaattcatcg gcccttcgga agtgccgtca tcgacgggtt cgattttgac tttgaagctg 900 cagtcacaaa cactggggtg ttcgcaacga gactgcgcgc cctcgcggac gcggacactt 960 cgaagaaata ctatctaacc gcggcaccgc aatgtcccta ccctgatgct gcaggcaaag 1020 acattctgaa cacaaacagt tctgccgcga ttgacgcggt ttttgtacaa ttctataaca 1080 actactgcgg cgtaaacgcc tacactcccg ctcgaaacac gcctgctggc gcccgatcca 1140 aagccggata caagcttagg gctcgagaag atcggtacgg ccgtccgcat cgcaactcag 1200 gctcgggtaa ccaagctgcg gcgagtaact ttaacttcga cgtgtgggac aattgggctc 1260 ttacgcagag caagaacaaa aacgtgcgcg tgttcctggg cgtgccggct aatacgggcg 1320 cagcaagcac ggggtacctg cccattgcga gtctggagcc ggtaattagc tacagtaagg 1380 ggtttgagag tttcggaggg gtcatgatgt gggatgtttc gcaggcgtat ggaaatccgg 1440 ggtttctaga cggggttgct aaagcgctag gaaagggcct gaccgcgcat gctcctgtgc 1500 aggaatctcc gcagcagcaa cagcagcccg caattgatga agcgcaacca ccttcggcac 1560 agcaggccca ggatgccaat gagtcagtgg atacaagtcc cctacagcag caacagcaga 1620 acgcaggtgg cgaagggcaa actccaacac agctgggcca ggatgtcaac gagtcattgg 1680 aaacaagtcc tccgctgcag caacagcagg aagcaggtga cgaagggcaa gctccagcac 1740 agcaaagtca agttgcctat gagtcagtgg atgcaagtcc cccgctgcaa agtcccccgc 1800 tgcagcaaca gcagaacgca gatgacgagg ggcaaacttc agcacagcaa agtcagggtg 1860 gagatgcgcc tgtaactacg agtcccccgc tgcaacaaga aggagcaata ccggccgctc 1920 tgcaggagac gacagaggcg ggagagcagc agctgaacca agatcaggcg gacgatcagg 1980 atcqqccctt qaaccttctt ccttcgattt tcgacccgga cgacgatctg gactggattc 2040 agatetgate tacacateat tettetttt etteteett tttttttet eeetteteat 2100 gtctactttt ctgaatctag tcatactata atgatgaatg gtatatccct tttgtggata 2160 tacaatgcaa agagcctgag agatgtttac cctggttcta cggtagcttt cattgaccgg 2220 atttgcggga atgcccttag ctgagagtca ggaactcagc tcccaggttc cttctttccc 2280 tcctgatctt cccatttggt ataaggccct gcaatccgca tgaactattg ggccgatcac 2340 acatgat 2347

<210> 2214 <211> 2397 <212> DNA <213> Aspergillus nidulans

<400> 2214

ccccccccc cccttggaat ttgcaattcc tgtgctctca agatcggtaa cacaaacctt 60 gtggatcaga gcgaattcca tgcccatgga gtccgcaatc gcagttgccc gcttggcgcc 120 accagegtet gggeteacaa caacggette tttgtagttg gegatgttge geataatata 180 gttcttgaga aggggtcggc cgtagaggtt atcaacagga atatcaaaga agccttggta 240 ttggggatca tgcaggtcca tcgtgataac gtgatccgcg ccagcacaag tgagcaagtc 300 agccacgaga gtacctgctt gagccaccca ctgtttatat ccaggacgcg gttcaaattt 360 attaattttg tcttggctgt catctaagag gccgttcgga agcgtggact tgctgctgtc 420 cgacttcaaa gattccatag tgtcactgcg agaaagcccg ttgggtaggc gtttcttgac 480 540 agggctacca gaagactcct ccagctgagc ctttgccaga ctcttttgta ggttatcaat actgactcca tttatcgggt ttccgacctc gagcttcccg ggatgggggg ttgtaggggt 600 gctctcgaag gtatacccgt tggaagcgcc ctttccttca agcgatgatt tgactagagg 660 720 agctcccgat ttgttgtaag gaatatcact ctggcgagag tatggaaaga gcgggagaac 780 agcggtgact cttcgagcag acgcagtttt gcatgccgaa atagtgataa gcaactccaa aagatggtcg ttcacctttc caccaccaga ctgaagaatg tagacatcct ttccacgtac 840 ggattctttg atttcaaccc ttgtctcacc gacagaaaac tttgacagca acacgtcggc 900 tggaggaatc ccgagtatat cgcaaatcgt ctgagtcagt tgaggatggg aagtgccccc 960 aatgacgacg atatttcgaa ccatagttgc cagaatgtcg gtatgagaag aatgtcctag 1020 aaagtacgca agtggccctg ggggtagccg attcggaggc ggagaaaacc tgggaaaagc 1080 cgcagaagcg ggtgttctgg aggggcggta tcgatcggga acgttagctc ggtagatgcg 1140 aggcgagcaa aatgtggaac ggaaagtcct agagtaagga gagccagaaa ctagatcatg 1200 gcggggagtc ttgaacacgc ttcaagggca aggacgaaag agacatggaa tgagatgtag 1260 tggatcaaga tgtcgtgtga gcccgtaatg gaagaaaaga aaaaaagcct ttcttagtgg 1320 accttgcaga ccgggttttc tgccgttgac gcctcaggtt tcagaccgcc ccgatcagga 1380 taagcggtat catggcccct cgtcttcaaa ggaccccgca ggaatgacga aagtttgagc 1440 aatcgtcgtc cacggattag gaaagcacac cacaacgtaa aggaacagag gacaacacca 1500 aacaaaacat caacgtccag catgcggtta gccatcatct ctcagactca acagtagctg 1560 ttttgcctgt tacgaaaggg ctaagaagct gcggattaca ccaaggacag tctcaattga 1620 ccaataagta cttgaacgtg aaaaaagact cgaaaagaga caaatgaaac aggaatagaa 1680 gagaaatcca tggtattgtt caagaaacag gtccaagtcc gggtccaggt ccggtttcca 1740 gtgtttggtt aacaaccaaa aaaaagtttt tgcattatgg aggattcttc caatccattg 1800 gtatagtatc aggccagctc cagtaatcct gtaattcaag gtcagtaagg aagcagcttc 1860 gcggaagccc agagcaacgt cccggtagac agacatacca gggatgagtt caggtgaaag 1920 gctcacagta aagttatgct ctgtttatct ggatctccaa tatattgaga accccacatt 1980 gttccaaaac agccgatcct tcagcactgt cgaagttggt gatttcaacg attgaggaca 2040 acgtgatgca cattattgtt agggatttcc catcatacac gatcctacag aacgtcagta 2100 tagaacaccg gattcacaca aaggtttgca tttttacccc gtgaagattt ttataggcga 2160 cctgaattcg cgataagttc ccaatagtgg ccactcctat ccttgtagac aaggcgaaca 2220 gcaagaaaca aatcttcctg cgttctagca gataaaaatt cctctccagc atttttgatc 2280 agatcagtga ctcagccttg aagacaagtg ccctcaccat ggcacaggtg tacgtgaacc 2340 2397 tgctagcggt ctgcgagtct tgggttctaa tatgtgatac agccgagctg aagccgt

<210> 2215 <211> 1884

<212> DNA

<213> Aspergillus nidulans

<400> 2215

aagtagaaga aggtagtctg caaatgttga cattttacga ttcgtttagc ctgcaatctg 60
aattgatgca gctcatggtg tcaccttctc caggaatttc ggccttcccg gacgctgatg 120
gaaacctcct atcctggact gctactatta ccggcccttc agaaacacca tacgagggtc 180

tgactttcaa gctctccttc tcgttcccca acaactaccc atactcgcca cctaccgtgc tetteaagae eccaatetae eaccegaatg tegaettete eggeegeatt tgeetggata tccttcgaga caagtggagt gccgtgtata atgtacagaa cgttctgctt agcttgcaga 360 qtctccttqq agagcccaac aagtaaggct acatcctgaa tttatttttt gttgttatac 420 taacqqtcaa ttaqcqcqaq ccctctgaat gcccaggctg ctgaactctg ggacaccaac 480 caggaggagt ataagcgcca cgtactggcc aggcactgcg acattgaaga cattgaatag 540 600 aqtacctctc tctagaattc ctactgggcg tttggcggaa ctggttgtta ttcttttgga 660 agcattqcat tqaaccgggg tctgggttgc acttttggac tcatttttcg tggtgggaat ctgttcactc gcgcgggact tggatatgct ttctcgtagg agaaggacag catcactgaa 720 780 cttqqqqatc cqttqttqqc aaatctgqag aaacgqagtt ttcggaagca ggacgtttcc 840 ctgcacagca ctgttcttgc cgtcattcgg ttgtccttct gcattatatt tcttcttatt ctgaqtctat aatactcagc aggtattttt atatgtacac caatcagagg tgttgtgccg 900 totcattoot atogagacca qtatqocato acqtgaccot agtotagact tgcagatogo ggggaagtaa taaaacggcg ttgacgctcc tgccaacatg aggatcatgc ggcgtgtctt 1020 gcgtcctgca gtaagctagg tacgaagttg tgctgccctc aatggtggct ctcgaatact 1080 ctgcctcatg gacaagcttc ctgttgaaat cctcacgaaa atcatcgact gtaagagctg 1140 teqteceege etgetgaact tittaceeca cacagactea attectaacg cattigggee 1200 tttttagacc tcactccact tgagcaggta cggcttcaat ctgtctcaaa gcgattcttc 1260 qccttaqccc qcqacaacaa cttatqqcqq ctccattqct acqaqaacac atqqqctqct 1320 ctattagccq ctcqqcccag tgtcgaaggc tccgatagcc tcgccacgga ttccactgca 1380 teteteaget ecctaggaca accategett egeteeetaa teeageetea agetetgeeg 1440 aacaacaacq atccggatac ccaaggccgg acgccgacct tcggcgaaag agcaagggct 1500 gcagccgctt gggacccgtc cgcagaggga gaagatgtcg attggtactc ggaatatatt 1560 gctcgtaatg gaccaatatc actcagctgg ctccagcagc cgttcacaag gacacagagt 1620 ggtggaaaat cttacatcga ggtgaaaggg atgggacttt tgcaggactg gagcttggct 1680 aggcaaaata aagtgatatc acctttgagt gacggcagtg tttgtgtttg ggatctcaac 1740 cacteteatg egateggtte tegggteaca aagggeagea taettgggae gagegeacea 1800

ggtattttga	. cggttgacat	gtctcaaaaa	a aaagagaaco	cgcggcgaaa	ı tcagcactag	1860
agttcatcaa	ctgggcgaat	gtgt				1884
<210> <211> <212> <213>	2216 5677 DNA Aspergillu	ıs nidulans				
<400>	2216					
cctcgaccgc	gaaagtctgc	taaaccggtc	: cgtccgcaca	cggttctact	tgggcgagcc	60
gacgccgctc	ctcgagaccg	atgatgcagg	cggcatcaag	cataagctcc	tcgaagcgcc	120
gcaggttgat	aagctgttct	ttatcagtcc	accaccctcc	ccgccgcacg	gctgggtgat	180
gcgccaggag	gaccccccaa	acaaggaggt	ccatgctagt	gatcttgcgc	aggcgctggc	240
aaaattgaaa	acgcagacgg	agggttctac	ctacgctaca	tctaccgtac	cggcttctca	300
gcagcagacg	gatccggata	caccgatgtc	tctttcgtcc	gacaagagga	cggggagctg	360
gccgttgttg	cagcagcgaa	gtaggagtag	cacgcttata	tataacccgg	aggagcacgg	420
cggcagcccc	aacctccccg	ctgtcatggt	cgaagatacg	agcgccgacc	cggatgatat	480
ggacgtggag	atgagcccga	ttgatatgcc	tgtgaagcaa	acgccgccgt	tcaagactgc	540
tcgaccgcct	gttgagttga	tggtttgatt	acttacgacc	gggttcttgc	ttcatgtctg	600
gtccactgca	attgcattct	aagcgtttga	cttggagttg	gctgcttgtt	gatgtctgta	660
ttgtttttta	ttttcgacta	ttgtgattgc	atcaggtttc	tctcttttc	tcaaacattc	720
attgcgaggc	gttcgggtga	tagtttatcg	gcaatctatt	catggcgatg	gcaataatgt	780
gtgcatttac	ggttctaaaa	accagtacta	ggcatacgat	gcttacttaa	atataattct	840
ttagtatctg	caagtctcat	attttccagt	agtcttctat	atatcataag	tagacttgat	900
agtctgacca	tacatggaag	tttgattcaa	tcaaacaaca	ccactgcact	atccttcata	960
actgtaggtc	ccagtgttgc	tgccagctcc	gctacaattc	ctttgattga	ctgcggctcg	1020
tctattggca	ttttctccca	tccgaccaag	tcctattcgt	ccattgtcag	cccacacaca	1080
tacatacaca	ggaattacca	gacaccatga	cgttgttata	acgagatgag	aaggggtgga	1140
aaggcgccaa	tactcacgct	catatgcaca	aatgacccat	gaatgagtaa	cggccagctc	1200
cccaggtcca	acttcttgac	ttcgtccact	gttaagacac	ccggcatgtg	cagcgcgaaa	1260

agggagactt ceteategtt gatttetget teggetteag cattateage egegtttget 1320 tccgtaccgg aggttgcggt cgtggcgcga tctcgcgaga gggaaacgta gggtcgtgtg 1380 ttgagctttg cggttagttc gccgtctaaa ggatcccagg tgtaggattc ggggtctgct 1440 atcgttaact tttggctggc cttgagtgat tttcgttgga ggcgcaccta gaatgtattg 1500 gggccggaaa ttgcccttgt agcgcatctt ctggcaggag tgaatgtagt agcctggtag 1560 gattgtgtta gcgagcgggt tctggaactg atgggttgga tactaaccca tgtagtaata 1620 ttggtagcct tgttcgactg cgaaggctat ctctctcatc gcactcagtt ttccaatttc 1680 ccactgctcg taatcagggt cgtagcttcg gctgttagtt acgttttctt attcgtctcc 1740 aatgctgtga cgcttacaag atgtaaacag acgtgacgcc attgggcatc agatccaaca 1800 cggcgacagc tatgagcttc ccatcgaggc ggtagcactg gtgccaggag cctattctgc 1860 gctgtacatc tcgcccatta ggctcactcc gctttagtcc cgaacagagg aagcgcttga 1920 agtetttegt ttgccatttg gaaacgtett eettatggae ettegtttgg tatttgegga 1980 aaagatcaaa cctaaaagat gtaagtatat agttgagggt catggtgcgc cttacatact 2040 tcgcttggga gactgtgtcg ccctctaagt ttacctcgaa tcgatgcgcc ggctccagtg 2100 atctcttcgt ctttgggtca gtcggccgct tgacattgct atactcaacc gcatggacag 2160 catcgtgtag atcaaagttg catttccggt gtttcttttc cctggcaaat ttgtgaactc 2220 agaatccaag tcgcgacaac cggttagaat gcttactccc ttgtttttgg gcagagatac 2280 gcagctctac ggatatactc gggcccaaga acgaacttgt tccaacgatt gatcgccttt 2340 cgttgatctc gtcttggttt gtaggccgaa gcctcgagcc tggactaatt agcgatgccg 2400 gatcaagetg getgegeaae cagacaegta eeteatggta taatgaggae ageatgaeeg 2460 ctgcaggttc tgcttgtaat acagcgttcc ggacctgcac tatggtcaga agactgcata 2520 tttactacgg ggtgctgcct gaccttctcc atccccggtt gacgagttcc tcatagtgaa 2580 ctggacgcac cgagacggag ctagcgtagt atgaagcacc tacgagcgtt tgcgatttag 2640 caagaaacgc acggctgcgg ggtggggcta cggcgactga ctgccattat ctgatttgca 2700 atatecgeae gagttgegtt ggtaacetga gatgacatat tggttagace gatgeaageg 2760 acagcgacga tcagaaagga atcatcttct tagtcacgac gagtagtcaa tgatttgacg 2820 gaacgcacag gattggctag gggatgtggc gatgggaatg aacgcggaaa tcagcagaat 2880

gaacggccgg gatgatcagg catcgtcctt gcgaggacga tgccagaatg gatggagggg 2940 caggeteata cateaagagg ggeaggatga agetgaggee gatagagaga ceagegaaag 3000 gaaaggcaca tgaaccaatg gccattgcac ggggagaggc agactgttgt gactgqctac 3060 teacegaggg gteggaacag egacaactge etegetegtt eggegteaat eggttecatg 3120 gtgtggtggt tgcgaggctg tgagacggac ggagatgcag actcgggatt ggagagggat 3180 ggaattattg tcagcgctca aggcgggaag aaataaaagc ggatgacgat gatatccggt 3240 atgacgagga tgattaagat gatggatgga gagcagacag aagtggacgt cggcggctga 3300 gatggcagca gtgcagtgag ttcttcaagg ttcggcttct cagcttaagc aattgaactt 3360 gggaactacg gaacgtttct tattaaggcg acgagctcct acctagagat gactgatggt 3420 agctcactag atagtcgcgc ctgggaatct tctcacatat cctctaaaca tgactgatgc 3480 ttctagaaga cacttggcta gctcccttgt cattatatgc acgctcgtcg attccgtcca 3540 atetgeeege getgtegata tteettegtt geeagtaaag teeaeggeag cattgaegtg 3600 cagcagtata cggggcagtg actagcctca aactgacact qcttqcttat ccaqctqtta 3660 gtaccgacta gtttgactac tgtgtccgtt aggttatggt aggatgtact ccgtaccata 3720 ctgttcgccc tgatacggaa acggtttgtg acgataccat ccgtctcagc ccgttttacc 3780 agcactggac caatttctaa tatcggctgc cagtcccttc tccagcgttt cgatcgtggg 3840 ctgtatcatc cctgatcttg tgcgcgttga ccctgatggt aatcattgag ctctgacgtc 3900 ttcaggggag atctgttgat ccagccgatc gcctataaaa gtcctcgaca gcgagctaat 3960 ctattctcgt ccagtttgcc ctcgatacga cgggattcgt tctcagqqct qqttactcaa 4020 gtaaaaatcc acacttctgg cacgttggca cattggcaca ttagcagatt aggacattta 4080 ctgcggacct cgtttggttc cacagggagc gagctccgaa tgaattccgc acacaaataa 4140 tgaaacgtgg atgccggtaa ccccaggaca ccgctcgagt tttattattg gcattgataa 4200 ccacggegaa ttegcaccag atttgcccat tttettgtee gageatatae egacagtttt 4260 cgttttcgat acctcgtacg ctggacgggc cgcatatccc ctcgtaagct gaccaaggct 4320 cagcgcttta acgttgggtg cattgtccat cgcctgtagt ttcctacgac ttgggaggtt 4380 acagcaagga cccttatgcc gtcgatgcca agtcacctgc ccgccgtccg taacgacggt 4440 gtccacgcgt ttttcatcat tgaccgtaga cgcaggagca cagctcggag agcgtagcgg 4500

gcctagcttt agcgagtcac gttccatgct gtcaggtatc aaaccttatt ttctgaagtt 4560 ggcggagaag ctgtccggaa gtgaggaagc tgtattcttc tctttttctg aaatggaagg 4620 agatcctttc cgaagtatat tattattgtt attattgggc caagcgcgag cgtaccctgc 4680 atgccatete catetgagea ttgageagaa eegatttteg gateggetee eeteggtqte 4740 atcaattata gtcgatcgac gcggggcaga gggcaaaccc aaqaqcacac qatattattc 4800 aggaagagcg cattccgagt ccggacccga ccgtcgcgct tatttcgcga gaggaggggg 4860 cgcaaattaa gagcactgta cacagtacgt tggacgtgac ccgtggccca tctgccccat 4920 acttcaaaca aaccatgcag gtgatgcttg gggcatcctg cagatgttac gggaaaacat 4980 gtccacgacg aagaggataa atgaaccatg gggtcgatca gagcgtcggt attgctcaga 5040 ccatgctgtt gctagttgca gagggcttgg actagggaaa tcaaggatgc gcataagatc 5100 agttagtggt cccagagtcc cagagggctt ggggacgctc cagcggcgat tgggtcgcgg 5160 cgcgacaacg cagcaaaaga tctgtaaacg tgcggatcca agatcccaqt tggctttatc 5220 cgcctttgcg tactgagtac gaagtagatt gtacctaata gaccgagtga aggactgatg 5280 tgttgcggat aatggccgtg gaagtgaatg ccataatgtt cattatgctg cgcgcggtac 5340 tgcgcgaagc acgtgacacc actgggataa aagagcaaac cggccggaaa cggcggtata 5400 tgatgtggac tcatggttta agcatgaatg aaaaacacga agctaggatg agggcctttt 5460 cgttgacagc acaatagatc atgagtggaa aatatagtag aggtcaatgt caagccggag 5520 tactgtgtaa caatgtgacg gtaatacgca taacacccac acgcagagac gcccgccccg 5580 agagaccttt tttacggttg agtctctgct gccggatagc gccgccgccc attatccatc 5640 ccaagetgte teegteeteg ceteceetee gtteetg 5677

<210> 2217 <211> 2082 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2217

aaaaacgggc gcgaggctta ggaggacggg tggcagcttt acgtggtgaa agagccatat 60 ccaaggaaaa ggacgtggat ctaaagcttg ttcccgatgt caaagatatc ctgccagcga 120 taaagcgccg cattatggga aatgttcacg tagttcattc cggattatgg aaattgaatg 180

aggacatcgc caatatcgag ttagcccagc acgcaaagac cttcggcgtc gtattcgcgg accgaattac ccacaaaaca acccaccttc tttcagctgg taagcgcacc gcgaagtttc 300 aagaagcaat gcaacgccca aaaatcaaaa ttgtacggaa agaatggctt gtagatagcc 360 tacttcagtg gaaacacctg gatgaagggc cgtatctcgt tccaacccac cccaacgagc 420 agcgcagttc caaggaagta gccgaaagct cctggctttc atcctcagac gaagcttcag 480 gcgactcatt cactgatact gaagacgctt ccgagctcaa cgacgagatc ctgaagtctg 540 cagggatcaa tgatcttggc ttcgaccagg acgaggaggc ggctgtgcac gaggaactca aagagtteet aggeagtatt tatagagega aagegacage gaatacteet gaatggaaeg 660 aattgaactc ccttccactt ccaacccaga taagaagcgc aagcgcgaag acggagaccg 720 ataacgacaa tgacgagaac aattcggata cccagggatc tggggaggtc gcgggctccc 780 gtctttctca gcgcatcaag cggtcctacg agcgcagcac cgggctgaaa gaagtcgcca 840 gcgctacttc aggcgaaaat ggctcaaata ctgacactgg taccgcgact ggcaccgata 900 ccgacactgc ggaagccgat gacgtccctg acgtcgcatt ccctgagaca gaagaagagg 960 gtgctgcatc tcgaaaccca gattcaagtt accctcaaga tcctgccgaa gaggaagatg 1020 aactcgagcg cgagatgctg gcggctttcg aggaaggagg gtatgactcc aacgccgaaa 1080 aggccattgg cgaggataaa ggctgaccgc cggcttgggt gtttggcact ggtgctactg 1140 tttgtacatt ttgtgacgct ttacagccag atcgacatat ggttgtgttc agagttgatt 1200 gggcgatcgt ttaagaatcg catagcgagg cgttggttga tggcttcgac ttccqattcq 1260 aggcactttt tcttctagct tttgtttatt atatcttatc aaattgtgat acatatagct 1320 ggaacttggc gagtgagtgg ctactcatct ctgtactgct gactaggtgg gctctgtact 1380 tgaacgaggt gagatcggaa ataggtatgg atttgatata ttgagttaaa tttggttttg 1440 ttctctgatt gaattttacg taagggaaaa tgataccttg aatcacctgt tgattatccg 1500 gaccgacctg aatgctcagg ctccgaagct aactatgtag aaataacgct ttaagagtac 1560 gccagatatg catcgtcaaa catgaaagta agatagcaag cagaaacgat cgagtagaat 1620 ggtcaggagg tatcctatat cctcatacat gattcacatc acatcataag tccaccgaat 1680 attgcggcag tggttgaaat cgaaaagcag tccaatgtgc tctctgctgg gagaggtagg 1740 aggageegag teatggttag etcaaateaa getegaaata gttegteeat eatggatggt 1800

ggacatcgcg atgcaccttc caggccataa caatcatcca caaaaagaac accgtattga 1860
tcagctcgaa cgcgaacgcc gctcgccagc agttgccagt attcacagtc agccttgttt 1920
agtgactcca atccatcaac agggacatca catacaaata ttgctttgcg caatccaagc 1980
cattgtgtcc cggccatccc ctccaactct attatcatat acaaagataa gacaattatg 2040
gttgatgtat gcgacaacgc cgtacatctg gnacttggtc tt 2082

<210> 2218 <211> 3074 <212> DNA

<213> Aspergillus nidulans

<400> 2218

cgactgccca gcaaaagcca gcaagccgat tccaaactca atcctagcac cacaaggttc 60 cgatggatcg aactccagcc tgtcatatca cgatcacgtc ttcgttgatg tcttctttgc 120 cacgcccata accttgctat cctgaatttg tggacagggg catacatatg acggcaaagc 180 cagtgctcag tcctcttccg aggtcgccat cgttaattcc ctccaacaat gccgcgatgt 240 ttgccccctg gtcagattcg atgcacggca gccgcgcgga ggataaatga gacgaaatga 300 cgacgggaag acccctgtct gtttagcctc aatagggtga tgataatgac agaggtggtg 360 gttgtggtgg ttgtggtggt tgtggtggag gggtagcata aacgtgcttg caggctgcaa 420 aagaactggc gacccgcaat cacatgctgg ctgccagcag caccaacacc agctctgcgc 480 atacgataat aagatgegea eeetgatete gtaagatate aateaetgtt gteaatggea gcagctatta gctatttatc accegaaaac cetettttt gaetttatte gatetgteet cacctgtggt tcatctcttg cctaccttct accggatccg tcctcccacc accagactca 660 ctcttaggta gcttctttcc ttcccctcc cattacctga ggttctgtct ctactcacca 720 gttccgttca gggagcgcca tttctcgacc cctcctcaaa cgcctctaca atccttatat 780 cgcacggctg ctggctttgc tgagaaactt atgcctcatt ttgaaaacgg cgcaatgggt 840 gaaaatgcgg tcaacggcga gcgggctcag tcccaattct tggaggtaat tttcgtcggc 900 aaccaagtcc tattgacatg ctgtgcaaca tacacttaca cgctggctgc gtagcacttg 960 acctcctacc cggttgtctc agactcaatc tccttctaca aaggcaacaa atacggcgcc 1020 aagtcattgg agtttgctga ccaaggctac ggctttgcca aaccctacct ctcatacctg 1080

tegaageeat aeggataegt tgegeeatae gteactegtg cagattetet tggtgataag 1140 ggcttgcaga aggtcgacgc aaccttccct atcatcaagg aagacactaa gacgctcaaa 1200 aacacaatct acgataccgc ttactttcca ctacgactat ttggggatgc taagagccat 1260 gtcttcagta cctatggcga cgaatataag aagtgcggcg gtgatggagt cgttgcgagc 1320 qqcaaqqcta ttatcaccac cagcctcgtc ctctctcagg aatcgctggc atttatcagc 1380 tccttgctgc agaaaaagaa ggcccaggtc aaggacttag taaacgagca ggcgcaggag 1440 taaaacatat accattcgtc ttgtttgtgt ttgctaataa ttgggtcggg agttgtgttt 1500 tagactttag tgtctagcgt tcatcattct ctgttatttt ttatcgggct tgacgcattc 1560 attqtcttat cccqttttct tttgttgcag ggtgcggttg gatatgcatt acagctcact 1620 ccattettat acettetetg teegeacteg gtttgagagt eagtgtatgt eacetttett 1680 cggtgcttat taagtagcaa ctccctagtt cgagtgaaga ttctcctctc gcaatcgaaa 1740 agctacactc cttctttttg aaaaaaaaa tgtcaaaagc ttgaccctaa actatagcct 1800 atagggetga catgtgataa tegtaagtge atgtgattte ttgattggga taaattgace 1860 cactettate gtegegteaa acgegteeac acceeacgee agatatatgt eteatagett 1920 tatgaaaaca ctgtactgat aactacgcgg tcagaatgcc tctcattcgc aagcggccag 1980 cggtgcgtta tccctattca ctacttcggc atgactgatt gtgcgaccag gttgctgaac 2040 cacaatccag cgacggagag tccgcttcct cagaatcgac tactcagtta aggaaccacc 2100 agcagegeeg cateegegeg tecceagteg agagegaaga tggeageggt gaegaetege 2160 cttctcatgc ccccagcagc acagacgtaa tggtaaagaa actagtgcgg ctggcacttt 2220 caagcgaata ctcacgccag ccgattcgaa gagtcgatat cagcaataaa gtacttgggg 2280 aacagggatc gaggcaattc aagactgtct ttgagggagc gcaaaaggct ttagcagaaa 2340 cgttcggaat gcagttagct gagttgccgc aaaaggagaa ggttactatt caacagcgga 2400 ggggtgagca tatccgtttc cagaacttgc tgggcatgct actatagaat actgacacgc 2460 tgcaatagcc gcccagaaag ttgaaaggcc attgtctagt aataagtctt ggatccttac 2520 gagtatactg ccatcaaagt atcggaaaca ggatattcta tgcccaacac gcggaccagc 2580 agagagetet tacaegggae tgtataegtt tataattgee gtaataetae taaaeggagg 2640 cacactccaa gagcagaaac ttgatcggta cctctcccgt atgaacgccg aacaattcac 2700 acctgtcgaa cgcacagatc atttactcca acggctctgc aaagaaggct acttagtcaa 2760 gaaccgggag atggacggtg gagatgaaat cattgagtat atggttgggc cgcggggaaa 2820 ggttgaagtc ggtgcgagag gcgtagctgg gcccctgagg gaagtcaacg gtccccaggc 2880 tatgattgaa gatgacgata tcactcccgc cgagagggag aggttagagg aattcgagat 2940 tcggttggca aatagtcttg ggtttaggta acccaatagc cggccagtgc atggtgagca 3000 caccggggat gatgaaagag tcggtgagag cagcccgacc caaccgcggc ggcggagagc 3060 cgctgctagg aaga

<210> 2219 <211> 866 <212> DNA

<213> Aspergillus nidulans

<400> 2219

cctacctgcg tcgactggct cagcaatact aactcgcaga cccaatggac cgcctacaaa 60 ggggatatca aagacaaggt cattgtcatg gccagactcg aagaagaatc agtggattgg 120 gtccatgagg aactcccaga gtatgtgcct aactttccct ctcgctataa ccaaccttta 180 tactaacaca ctcgcagctg gcaacgagca atatacacag ttaatccttc aaagactact caageegatg acaagegttt caagacaeca gteaacaaag gecaegagte tatggeetae 300 cttacctacc taatagacta ctacgaccac ctcccgtcca caatcgcctt cattcattcc 360 caccgctctg gcttcctgac agcctggcac gttgatgcac cattacacga caacgtcgcc 420 gctcttcggt ctttacggct cgactttgtc cagcqcaacq gctacqtcaa cctccqctqc 480 aatctcaacc caggctgcgg cgaaacacat gggaaacacc gtaatccaca cgtcacggaa 540 600 ateggeegee ceageacace cageggatgg ggaageaatt ctatacatgt geaaacggaa 660 tegagatece ttecaatace aacceaggte geegeageat gttggegea gttegeegte 720 tcacgggatc aagtccttca gcgtcctcgc gaagactata tcaagattcg acagtgggtg 780 attgacaccg ttagaagcga cgcctcgagc ggtcgagtga tggagtacta tggcatgtta 840 ttttcggtaa acagtcggta tagtac 866 <210> 2220 <211> 2065 <212> DNA <213> Aspergillus nidulans

<400> 2220

catecttgcg ctgatgagca tetegaecet etatecaata ateacaegae cgaggeaegt 60 120 tactgttgca atcaattgtg acccgccaat atcgccgatg aagtcgaacc gggggcccaa gctgtgctgt tcgtcagtcg acaatcaaca ttatttccgt cattgattat tattaaggat 180 240 cttcccacqc gqctcqtttq qcqcqqtqcq gqatcqcttq ctccaqctcc acggaagtcq gaactgggat gctgatggct aagcctgaaa attggatgct gaccgtcact gatgagccca 300 tatataaacc aataacaagt cctccgcgtc aatcatgatg ccatgatatt cgcgggtgaa 360 acctqqaaqt qqacaqaqct gaggggatcc ccagggattg acatgttgct acacgtgacg 420 tggggtctcg caagcgcgcc aataaatagt taggaatagc accgctctgg tgtgtttcag attcagccag gcccactttt gcgtcgccag tttgaactag cgcgcgcaac tcttgtttca 600 agatttcatc ggcgttgctc gtggcctcac accgcagcgt tcgtccactt ttgcccccac gattegggga tteggegaca acaatagetg ageetagage eegcagette eageageage 660 ctatactcat gtttggaata gaccgccggc acagcctgcg agtgtgcgtt tcatctcgca 720 tqctcqqcaa qcaqtqataq qaaaatqtcq caataataat qcctccactq tctcqtaqaa 780 acaatctgtg gatcattaga aaatccagca gttccatatg acttaggccc tcctcgactc 840 tttgtcttct ttcttatcat actgctgctg tttctcttca ttctcagctg aaagctgaac 900 agctgcattg tetetactet etetecageg caegetgeeg ategagatag acceeagggt cttggaactg aacagagccg cgcacaagca tctggcaaca ggaaccgttc ctgtaacaga 1020 gcgggtcaga cgcttcagag gctgggttcg agctcgatta cgattattat gactgccgcc 1080 tgccaacaac actgaacaaa cggaatcgac ttcatgaaaa ttggactgaa gaagcagtcg 1140 gctctgtcat ttccttctcg aaggcttcct gaacattcgg ggatcggact gtttgatcct 1200 gcacggctga gagagtttgg tgctggtatt gcgatcgctg gtcctcgtgg tattggcaga 1260 cgaaatcctg cggatctcgt attactgccc tggtattgat ccaacaatcg tgttcctgct 1320 gtctccgata ccgaaatcca aggccttctc attccagaga agtagaaaga actgttgccc 1380 aggtatgtca tetteaaget tgtttttttt tttttggtgt tgtetetetg caatettggt 1440 tacggtacat gcacatgtcc ttetegtecc egitacaegi cagggagatg egecagaaeg 1500 ggeccattgg actitictge aacagegict ggiaatatic tetgaateca gaegeceagi 1560 etegagaata caggicetec tiggecegeaa tetggiggea titecegatec agetietigta 1620 tagticecag tieceagite etactietig eeactietie eeactietea tigetieeee 1680 eacteecaae eeatgateat gagaaggeea atggaeteea gieteeaaet getigteee 1740 gieeeaaaea tigaegaegig eeeatgetag egitagigg aagagetige etetgatiig 1800 egitigeatita gegeeeatei geatieeage eteteeete eactigaeetig giegegitaaa 1860 tatagetete getigteet attigeetet egeatiagga tigaaeeaga etiggetige 1920 gieeeaaee egitegetige gitageetii giigaaeeaga eigigeetii 1920 gieeeeaee egitegetige giigaeattgige tigeeetitaa gigaaeegigg egageagete 1980 tigeeeateet tieeetteee gittigetige acaetigaet etiggaggite attigeetetig 2040 tateggiatit aegagteagg titteg

<210> 2221 <211> 2025 <212> DNA

<213> Aspergillus nidulans

<400> 2221

60 aaaaaataca aattaaaaac aaaataattg caaagggggg ctcctaaaat cggaccaaag aggacaatta tccgaaggag aattgaacaa aaggctagac aagaataatt ctttgagcca 120 gccacgatgg aaaaagactt ccggggggaa cgctccaaat ggattaaacg actccttgaa 180 tgqqaaqqcc agatctttcc caattacgga gcatacgggg atcacgacca atcaaccttg 240 gcqqcttqca ctqqaqcqcc acttccaaaa ggtccttgtt ttctgcaaac tgaaacggtc 300 tatccgcgct ggtcgtggtg gcctactgca tggtaagctt aatatgtcgc tgatccaggc 360 420 gatgaacttc attcactctc aacggttctg tattgatatg gagaatggct taaggccgat gttgctggca ttcgaggggc ttttaaaggc aaagcgggac gtcgaaaagg cgaacaaggc 480 tgctggggcg aattttcttt tgaccacgcc ggctatgaca ctctctaaga agcgaagctt 540 cgcagaccac gaggaggacg atacgatgga ggatgacagc atggacctgg agaggaagcc 600 tacggcgccg tttcaggatc gctgggcata atagcattgt aagctaagta tcttctcgct 660 tgggaggtgc tgtcaaccet gggcgatatt ctacgacctt tcagttcttt gtatttatta 720 agttttacta ccaccagatg atgaataagt ttctcggata ggtaaccgga attgttagct aaacttctct atcaagatct gagtaagtgg cagtagcatt gagagtgtca gtggtgttct 840 agtagtacca agacaagcag ccaggccgtc gtccagatag tcatttttaa attcgataca 900 tactgtataa cactacggtt aagttcctac tattatgatt gctctttgtc agtggacaag 960 aactcctqtt ctqtacqcca ttcctttttg cttgcagcct ttagcccaaa tcgttcactt 1020 aaccctcaat caggacatca acacttccag atacctatct ctacctcaca acccacacgc 1080 ccattcatca tcatcacqat catcaacatc acaaacacat tcatttgcca tcgtcgtccc 1140 taaattettt titteteett teattatett acetaattit eetitageet eetgeaagea 1200 agcaggaagc gcaaccgagc gagcctcagc acaatgcaca tgaaccttcg aaagaatatc 1260 cgccttccgc agcacttcaa cccagaccat ttttatggcc ccatgtcgca acgatctttg 1320 cgcggagacg acaaaaagag gccagcgtac actgactata atccgaactt accccctgcc 1380 gcattcccga cgttagagag gccgagggga gcaagatacg gtcaggatat acatcagagg 1440 gacaacgacg aagacagact gaacaaagcc agtcgaagaa acagtaggag gagttttgat 1500 gacttatgtg catcagtaaa tcctaatggc aaaagggaac catcgccgac tgctcatgtg 1560 acggaaatac cgctggacca gcttgacaat tacgtggcga gcaatggaga gctcaaccct 1620 atctgggtga gcaatatggc tcggatggct gctgctggaa aggatgctga tgtcgatatg 1680 gacatggaag atactgactt ggaagggacg gtgactgggg agtgtcgggt aagtcagact 1740 ctcgttgccc tcactggcct caagcttggg gaatttggca gaacttttga gacttcactg 1800 tgtcgaaagt cgtgtctcag gcctcacagc agtcccacga taagcggcgc agtttctatg 1860 cagtggtatt ctgaacttgt ctctttgcta acactattgt tccactattg tcagtctatc 1920 tcgccagggc cacaaaaccc gacctgggct gacctctcac cacgaatgcg agccgagatt 1980 tttcaaaatc ttgttagaac gccgacagct accccgccgt gtgtc 2025

<400> 2222

tccaagtcgc tcgggtagca ttttccttct catcgagctt cttcacgtcc tcttcttcct 60

<210> 2222 <211> 3267 <212> DNA

<213> Aspergillus nidulans

cgccatcgtc tcgcctcctt gaccaaactc gttgactcga gtatagtcta ccttatactt qtaqctttga tagagccaga tgaagaaaat tacatcatca cgcagggttg caagtctgtg 180 gagccaaggc atctttacag taaacgcgaa gagatcatcg ataaacgtgt tgaggaactt 240 300 gtaagtcata gcctttccag gcatatgagc gacagactag agtatgcttg ttagcagaag gtcaagtgac gattgcgacg gtacgaacct tgagtcggta gttaatgtac aagctgggaa ccatcatcag aaaaccgtag gcataaacac tgccgacgag ggtctcgatg atataagagt 420 480 accatqactt qtqcgtgttg tacatcaagc tgtaagcagc gtacgctccg aggagaggca cagcaatgat atacaggtag cggaacgcaa tctcatcata ctcctgggtc ttcttctccg 540 tttctgtgag tttatgcttg tcttcaaaca caaccacata aggaaggaaa gagaaggagg 600 660 atccaactgg aggtgggcgc agacggacat taaccgtett cgtcacette caagetteca atacaatacc gaagcettga etggegagaa teatecagga agtgttetea etgttgteea 720 tgagatagag gaaaatgact gtttgcatga acacattggc gaggatggtg cggactgacg 780 tcccgacatt gtctttcttc ttgcgccaat gagactgcag taaggagcac aatcagcttc agtaactaaa acccttggga agacgaggac gacttacaat gtcatttttg aatgctagag tttcaaaaat catgtgcaga attgtgacta caccagttgt acccaacaac cagatgttgg tatccaggag cacttetttg atcateteaa actegetace ategecacea ceaggggtag 1020 atcctccgaa tgcggcttgc ttggcagttt gtttggcgtt ctcgtcgagg ctcgccatca 1080 ttqcqaattt ccaqttctgg aggttttgga gtgtaaaccg tagagggata gtttcaaccg 1140 tcgagttgag ctccaccata tggcttctca actgccagaa agtgttcagg aagacaatag 1200 gatagtacca accattctga cccgaagcat ctctcgcgcc agtcgcctct agctgtgtgt 1260 ggcgacgaat ggcaggatgg atttgacggt atttcatgtt cccagaatca ggaatcacgg 1320 atagtgtgaa gttcgggtgg taatatgatg caattgaaac atcgggggtc ccatcgtctt 1380 cctcctcatc tgtttcatcg gcacccgcga gtaggttctt gagcttctta gcctttctct 1440 tagggaggta ctgattgaga ggtcgtaaga agtgcacagc tgtatctgtg ctgtagccct 1500 ttgccgcagg atcaagctcg tgcccactca atgccacgaa aaagtgagcc cagagggtcc 1560 cgttatgctg gacctctttg ggaacctgaa tggtggtctc cacctctcta acatcgctgt 1620 agtttcctag accgaatttc ttctcttcca gtacaagaga actcgaggga agagatgaga 1680

tcgaaggaag cacaatcgac ggagaaacgt aaacgctgat atccaaggca ctgtccgagg 1740 gccagatcgg agcaatagta tcgggaacag agctgtagtt ctcgacttcg gcttgcggag 1800 gtcgctcccc aaaactagtc acagcaccgg gttttccacc ggccgtagca ttctgcttgt 1860 ttccaaagaa ttgaccgatg aagaattggg tcacaaagaa aatagtgaca ccctggatta 1920 gtgatctgac aatggactgg agataaaacg tcagaacaat gagtttgaca agtagacggg 1980 accgtacgca cgccttgctc tccctcttct ctctgttgcc gctgctcagg cattttgaaa 2040 tggcgcgaag atagatgatg gaatcgcctc caagccttga ctaagggcgg actagccccg 2160 gccaacgcgg tccagaagtc cggcagttct aggctagatc tgaatgccat ccgcattcat 2220 tcgaatacaa ataccctccc acgcaataga gctctcgctg ctcgattatt gggcgtgtcc 2280 tettgegega tggatatget ggeceegtga atgecateet egeceteatg acagagaaca 2340 atcoctcccc tgactactcc cgcccgcagt tccctcccca taatgagtcg cgcgtatggg 2400 tgatcaccgc gggagattcg cctattggta tttcggttgc gcgtcagatc cttgcgcatg 2460 gggacagtgc tetegteggt ateacatect eggatetega eegegatgeg tgeegteggg 2520 atatgttcga ggacttccag gcggaagttg aagctcaccg cgacgaggga tgggctgagc 2580 gattcaaggc tgttcaatta gacataaggt gcgcattcga tctaatatgg cacctctgtg 2640 aaagagccca ctaggctgag actcgcggcg caggattatt ggagagtgtc aggcagtggt 2700 tgccgaagcg gttgcgacat tcggcaggat agacattttg ctttgctgca ccagtcaagg 2760 taggactcag tgtcaagctt ctactctgtt tagtatagag ccctgaccat ctatagcact 2820 cgttggaacg gtagaggagc ttgctgccct ccaacaaacc ctgaactttg tccgcaatca 2880 agttgaggtc attactttgg gcccgtcaat attttcaggc atcgttactc acattgaggt 2940 ttaaggtcgg gcatgctgaa tgtcttcgaa aacatatggt tccataacca gcttttactt 3000 tgtcctaaat ccccacctcc tatgccccct ggttgaagcc ttgcgggagg gcccaagggt 3060 ttgcataggc ttatattaaa ttttttgacg cgtactcctt ttccagcctt atagacgtct 3120 acaaaaacct ttagagatgg accttaaacc aacacgggcg gttgctctcc actaacattt 3180 ttgattcccc ccccccaca ggggattagg ctctaaaaaa aaaacgtatt atgttccatc 3240 ttccccttcc cccttcccct ttgattc 3267

<210> 2223 <211> 1458 <212> DNA <213> Aspergillus nidulans

<400> 2223

60 ttccatqtcc aqtattqtqa gaagttgatc gagcgctttg cagagccgcc tcgccactct 120 tttctggcaa gctgcctaac cagccagata tatacttccg gctgatgata gcaaccagga 180 aatccctqcc aataatactc acttcttqcc atctcgaacg aaatgcccga atcgcggacg cggccgtgaa taagtgagac cgaagagagc caacgacgca actcctaacc ccattgttct 240 ggtttcaatg atcgtagttc atattatgcc ttcaggtcat gaaagcttcc tgtcaaggtt 300 360 tttcgctcag ttcgcctatg cacttgggat ttcttcacct cgtattcgtt tcataacgat 420 ataagctcgg tttttctgaa cgaaggagct gtagacctta tgatcaggga ttgtattcct aagataaagt tattctcgat catcttgacc caagagttgt ctagctcatc tcttaggcag 480 tatatgaata caccagccgc agcgccgtag aacttcgtcg cggtcttcaa agcgagaagt 540 gtcaggaagc agttgcaaat gcgctgtcaa ttgttatttt cctgtgcttt cataattatt 600 660 cgccacccca ttttcaggca ggacttgagt taatatctaa ttccacggtg cctaatcatt ttgggagtat attgtaagcc ccagccgggc tgaaatgata ttaggttgca caatttcctc 720 aagttgaaat attatcctgc ttagtaatta tgaatatggt ttgtgctgct acaggcaaaa 780 840 agccagctta gggttcggct agacccgaac aggataagcg aagcgcccac aaccaaccga 900 gcgccgccca tctgaactgg attgtgtgcg agtgaaattt cgactctcaa cgacgacgac aaccgacgac ccatccctct cacctcgccc ttcaactccc gtacaccttc acttcgaggt cacaagtcgc caaaatgggt ggtgtcaccg ttcgcgatgt ggacgtaagt tgtcacttta 1020 cctgtccttc tgcacctgca cctttacctg gcaacggatt ggcatctggc atcaagagag 1080 ggaaaggaag cagtcgatcg aaacgagaac acggacgatg ggaacatgga aatgttggag 1140 gggacatttt tgatgcaaca aacgcgtgga atcttggtgg ccgattttac ggtgacgggc 1200 ttcaattgtc gatacgattg accggtgact acgatgcgaa tgcgaacaga tactgaatat 1260 cgatatggat taaaatacgc acagaatcaa tcgttgccag ggggaaggtt tacaaagcag 1320 agggctaatt tttttggcgg tcgaatgtgt gctgatttcg ttacaggcgc aaaagttcat 1380 tgtggcttac gccgctttct tgaagcgtca gggaaagctc ccatccctgg ttcgtcatct 1440 1458 acctacqcca tctqaqta <210> 2224 <211> 2671 <212> DNA <213> Aspergillus nidulans <400> 2224 atcccactcc gagtttcctc actatttcac gggaagtggt tgagatccaa ttactgcaat 60 120 ctqqcttcaa cqaaqtatac gcaaaaatac gcaaaataca tacgcggact tacgttgtca 180 ttqqattctq ccqqtggata caaagcaatg taaaggcggt atcgagagca tgtacgcctt 240 atcgctcaca tgaccaacgc gaagtccaat ccgattcggt cagtccgtgg gcacctcatt cqtaqtacta gtacgcgttc agctgtatgt cttgcagggt ccagatcttt cgattggaac 300 tctgagctgg ccagaaatgt ctgccggttt ttctgacttt gacgctggtc atagggatct 360 agtgactgtg acgaagttca actactatgg caaccgcata gttaccgctt cgtcggacca 420 480 tcgcatgaag gtctgggacc agaaagatgg cgaatggcag ttaactgaca cttggcgcgc ccatgatgca gagatacgtg atgtaaggtt cccccttcc ttggtaaatt gtacgtattt 540 600 aacqatccqt taccgcaggc aacctggaat gggcctttca ctggccagca tattgggagt 660 gtgggggagg acatgaagct gaaaatatgg caggaagatg tcactcagcc gccgaactct ggccgccgtt tcagatcaat cttccgcttg atggcgccac aacggcatcc atatgtctcg 720 780 cttgatttcc gcaacattga ccttgaatca tggctggccg tcataacgcg cgacggcttc ctgagagtca tggaacctgt cagcccagac tcactcgctg actggcagac tgtcgacgaa 840 900 ttcagggtct gcgccgcgcc ccagcgcggg gaagagacga gcttcaaagt gcagtttcat cacgacccta tagatatcac ccactccatt ttaccctcct gggaccggaa aagcctgtct cttgtagttg cggctatgga cagtgtgaag atcttccgga ctgatgccaa ccgtcgcttc 1020 taccacgctg tagaattaaa agggcatgga gggttggtta gggatatatc ctgggcaaat 1080 ggctcagttc gcggctatga tctcatcgcc agcggatgca aggacggctt tgttcgaatt 1140 ttcgaggtgt atacctccct atcgtccaac aatgcgcgag ataccgatcg caaccacccc 1200 caatcgtccg cacaatctca gtcgtcccgc accacagcgc agtcagggat aggctcagct 1260

ctggccaatc gtgcgcctct gtccatggcc agccggcccg caacgggtga ttcgccgttc 1320 aagcattett acaaggaagt agettgeate gatageaage atetegatgt atggeaggte 1380 gggttctcct acgccggtta gttccttcga ttcactctat tatttattgg tttcgctaat 1440 gaccatgcag gtgattgcct catttcttct ggagatgacg gggtggtcag attttggaaa 1500 aaagetetat eeggggaatg getegaatat geagagaegg agatgaetga tagtgagaea 1560 aaatgaggac atgtcaactc ttcctcatgt tcatgccgca gcatcgcgaa ctctggtctt 1620 ggagetactg gaggttaatt etggtaattg gegacacagt tgtetacatt tgeettttt 1680 gagggcacgg tgttctttcc ccttcacctt atttctcgtt gcttttttaa gacagtgata 1740 cccatcatca ggctttattt cttgtacttg aatcctcctc cttgcttttg tcgtggaatc 1800 gtgcccaaag tttgacagat gcccttcaag gtgtaaatcc cgctccttcc ctttgacgaa 1860 cgtcgacatc atcaaactgt gctcttaccc aattgacaaa caaccgaggc gcccgaaagg 1920 caggcaccac gcagcgcgga tcatggggcg aaggcactct aatcctgaac ccttcctctg 1980 cttctagtgt tgacttccta cctacttgtc acctcccctc atgtgtctat gactttaccc 2040 ctgcctatta ttcgtcgcta ttcttatcga aaactatgac ggtgggccca actttgggaa 2100 ccggcctctt cgtcggaacc ggccaggcgc tcgcggccgg cggccctgcc tcgctcatta 2160 tcacctatgt attcatatcc gcaatgacat actgtgtgac gactgccgtt gctqaaattt 2220 caactcactc aattactcgg aatggcgcga tgctcgctca taattaccat tatacctcga 2280 atcatgtggg gttcgcgata gcctatctta gatggattgg tctcagcttg cttgttcctt 2340 ttgaagtcac cgtgggatgg tccaccttgg gctatgggaa ccgagcgcga gcctcqcatt 2400 gcgctgggcg gcttgatgtc cgtcatattc ttcttcaata tgctgccgaa cagttctcag 2460 aaggcgcaaa cgttcttacg gggaataaat cctgccacat cggcttgcac atctctttta 2520 cctgtatccg gccagcaccg gcccgtggga ggtttgagat tggctacccc gtcattqtqa 2580 gtctatttcg ggaccggggc ttctgctttt gtctgatcct gaqacgattt tqqttttqcq 2640 ggtaccggca ggtgcaaaca tgatgggccg a 2671

<210> 2225 <211> 3743

<212> DNA

<213> Aspergillus nidulans

60 tcttgggcgg gaattctatg ccctcccgct cgaagaaaag ctcaagtatc attccgcgag taacctggaa aaaggcgagt ataacagcta tcgtccggcc ggacatcgca tgtaagcaca 120 180 cacttccgta ggaaagactg agagttgctc acatgacagg ctcggcaact gcgtcaaaga caacaaaggt ctacaacatc cccaagttcg acggtcatca tgctcgcaag catccaccca 300 ttctcgaggc ccgcattaag gaattgaacc ttcagccgca aatgccatac ggaagtcgtc gagaaactcc tccggctctt tgccattctg cttgaattgc ccgacgacga ccagctggtg 360 agagaccatc agtatgatgt tgaaggggaa gaccacctcc gctatatgca ctacgccgcg 420 cgtggtgcag aggagaacaa gcgtgctgcg gagatttact ccagaccata cagatttggg 480 540 atccgtgacg ttgctcttca ggcagcctgt tgcggcgccg caaatcctta acaatgacgg gcagtgaaaa tggttaagcc gcaagatgga accataacca tcaacacctg cgatgcgctt 600 acagcgttga cgggcggttt gatcaagtcg agcattcatc gggtgcgtac gccgcctgct gaccaggcgg gtatcgatcg gctgggtgtg ttgtactttg cacgcccaaa caaccatgtt gtactogato ogatatocaa cagocotgtg otgoagagao ttggactgao atcoogtgtt cacggagctt ggcaaggatt tgacgatgaa ggagtgggtt aaagtgcgtc ggacgcagca 840 acagaggcgg agacaggagg cgaagatttc ggaggatggc aagtacacgt acaagccgaa ggacttagaa atcattccgg gattgttggc caaggtctat aactaggctt catccctgaa 960 tgtagtaaat ctgaaatagc tgggtgtaca ctagctcacc agaaagctga ttggattatg 1020 atggcaccac caaaatatcc agaaatatat tctcaaatcc gccactatga agaaaaattg 1080 acgctatatc ctcccgtctt cgggtcctga acgaatttga agttgtctgt cgacagccca 1140 aacggcttaa gaataccatt tcccagctac ggtggttagc aagtcaaaat atccagacag 1200 taataggaca gtcacttact tcttttaact ttcccatcat ctcccccatc tcaacctcct 1260 tcgctttact tatccttgcc ggaagctccc gcaacgcctt ttggacgacc ttcctatcac 1320 ttggtggaag attctccatc ccagcaagaa gcttgtaatc ctcctccgca ccctgcaaat 1380 tegeceaece acceaactea etettggeee tegecegeeg cateagagee ttegecegaa 1440 tgcgcgcgac atcccgtttc cgctcgtcgt tttccttgat cctctgtagt gccgcttgct 1500 cgttgacctc gtcatcaacg gggatttcca ccacggaatc cgcctccttc gccgcacctt 1560

ccttaccatc ctcgggctgc gaaggcggga caacccgatc caggccctca atacaagcat 1620 ttgcgctgtc gacagcagcc ttccaatctc ctaacttcaa gtagcaagcg gacatattac 1680 ttcgtacaac agcgatctcg tagtctaagt agctggggca ggaggccagg gcccggtcgt 1740 aggtggatat ggcttgggag tagaaggcgc cgaagtaaag gttgtttgct tcggccttta 1800 qqctqtgcga ttcggcgaga agacgctgac agactaatgt gttagtttat atgatgtaga 1860 caatgaattg gagtaggggg atagcgtact gtttcttctt ccggtgggaa ccgagcatcg 1920 tqaaaqactt cgtcttcgtt ttctgtgtcg cttccggcat ggttggttag gtctctacca 1980 tttgatgccg aagatgtgtc tggcggcatg gttgttattg ttctttgcac cttttgacgg 2040 acgaagttaa agggtgcgga gagtgattgc ggggagttaa ctgtcgccgt cagatgagaa 2100 atggcgtggc gcctgataac tgaggcagta aggtacctta tcgataagct atctattccg 2160 accagtatec caccattgag gggaaageet ttegttggag teaacteage tecaccete 2220 cttagatctq ccacttgttt ttggactcga gactttcaag aaattctaaa caatgcctgg 2280 cgttaatcct gagtaagtga tctatacctc aaacttaaca gtccccacta acaatgccag 2340 cctccccca gtacgggcgt gtctctttga catggacggc cttctcatcg actccgaaga 2400 cetetacace gacateacea ateaggtget geactegtte ggcaaacett egetteegtg 2460 qtccatcaaq qctcaattqc aqqqtcqtcc tcaqccaqaa qtacqctqta accttctcac 2520 caacctacaa caccttatct gccccgctcc ctcagaagct caagaaacag ggtctaattt 2580 gactgaattc tcaggctgcc agaatcttct ccgattgggc gcaactccct atcagtcacg 2640 aggaatatgt ttcacggatc tcagcgctac aagcagaact cttcccgacg accaagccgc 2700 tgcccggcgt agagacattg ctcaagaatc tcgtgtctac gcagaagggc cctaacccgg 2760 tgcacattgc cctggcaaca tccagccaca cacggaacta ccacctcaag acgagccatt 2820 tgcaggatct cttctccctc ttccctgagt cccagcgtgt gctaggcgat gacccccgca 2880 tcggcaaggg tagaggaaag ccactaccgg acatctacct ccttgcccta gaaacaatta 2940 acgccgggct tcgagagaag ggtgagaagg agatcacgcc ggaggagtgt cttgttttcg 3000 aggatgcggt gcctggtgtt gaagctggcc ggcgcgggg tatgagggtt gtttgggtcc 3060 cacatccggg attgttggag gcgtataagg gacgtgagga agaggtgctt gctggactga 3120 caggggagca taaaqaagag gaaaagagtg aggctgagaa cgaagcgacc gagttggccg 3180 aagagaggtt gaaggctaac agtgctggaa cgcctggaaa accggaagat ggacactcgg 3240 gattgttggc tacactggag aacttcccat atgaacgcta ccatatttac gatgcagacg 3300 cttgcacgct caaatttcta caacctaagt tcatcactca aggcatctac cccaatgagt 3360 tttacttaaa cctgccattg catatttccc cagagaccat tcaccatcct ttgcacacat 3420 aatgcactt cctacctcgc taacatcatt atcgacgtaa atttttaac ccttcatcaa 3480 accacacccc cttatctctt atgccgtttc caagcctaat ttctttaac cggggttttc 3540 tttacacagg ttaaacctcc aattgcttgt tgttcaatgc gaacccttac tatttaaaaa 3600 attctaccct tctacttcct ctcgttggtc tcagaaatta gcgaaacctc tttcaccttt 3660 tatttattt tatattcggt cgctctgtct ttttccttcc acaccacccc tatctacac 3720 catatcttta cctcttactt tat

<210>	2226	
<211>	2419	
<212>	DNA	

<213> Aspergillus nidulans

<400> 2226

60 cgctcctgag taatgacgtt tcccaccgag gtcaaggagt gctggtggcg agaagatgct tcacgatggt tcatgaagct acgcaacgtg gaaacggatg agatctccta ccatgaatgc 120 cagatactct teggegegac gggagtetta gttgaacete gegeetgega tateeeggge 180 qcqtcaacat tcaagggctc tctcttccac accgcgagat ggaaccacga tgttagtctg 240 gacggaaaga aggtcgtagt cattggtaat ggatgtatgt cctcgatcac accatctctt 300 360 taaaaaattt qctqacaaac caggtactgc tgcccaggtt gtaccagcta tcatggatcg 420 cageggetea gtgacgeaaa teateegeag eaageactgg gtggttgaaa eggteaatgt gcaatacacc cctactatgt tatgggcctt tcggaacatc cctggcctcc aggcactcca 480 tegttteget atataceaag gegetgagge tgaetggeag etetteeeta tgaegaagte 540 ggctgctaaa taccgccaga cgcgacgcaa agagattgag gcctatatgc gaagggccgc 600 gccggccaaa taccatgacc ttctcatccc agactttgaa gtcggctgca aggtatacct 660 cttcttcctc taatgtgact gtctactgtg aacctgctaa tgttatcagc gtcggatctt 720 cqattqcqqt tacctcqact ccttqcacaa tqataaqtat ctcctcacqq acqccaaqat

cctcgaaatc accccggaag gtatacaaac ctcgaacgga ctcattgagg cagacgtgat cgtccttgcg accggattca atacgaacac tttcctcccg ggtatgcaag ttcatggtcg 900 agatggcata accgttgacg aacactggag ccgccagggc ggtccagggg catacaatac 960 ctgcgcgatg aacggcttcc cgaacttctt cgtcctactg ggaccaaata cagtaacggg 1020 ccatacgtcg gctgttatgg ctgctgagaa gtatgcacta aacgtccacc tgatatggta 1080 tttgttaact cggggctata gctcggtaaa ttacgcactt cgcgtcctaa aaccggtctt 1140 agatggcgcc gcatcagccg ttgaagtcaa agctgatgcg gaacatgctt atgtcgagag 1200 cgtccagact gcgctacgga atacagtttg gaacgctggc tgtcactcgg tatgttgcct 1260 cccagctgtc tgataccact aacctcggtg tagtggtacg tcaacgagaa aggctggaac 1320 gcgatggcct atccctggac gcagccccat ttctggtata gaagtttgtt tccggtttgg 1380 aaggattgga atatcaaggt agttcccaga tcgtcgagtt gggcttcaaa ccagactaac 1440 actgctggac agtgggcaca gaaaccagcc actcaggctt ggagacggct gcttctagcc 1500 gtattactcg tcgtgagcct tggtgtattt aatcgtgctg ccacttcccg caacgtttca 1560 tggtggacag ggatagttac tggactacgg aagagagtta ccgcgtaggt gtattggatt 1620 gtcctgtagc tttattatca ggtaagcatt tacctgacta gttttatact ctagctaaca 1680 ccttcaggat acgggtgttt agtaccacaa attcatctta ttggttgtct taagattcca 1740 tagtgtccca aacatagctc tggatatggg cggaacggcg ataaggaaaa tagcaagccc 1800 tcggttttat tagctgtttt gagtcccgag ctagatgcag gtatctccgt ctaagtgaga 1860 cgtagggcca acccggactt aagcggcagc tcccggattt aacaactccc taaccttcct 1920 ggactacgat tacagcaaca tgaacttcac ttcctctctc atgctatgcg cagctgagat 1980 ggtcgtgtgg acaacacaat cgtggatcgc tcccttggca cgcggccgaa cagagggtgc 2040 cgtcatggct taactccgct gaatatatct gatatattta tataatggaa gctccccacg 2100 agtccagatc acgcaaacat acttttctga aacatacttt gctgcgtcta ttgcccttac 2160 aaccatggcc ctagttgccc ctacagtcgt tggcaagatt gtcggcccta gtggcttggg 2220 tctcatgggt acgtccactc tctgaacatc ccatcttcaa ctaacctgct tgcaggattc 2280 actcgccctt gggcgcccgt cgagtattcg ttggcgacaa gagtcctgaa aaccgccctg 2340 gatcagggcg cgacattctg gaacggagtg agtaaaccgt cctaacccgc aaacctacat 2400

<210>	2227	
<211>	1533	
<212>	DNA	
<213>	Aspergillus	nidulans

<400> 2227

60 actacaggcg caaagtcggt caatatagtc caccatactt agaaggatcg gcggcgaaag agtagcgtgg gttgttagtc gttgcaggta atcatgtaca gatatacgag ggggagtgcg tgagtggaaa cgagtcagcc ggccctgatt caggggtatt ttatcgttgt agcggataag ctccatcaac atgctggaaa tgaggacaac cagatccctg ggatcggcga actcataacg 240 300 aaccgggaga tacttgacag cagggttcgc cgggcgcagt cttttcgatt gggatccttc aagactcaga ctgcccggtc cagcgggctc aacaccgcga gtagaatcgc tctggctgtt 360 acgcttgttg gaccccgccg tagtagtcgg tgccggcatt ggggggggct gggtgttctg aggagcagca aaagccggag gaaccgtggg ggcagggccg ggaacggagg acgtattagc 480 540 qqtagactgg ttggatgtct cggggagggc ggcgttagaa ctgggaccag cagcgaaaga tgctgctgcg gacgcggaag tactaattcc gcccccaagg gaggtctgcc cagcggacat 600 acgaccgcaa gcaggatccc ctgagggcct gctgggtgga gacgaaacgg aatgcctctt cagagctgag cggagctctt caacggccac acgcgaggaa cggggagtga aaggactacc gggcacaaca gagcgatcag cggcagagtc atactgctgg gcttgatagg cgagtgcagc 780 cgacgtcgat gacaggcggc gcgtaaacga ggtcgaacat ggagagtgag gaggatgaag ttgggtggcg gcgggtgagg agggagcagg gcgaagggcg gagggcgaag gcgaagaaac taacatctcc gcccagcaga ttcaccacgt gggcgcacga ctgaacgagg ttcttcgaga 960 ctggcggacg ctgtgaaacc caagaccggt actattgcgc ttagtgtcgt gcacagacac 1020 attctgtaaa cccctactcg aaaaagtgaa aagagtagaa gaaatgataa cgatcctgac 1080 gatggatcta agaaaagagg atgtggaaag ccaaaggaca aagacaaagt gaagtcagtc 1140 cacgctggag accactaatg gactgaataa aagtatgagt acagtaagat acggtaatgg 1200 tcttgtccaa ttcctcatta ggccaatgaa gcttatttat caccagataa cggagatcgg 1260 tacagatata ttacatgtct gatacgagac tgacgcccgg tcagggaagc ccgtcatatt 1320

gaggacgatg	cgctatattc	gacgaattaa	cgtccggcaa	tgtcgggact	caactccatt	1380
tgtgtcgcaa	ccaaggaacc	cggcacagaa	ttggcaccct	accccaggac	gcttccgact	1440
ggccgagctg	tcagctggta	tagaacgata	agatcaaaat	ctttcgcgcc	tgatggtcag	1500
accttcgacc	ttgaggtgtc	agtataacga	gtc			1533
<210> <211> <212> <213>	2228 471 DNA Aspergillus	s nidulans				
						C 0
	acaagagaag					
ttgacaagaa	aacgggctgt	acggagtacc	tcaacagtta	atccgaacgg	aattggactg	120
agaatgagaa	ccgcgaacac	acagtggtaa	cttcctgtgg	ctgaacaaac	gctgattggc	180
gatttagtgc	tgtggcggtg	tcatcgccaa	tcagacggta	tacttaccga	gtaatctgta	240
cgggaccacc	aaggagaact	acctggactt	ttgccaggga	gtcatcttcc	tagaaatttg	300
tcagacatga	gagtaccttt	gggtacaagg	tgactttggc	tggttagcat	tctgatattg	360
aatacccttg	aaagaggaca	cggcaggcta	cgaagacagt	ggctcaggag	tatctccatt	420
ccagtcaaag	ggccttcttg	attcccatgg	tggcccaaac	atgcggaaaa	t	471
<210> <211> <212> <213>	2229 1446 DNA Aspergillus	s nidulans	•			
<400>	2229					
attgctgtga	cagcgtccaa	gcaggcagcc	agccctcggc	acaatcgctg	taagcaaagg	60
ctgacagcgg	cccatcatct	ttccccgctc	gctgtgccgc	caccacggtc	ggctttcctc	120
tcatcaccac	tgaagagcct	agcctcccgt	cggccggggt	caacaccgta	cctgactcga	180
ataatcccag	acatctcccg	gagatccgta	gcccaggccg	ggtagttacc	atccctggat	240
ctcgctggta	tatgctggac	agcgaagtcg	ggttcgtaag	gtcggaataa	gcagtgctag	300
gcacagcgct	gatgatctcg	gaaatgatcg	agctgggcat	ttcggggatg	tccgggatgt	360
cctttatact	agcagagtcg	gagtcggagt	cagaatccaa	ggaagagctg	gagccgctga	420

tgccagtcgc tacggggatg tcgcttgagt cttgcgattc aatccattcg tcgagcgtgg ggacatcgcc tgagacacca gtaggtactg ggaggtcact ggggctttta tgttagcagc 540 ggctagttct tgaagggagg taagcgacat acgtagtcga ctccagtgca tccatggagt 600 660 caacaagcca gtcctggccc agggccatcg aagaaagggc aaggaaggta aggtatttgg 720 cqtqcatatt gacagatctg acaagaagcg aggtagaaag agcgtaaaaa aaaacaagga 780 gcggaacgtc aaaaatgtac agtgtaaaat gagatggaat tgatattgat tagaataaaa atgccaaccg ttgctgaagt tatgttcaaa aagtctgcca cccagagcgc tacaggccct 840 900 tcatataggg ttcacattga acatcgcaat aagacacttc gtgtctgaca gcaaaagaaa gtttgaacca agttctgaac gaccgcttta gaggcgctgc agccgtctcg aaacgtcctt ctctcgtatt cagtcttgtc caccttaccc aaccgggagg atttgcaacc gcatctcgta 1020 ttcagatgga cgatcgctgt tgcaaccctt aagtaaatat ggcatatgga gccatccgaa 1080 caggaggaga tttttgtatt caagagcgtc tgaattgtcc ccttggcggc tcgtatcaac 1140 atcggctcgt cggcaaagtg ctggtgcctc tgcctgctac tatggtgcct gtgccttggg 1200 tetggeagge etttegaete agaactgagt eagaactgaa aatggeaece acagetagtg 1260 gatacgagcc cctgcgtcgg caatgcattt gtgaggctct cctgaaagca tccacagtct 1320 gggtggacac actccatcaa ctccatcagc aatgaatgcg tttcctgctc acacgacact 1380 gatacaaaaa gaaggaatac gaggcatcgg taaaatgtaa gcattctcag ccagatgatg 1440 1446 agtcca

<210> 2230 <211> 2445

<212> DNA

<213> Aspergillus nidulans

<400> 2230

acgccgtcgt gtcagcaggc gtctcaacca caagaggcgg ttgctttctc tgactcttgg 60 cagacttgga agaaggcgc cggtatggtt gaatagcatg gtccagtgca cttgtattga 120 gcggaaggtc tggaatcgca gacggcagca agctggctgg aagtttgaca ggacgctgat 180 cgatgcggat aggctctgtc tgaatgccag ttgttcgagt ttcggtgact gccctcaagt 240 cggcctggca ggaaacactc ttagtttggg gaggaaggac tacgcttccc cgcggagaag 300

aaggttcgga tacggggggc tgaattgtga tcattggaat ctcaatgttt gccggcttga 420 gcttctgcac agggttactt tcagcttcaa tcttggcagg aatatccgtt tgcacagaag ctggaaccat agcagcgtgg tcgacagctg ggagctccaa aggcgcagcg actcttggag 480 540 tccaaggagg ggttggaaga ctctcaacag tttgagagga ggccgaaacc atgtcgatgg tcaaagtcga tgtactgctc tcctttgttc gatatagcga aacatcgttt tccacattcg 660 cttcaattga cttatcagcc attagaggta gattgggcga tgcagggggg gagtattgga 720 caccgctgtc ttgatattca gtaggcggag tccggtcaat tgaagggctc ttgagcactg gagatgcctc agctttcacg gcaaagctgt ccagtttctc atcaagcgaa acgccaagga 780 tttttcgtgc cttgctactc atggtatgag acatttgcga atgaaccgag atggggcgct 840 cttcaggaag cgcctcgggg gattgaggta tatcatcatc attatcatca tcaaggtcga 900 actcatcttc ttcgtcaaat gctagctcgt ctgcaaggtt tgtctgtgaa cctagcatac cggcagcgct cataaccgaa taacgtccct caccaagtcc atgatgttca tcactcccag 1020 cactactcaa actcgtgatg ctggtccggc ggcgtccttg gctgctcgag tacatgctaa 1080 cggagtcact gtccttgccg gtggacgcct ctttccctgc gtcttgtgca tcgtttatcg 1140 aaggetegeg ggagttggea geetgggegg etgeaactte gtteaagaca getttgagae 1200 gaccetegae caeatggaet tteegeteea gatteeteeg ttegeeatee eaggeeteet 1260 tttcccgagt ccacagcttc gtagttcttt ccaattcttc atcgcggctt ctagccttct 1320 tctgcgcctg ttcaagtttc ctgcggaatt cagctacccc ctcgagtgcg ttgtccctct 1380 cttttgctag ctcagtaagg gccgaagagc taccaccttc cagaagttgc agttgctgct 1440 tcagtgaccg agactctttc gagtgcttgg ccagccgctg agccaactct tcattctcta 1500 tccgggactc gtcgaggctg ttctccaagt ggtcaatggc ctttgtcttg ctctcgacgt 1560 ctcgtcggag ggcgagaatt tcagagacaa gagaggcgtg caaggtcggc gtgaatctcc 1620 ggggatccag cggcgatatg acgtcctcat cagcaatgga atcgagatcg ctgcgtcctt 1680 cgggagagga aacgtgattg gggagcgata caggcgatac cactggacct ggagacgagt 1740 caccccggac atgcatggaa ggtggtcgtt ttggagttgt agaaggcgtt gggaatgcgc 1800 tcgctaatgg cgggctttga tacatcgctt ccgtggccat ggcgtctgca gttagaccat 1860 cacagtgcaa caaggtctct gtcagagctg caatcgtcgg ctctcatgca cacgcgcgag 1920 tagaccgtcg tgttagaaag cttccattga ctatacctat gtagcttatc caggcaatca 1980 agcagtaaac gaaggaggca gtcgagattt caacggggct ggccagcagc agtgattatc 2040 atcaaggcct tgccgctgtt tctattctgg aagcatgagc tagttagttt cgagttgaaa 2100 catgtggaaa tcaaaagcgc atgcgagacc atctgggcgg acgtagtcaa tacgtacata 2160 ccggactgta caccgtctct accaactcca gagcccagga ggtttcgata atggcagctg 2220 gagtccgcgc gttctccttt gtagtggagg tcgtgatcgc agatcgagtc acgaatagac 2280 aattcaagag aagacagggt aagacaaccg cataagatta aaatagatgg gggagcagga 2340 ataggtagta tctgcaacac cctgtgtccc taacgttggc tatcgtccaa tccctcgcct 2400 ttcgcaggaa gaggggggg aaatgcgatg cacgaagtac ggagt 2445

<210> 2231 <211> 994

<212> DNA

<213> Aspergillus nidulans

<400> 2231

cggacctttt cccagactcg taaccaggca tgcttcttgt ttcttgaatc cgcgccaatt 60 acacaaacat cataqaqcaq cqqqaqtaqt gagtaacaga gcccaatata ccgatcgacc acaagttcac atccgtcccg aagtcgcagt cgcaaaaccg gcatccgtcg gtggatcaga 180 cactccactg tgtcgaggta taggagacaa ttcatctcaa tgtccatctc agacagttgg 240 gacagcggtc cgggtgggtc ataccatggt tttgcatgaa agagtatata ccggcatatc 300 gtgaatgcgc cttggccgta caccgatgct gccgcagccg gtgacaccat ttggtcatag 360 gtgaggatac ttgttcccaa cgccaacatc aaacggacct gtgccaaatc tgttggaggg 420 480 tctagagcac gaagtttgcg gatcgccatc gcgcagcggg gacatgttct gtgcttgtgt 540 ttgtatttga aggtgccccg atagaagggc aaattcgcca gcgcaagcca gaaacccttc caagaggttc tccggggaga tcaggaatcg agagtgcaga gaatgacgca tcttgcttct 600 660 aaaagaaggt ccaatggtaa aatgggagat gaaggctgta gttgagaaga ggaattggat cgttgtctct tcctcggagc ggagagtgat cgagagacga ggatatggta gcggatggac 720 gagcaatggc aatctacccg agtcatcgct atttggacga gttatgggtg atggtgaggt 780 tgaagttgte tgeggettee gaceaggggg geggatettg eggagtgtet ggeaettgtg

gccgagtcgt	tcgcatcgac	gacacgtgga	tgcttcccga	ttgcgcccgg	gctggcattt	900
gaccttgatt	gtgtagcagc	gatcgcagga	gcgtctcttc	atcgtgtgtg	agtgttgttt	960
ggagtgtggg	gaagaggaat	tgcagacagc	gtca			994
<210> <211> <212> <213>	2232 1672 DNA Aspergillus	nidulans				
<400>	2232					
cctggaactg	tggcgggcac	cateegegee	agtacattgg	tgaagcactt	gtgaaccagc	60
accacgtttt	tctgactcga	gggattacga	gcggttgcgg	cctgatcttt	ccgcggattg	120
gctttgttag	agcaagtgag	gggcagggtt	gtcagacggt	tagtgtggaa	catactgcta	180
gaggtagtac	tctgctttac	atggagagac	agactgacga	ttgactagca	agcagcaggc	240
agtgttacta	tctacgattt	tggacaaacg	actgtaaaag	gctgatgctg	cgaggtcttt	300
agtttggaga	agtcactggg	ccttagcata	cacaaagcaa	tacacgcgag	tgaggtgtct	360
aggcggttat	atgcgacaaa	gggaataggt	catggtatag	ccttaaaaca	gtaggaccag	420
ccttgggaag	aaatcgaatc	aaacaaagga	aaaggaacgt	cggcatctct	tcataccctg	480
ccagtgctag	gaactggctc	attaatattc	cttccacggt	cggcttccat	taccccagca	540
cataccccga	acttgtattg	ggcggcactt	gtagatgcct	cagttgctgc	tgtagccttc	600
ggttcccatc	tacgagctcc	gccaaaaagt	ccacagtgcg	cataagcacc	tcgcgcttcg	660
tcgagcgcga	actgttctcc	agcccgggca	ccatcttgta	caattcatcg	tacatcctat	720
tctgatgtag	acgccgattc	cgctcagcga	tgatgtgcaa	gagccgtctt	cgcttcttgc	780
ccgtgatctt	ctggagtccg	gctcggctca	gttctgccag	ctcagggagt	tggtcttctt	840
ctttgcttga	cggtagtatt	ttcgttgcct	ctgtcactgc	ctcgggctcc	agctctagct	900
ccgtctctgg	ctcagactcg	ggcttgagtg	cgggcgtctg	cgccgtcgtt	ggcgtggcag	960
cccgcgaatg	cggtactgca	tggattccat	ataagggagc	cggttccggc	tccatcttga	1020
cttctggcga	ggagttcggg	gccggttggt	agccgttcgg	accgaaagag	acgtcagaac	1080
cccacatgag	gttggactcg	ggcactgtat	aacgattcgc	agctaagatc	tttgcatcgt	1140
atggttgttt	ataggtgacg	ccatcgtcga	cgtggattag	gacgtcgctg	atgacgccgt	1200

tgacgaagcc gtcgtattcg ttgtgcacat atggtattga gctgaggaac ggtgtctggg 1260 gaaagtatgg cgcgaatggg acggctttga gcctgttagc aatggctgaa ctggatagat 1320 gaaaagccgt tgaacaaacc tgggccgcat ccgacgcttg gtatcgcata gtgttgtggt 1380 ggcggtggtg tatacggtgc gtctctgtag atgggggctt gttggagggg agaataaaat 1440 gaagaccggt agtctggctc gaatgcagaa gccatggcta tgggtaactc tcacagcagc 1500 ggactgtcga actggaacag cgggaagggc tgaaatataa actcgcggcg tacaggtgga 1560 ggacttttga gatcgataga gcccagaacc acggggtagg ctataacaag aggacaatga 1620 acgttgaagc tttaagcccg tactttagaa caggcgggcc cctgcggtat at 1672

<210> 2233 <211> 2506 <212> DNA

<213> Aspergillus nidulans

<400> 2233

aacgaccttg tgcccaggaa gttcaccacc ctctccaggc ttagcacctt gggccatttt 60 gatctgcagt gcgtcggcgt ctgcgaggta gtgggatgtg acaccgaagc ggccagaagc 120 aatctgcttg atggcagagc gcatggtatc tccgttcgcc atgcgcttgc tgcgctctgg 180 gtcctcacca ccttcaccag tgttagactt tccacctaga cggttcatgg caacagccag 240 ggtagagtga gattccatcg aaatagatcc gtacgacatg gcaccagtca cgaatcggcg 300 aacaatctct gtccatggtt caacctggtc gataggaatg ggcgtccgct ggtcaaagtc 360 gaactcaagc ataccacgca gagtgcagtt tttaatctgc tcgtgggcag ccttagcgta 420 tgcctcgtag gacttgtcgt tcttcgtgcg cacagcatcc tggatattgg caatgctgac 540 gggatcgttg atatgatctt caccaccgtc acgccagtgg tactcacccg actcattaag accagggata tcgacgatgg cacgagatgg gtaaccacgc tcgtggatgg cgaacgcatc 600 660 ctgcgcgatc agctcaaaat tcataccgcg gatacggctt gcagtgccag tgaaacagcg gtcaatgaca ctgtcatcaa taccaagagc ctcaaaaaatc tgagcaccct tgtaagatgc 720 780 tagagtagag atacccatct tgctcatgac tttcaggata ccaccgtcgc aggaggcctt gtagttctcg atcaccttct cgtcggagag ttcttgcgga tcaacttttc tcggttcatc ttgaggatgc actccatggc gaggtaaggg ttaataccat cggcaccata accaacgaga 900 acacacatgt ggtggacctc acgggcctcc gcagtctcga caatcagtgc agcaagagat ctccacttgt tacgaaccaa gtggtggtga acaaggccag tggccaaaag tgcggacact 1020 gggactctgt ccgcagaagt ggcacgatcg gaaaggataa ggatcttgtc gccttgttga 1080 atagcttcag tggcggcatc gcaaatacgg tcgagagctt cgatgtaccc agggacgccc 1140 ttcttcttct cgaaagtgat atcgatgagc ctgactgtcc agtccttgtg gactgtgttg 1200 atattcttga gggcattgaa ctcgggaatg ctcaggatag gagaaggaag aagcaggcgg 1260 cggcactgcg atgggtccat ttccagcaga ttaccctgag gaccaacgta gcactccaga 1320 gacatgacga cggcttcacg gattggatca ataggggggt tggtgacctg agcgaaaagt 1380 tgacggaagt actcgtacag aaggcggggc tgtttggcga tgcaggcaag aggagcatcg 1440 ttacccatag aaccaagagc ctccttggag tcagctccca tggggccgag gaggagagtg 1500 acctgctcaa atgagtaccc gaaggccttg aggcgagggt cattctgaac agtggtgttg 1560 tcgaggtcgt gacggagatc catattctgc tcaaccagct tctcggtaat agcaggaagc 1620 ttaacgagct ccttattcag ccaactactg aagtcatggc ggtgggcaac tgtgtattta 1680 agctcagagt catcaataat acgaccagcg accgtgtcaa ccagaagcat ttttccaggc 1740 tgcagacggc ccttctgaac gactcgctcc tggtcaatgt cgacagcacc tacttcggac 1800 gcacagatga tacggtcgtc atcggtcacg tagaagcggc aaggacgcaa accgttacgg 1860 tccaggttgg cgccacagta acgtccatct gagaaagtga agagagccgg gccatcccag 1920 ggctccatct ggcaagcagc ccactcgtaa aaggcggcct tggccgggtc catagctggg 1980 ttatcctgcc acgcctcggg aatcatgatc ataacggctt caggaagaga aaggacgccg 2040 ttgatcatca gcaattccag gacgttatca aaggcagcag agtcggaacc gccgtcttcg 2100 acgataggga gcagagactc gagctcctcg ccgaaaatgt cggacttcag caaaccctcg 2160 cgagcacgca tccaattttt gtttcctcgg agagtgttaa tctcaccgtt gtgagcagcc 2220 catcggagag gctgtgcacg gtcccaagag gggaatgtgt tggtagagaa acgagagtga 2280 acgagagcaa agtgaccttc atagtcaacg ttcaccaaat cgtggtagta ctggtacacc 2340 tggatagggg cgagctgacc cttgtacaca atgttgcggt tgctgagaga gcacaggtag 2400 aaccagttgg caaggcaatg atgtgcgtag ccgctttcgc aggacataca actgaagctc 2460 2506 gaatgtettt gtgteaaatt getetggate agttatatea ggettg

<210> 2234 <211> 2777 <212> DNA <213> Aspergillus nidulans

<400> 2234

ctgacccgga atagtcagct ttcgcgcatg tgagaatgaa catccagtaa catacttctt 60 atccttcaag aacaactgta agttaacctc gaagaccgtt ttgagtaagc ccatgttagc 120 tccttggtat agaccaactt ggtgctccca gatgttaaca atcagaacct cactagtcgc 180 gagegeaaag agagegetet tgegetegaa gteetggtet teaeceeget egegteeate ggtaccctcc acatccatca ccaagatgtt atcggccatc gacttgccgt ctccgttttt 300 attetttgat agccaaatac cettggtggt etgacgtegt teegtttegg ecatgacgga 360 gaagtgggta ccgaagaggt ggttgagaag ggtagacttc cctgtcgatt gagatccaaa 420 gaccgagata agatggtagt tgaaacctgc aggggtgaca ttttcgaagg ttagatactt 480 ggtcaggttc gtactatagt atgactgtta gctcccatcg ccatacaaag cgaatgccgt 540 cgacgtcaca tcaagccgca ttgcgcacaa acatgtttgc atgtcagaaa gaacggaagg 600 catacttgaa ttctttattc tcgtcgatta cttggacacc atgctcatat gtcgtcttat 660 cgctgctgtc gctgccaatg ggggcaaaat ggccattggt cgccatggtg tgagaacgcc 780 gtcggagagt tatccagatt cccaggaaca gttcctaagg caaggtattg tcgttctaga 840 atctaagaga gctccaacaa gcggaagagt atcgctggga gtgacgagta tgcgaaaacg gtcgtgatgt taaggagaga cttaggaagc ttaacgcagg gccgatcggc tgtaaggaga ccgaaagttc atgtgcaaag aagtaagaaa aggtcactgg aagtgtcaat cacaagactg gcagccacac agaacgcacc tggaggatct cgtggtgcgc ccgaagttga ttgtaaggcc 1020 aggttggtcg cttgcaagtg gatggtggat cgtgattccc cagcctccaa ggagtccagg 1080 cgcactgtgc aggtggcagg aagtaggagc gttctggagc gtcattgaag cctgattttc 1140 aaggccacaa tttatcatgc cattctagta ttagcgtatt ccctcctccc acctccaaag 1200 gtagaggatg gagtatggca taaggagacg gacagcaagg cccgtatctg ccctgtagaa 1260 tgatagaata gggcaacatg atgtggaaag atatgtggta acaagactca ctgatcatcc 1320 aattcatatt caaacatggc tagaaacagg agaggagagc cgaataaaag attctacata 1380 ttgaataaaa tacaagtata tgaatataac actaaacgcc ggagcgaccc ctttcccaat 1440 gtaatgtact gaatccattc acggcatcct gcactgcaag tcgttattac cgagagatcc 1500 agccggatac ttttcaagaa gtacaacgca gtcgtttact cctcaatgac gcgcgtgatc 1560 agaccggtag caacggtacg gccaccctca cggatgttga agcgctgacc agcctcggcg 1620 gcgacagggc ggttaaggtt caaaatcatt tcgacgttgt cacccggcat gacacgacgg 1680 cttaggtcgc catcggggaa ggtgagatca caagcctcgt ctaaacattg gttagaacga 1740 cgatgatgcc cgaagatggc attcaaattg ttcgagaaag acttaccggc agtgcggatg 1800 taggcctggg ggcggtagtt ggaaccgaat ccgctgcggc ggccaccctc agcctcggtc 1860 aggacataca tggagaccaa gaacttcttg tgggccttga tagagccagg agcagcgatg 1920 accataccgc gcttgacatc ctcacggcgt gtaccacgga gaaggagacc ggagttgtca 1980 ccggcacggg actcgtcaca ggacttcttg aaagtctcga tgtcggtgac cttggtcttc 2040 tggacttcac cgccaccgtg gatctcaatt tcgctatcct tcttgagaag accacgctcg 2100 acacggccgg aggcgacggt accacgtcca ggaatggaga agacttcctc gacggacatc 2160 aggaagggct tatccaagtc acgctgggga gtagggatcc aagtgtcaac agcctccaga 2220 agtttgtcaa tttgctcagt accaatttcg ggacggcggt cctcgagagc gcacaaggcg 2280 gagccgaaga tgataggggt ctcttcaccc tcgaagccgt aagtgttaag aagctcacgc 2340 atctccagct caacgagctc caacatctca gggtcatcga cggcatcgac cttgttgacg 2400 aaaacaacaa tettetggae accgaettgg egggeaagea geaagtgete acgagtetgg 2460 ggcctgttgc aagggctgtg tcagctgtct gctacttcat ctcaactcgt gcatttgggt 2520 tgacgtacat ctgtccatcg gaagcggcaa caacaacgat agcaccgtcc atgttggcgg 2580 caccagtaat catgttttta atgtaatcgg cgtgaccggg acagtcgacg tgagcgtagt 2640 gcctgttgtc ggtcgagaac tcgatgtggg cggtagagat ggtaatacca cgcttacgct 2700 cctcaggagc cttgtcaata gcaccatact caaggaattg ggcaagccct tggaggccgg 2760 2777 tgctggtatg gcacggc

<210> 2235 <211> 1549 <212> DNA <213> Aspergillus nidulans

aatacgccta acggatctaa acccctaagg cttcattcga aacaaagtgc gatcctccag 60 cgcatcgata cccagttgcc tgcttgatcc actgaaaccc tgcaacacac ctgcccatat qccqcaqctt ctgctggagc tgctgctctt tgcgtctagc ctgttcttct gcctcacgta tcttgcgtag tatttctagt tcggcgcgtc tcttcagctc ttcgagacgt cttcgttcat 240 300 gctgtttctt ggcctcgccg tcgggctcgg aagcttctac tggcggatcc ggtagctcag 360 cqacaqcatt ttcagctgca cgttcttcac gaagaagctt ctggtactgc ttctctgctg cctcggcggc tttcttgtcc tgctgcaatt ggtgccacac atcgtctgcg acgccgtcat 420 ctcgagggac aacatccgaa caattttcgg agcgcagagc ggtgggatct tcctctttct 480 tttcttcgtg aagcgtgggc ggatttgaaa ctgtagtcaa cactggtggc gccgttgtac 540 ttccaaaaga ctgcgcttgt aggaggtcgg cgactggatt tctcagcgcg gactgcttcg 600 660 cttctcggtt tgttcgttca gatatcatat ggtcaacgtg gcggagaata agctcctcgg tcacggacac gttcttgttc tgcatcttct ggatagcgac tcggaagatt gtctttgcga 720 gcgtctgaat atcacgagca ttggcccagt tcgcggtacg gatgagtgac tggaatctat 780 840 tcaacaactt cttttggaac aacgaacttg gagagtccag tgcatccaga tcgaaactgt tqactttqqq taaqaagtcq gcctttcgcc tctggagtaa cttggtgaga agctggaggc aatcggccgg agcgagtcca ttgaattcga gttcctctgg aaaacgacta gtgaggccag ggttgatggt cataaggcga ttgatatcat tgtcgtaccc cgccagaata atgataagct 1020 tttggaagaa cttgggctta gtgatgcagt ccaccatttc gtccatagcc tcctttgcaa 1080 attgcccttc tgcgagtcgg tacgcttcat caataagaag gaccttccca agcgactttt 1140 ccagcagttc ttgcgtcttg ggtccagtgt gaccgatata ttgccctatt agatcggttg 1200 ccgagctttc gataacctcc gcagatgaca gcagacccat atcatagtac actttgccca 1260 tetteetgge egtgetegtt ttgecagage etgaceteat tagtaactgt atttegaagg 1320 ctcctqctqa cttacctqqq qqaccqcgqa aaaggaagtt gaaagggacg tgctccttag 1380 ggtccatatc caattctcgc atattcttga ctgactggcg atattcttca agcttactga 1440 tgattgactc acacccaaca atgtccccaa cagcatcggg atattcgtct ccgaacgaac 1500 1549 gccacgatca tattcaggat ccaaatcttg cggttcaggt gttccagcg

<210> 2236 <211> 3004 <212> DNA <213> Aspergillus nidulans

<400> 2236

taactagcaa ctctcccatc cagttctctt caaaccttgt tgacggtctc caatccaaca 60 ccgaagtacg tcgtcctaca ttacaatatc tctagaagcc tcactctgtg attgaagctc agatgaagtc gctaaccgcc caacagaccg actccgcccg cgccaaatcc ctcgaactag aaattcagaa ccgcgttgct aaagaactcg agcgtctccg cgcgcgcgaa caacaaactc 240 ttqccgagat tgagaagcga ctgtccgaag ccaaggacac cggcagcttc gcctccgctc 300 ccagcgcacc agccgtaacg cactatcccg ccggctcact agacctcgac gcaccccgga 360 420 teceettege eggeegegag taegeteete eeceteetge tgetgtegaa gtggeegetg tgaataagga gctcaaccga gagtctgtga actcagaaat tgaagagttg cgcgttaagc 480 tcgaagggag gaagaagctg gcggagttgg atgagggtgt tgcaaaggct caaaaagacg 540 tcgttagctg tttgcgcttg aatgatcggc ggccgctgga ttgctggaag gaggtagctg 600 agtttaagaa ggaagttgcg cggcttgagg agggatttgt ggatcggatt gtgggttgaa 660 720 ttqqtatqat ctggcgcatt cgatatgatg ttgtgtgaga gcgctgtgag accaagagca gcaggcgcgc tttcgaaaat agatgtgctg tttatttata cttgtattcc tactattcac 780 ttggggttat atgcatcttc tttacgtcta atctgcacaa gcatctctac ggcagcgaag 840 900 ctgaggetet cettgatage cageteaaaa tgeaettgea tagetaeeta aatetaeggg tatcatacca gtaatgtaca ttatcactct tctagctctc tctctcagct tttgaggccg atatactcaa acaagctccc aggaagctaa acgtccgaca ctctcacccg cattcctcac 1020 aatacacata ttcctctctc gattcgtccc cttcgtgcct ttcgttgtat accgcacttt 1080 qqacactaaa attqaqccaa tgcccgtacc cttcccctca gcgaggttaa agtttcccgt 1140 cgtgatgaat ccgatgagat cctcttcaac tgggaccggc aagtgttctt tgtggattga 1200 ggaataatca gaatcaagca ggatggatgc tgcaaggcgc tgtctggtag atccagtgtc 1260 ttcctctgac ttagctttat ttttggggcg caaagtctgc ccagaggtct taaatgatga 1320 gctcttcgac gttgatgtta atgccgatac taacgaaagc cacttctggc gaaggtctgg 1380 gtcattcgag gggagacgat aaatacgtgc acgtggtgca ggatggccac gggaatagag 1440 ggtgagtttg actgttgcga gagcggactc gtccacactg accgcagggt tattgatagc 1500 aaaattcgcc tcggaatatg gcagttgatg gattctaaat ggtggttcaa tagccgtctt 1560 gtcctccttg cacacggtct tatctgtttc cgagccttcc tctttctccg cgttagagtt 1620 cttctccttc tgatctttcg cagactcgtt atcacaatgc ttaacaagtc tttcccagtc 1680 acaagcccag ccgcgcccaa tttcaccctt ctgaccattg aacaaatcga gagagtcaaa 1740 ttcgactcga cggcccttag gccgtccttc ccactccttt tttgctgcct cgcgttctcg 1800 tagacaccat ttccagcctg catgggtgcc tgggaaatcg ccagggaacc aaggctctcc 1860 agtttcgaag aagagttgtt gctgttcctt aagtccgcca aaccgcggat tgccgccgct 1920 tgatagtgga tagtacatga gggagtacca tatggatggt acgcacttcc aagggagaag 1980 cacggtccat gtgcctgaga aattgttgtt cttttgccga gtactaggtc tcactgcttg 2040 cacgatcaca gggatttgag ggtcagaagg ctggggacgc gggtactcgc ccgggcctgc 2100 ttctgtccgt cgtcggttaa tagctttttg gctgggaagg ttgcggatag ctgctaatcg 2160 gaaacggcgg tcgaataggg cgggggaggt ttgggtttca tcggcaggcc atgtggacag 2220 taacatggcc aattettgca tteteeggte agagaacgaa gettteattt ttttgggagg 2280 gaagtgaaga cggggatctg atatagagaa tgaaagaaga gcattctgcg gcagcgacga 2340 agggttcgtg actcccagaa gagcattcca tacgccctct ggactatccg ctggaggctc 2400 accetggece aatggtegta ggaetgeaag tagegettea gttgaacegg ggeeggtgae 2460 gtcgatgctg ccaatctcaa agcgaaggtc ttcaaccatg accggcgggc actgcttctt 2520 tgatatagec ageagetegt tecaaageeg caagaaegea gatggatgga etetgacaaa 2580 catcttcgct gtattcttcc gcttctgctc gtccttgttg gtatcgccat cagcatcgac 2640 catctccgtg tcttcgatga ctttacgagc gcatcgaatg agagtaacag gagcaatagg 2700 ccttcgctga ccctcggact caaaactcca cgcgcgaaga cttcttacac cagctctcca 2760 tttctttcct ttqqcacccc aagcatcqtc tcccacqact cctacaqttc tqaqtacaqt 2820 ctccaaggcc gectetgtee ettgaagetg aattgtggaa atatagetea tgteccatge 2880 caccgcaccc ctagcaccac tcgcccgatg tgtaggtcta taactcttct ccgtcggcga 2940 cagtggcagc gcaaacctcc acaacggatc gttcgaggct gtcataaggg cacgttaata 3000 aatg 3004

<210>	2237	
<211>	4636	
<212>	DNA	
<213>	Aspergillus	nidulans

<400> 2237

60 gctccggagt tgtcgccgcg agtccctcct tcggcgccgc cgcagcatcc agcctaaact cgcttgcttc cggagccggc gtgatggtta tctctggctt atcaagcgca accattgtaa 120 caggcgggat ataccagtcg ttatcgcaaa cactccaccc tgggtcaata tctcttactt 180 cctcaggaat catcagccaa ggcatatagt cgtcccgaat catggtacag gtattgccgt 240 300 ccggaatcgg gcattgctgg ccaccgcggt actgcggcca tgggatcaat gactgagtat agtttccaat ttcatgtggc atgaactcag caaaattgaa aggatacgcg gttcctataa 420 ttgggtattt cgcgttccgg tggttgcgca tcgacgtaag agtggagggg tgcagggaaa 480 cgatggtgtt gctgtggtcc acgccgcatt ggcttcccgg atgagcgcgg cggttgctcc aagcgtagat agacgtgaac gacaggtaaa cagtgggtga gatgaaagtc tctccgttca 540 600 caatggcggt gctgggaccc gaggcaggga cggtggttcc gttctgcaga cagagatcac cagctccggt agtgacgggc cagtagaaga gagttgctgt tccaggaaga aagtggcagt 660 720 tggagcaagg gttttcttct ggatacgtgc gagcgggtgt tggacagtca aatggtggga tcggactgtt ggtgtcaccg ggtgtgggcg tgactacgga atcccgccag gaactggaaa 780 tgctcgagta tgtctgccag attgaaacac agtcagtcgt ctccagagtg cagtctggag 840 tgaccgacgg ttcacggtag aaggtctcag tgtaagtgtt agttatgtaa ctactggcgc 900 atggaccagt gccgggatag tacgctgtca ctatttccct gggtcccaat gcacgaggcg cgccatcgca gagggtggta agaggaccag aatgggtatt cgaccacgcc tcgggtgaaa 1020 ctgaagttcg acaggctcct tcgctcgtca tatacgacac taatgaaggg cttgtggccg 1080 tgggccctaa agaccgcagc tcggtagacc gccgcgcata ctcaacccaa gcggcattgc 1140 aggtcacggc ggatgcgcta ggtccggttg tgggaccata gaagtaatcc gtggacgttg 1200 gccaaaagat tgaagtgttg agtgtgatga gccattgatc gctggtgatg gctagccaaa 1260 taagtaagtt acatgctctc aatccactcc agcgaaaagg acttaccatc ttgggcaata 1320 gccgtcccga tccagagggc aaggagcaac attgtttgta agatgaggga cggcagttca 1380 gagtagcaag catggctgat tataactgtt tgcggtctgc tagcggctgt gggcacgtcg 1440 aatteetgag geaceteatt ggttgageee tacagagttg acettacaea gtaetettge 1500 agttgcactg caccagctta ctatggtggg tgttctggag aggctatact gcatgacatc 1560 gcgagctcga tgtcttctga gagggcaggt ttgactgttc cttcggccta gatgcacggt 1620 tctcccgtct ttggctgcat ggtgtctggc gtgatgcccg ggtccctgaa tcgcagctgc 1680 taatcetteg gtgeagatge atggteeteg atgggtetga atttetgaag acagataaga 1740 tccactgggg acagatette egtegaeget attecagggt aggaggggte ggeagaggge 1800 cagtagcaag agtaatacgg agttcggaag aatctctccg ttggaggtca tcttataaga 1920 aattgagcgt gcgtcgagca atctctgcaa ccgcgacaga ctgcagggtc tgattgaccc 1980 agaagggctc gaatatggtt caacgtgttt ctagagtgcg tcatgatggt atggggctct 2040 cgcacaaatc aatctcgatc gaatagggtg gagcgatcaa tttcgatctg agaagagtgg 2100 gatgaagaat ggatggttgg gaagcgctgt tcgtccgcta gtgcgaattg tcgcagaaag 2160 tccaattgct gattaggacc cacgcgacag caaggcgccc actcgccggg ttgctttccc 2220 ctaattcgtc cagccaggta tagaaggctt tgttaatcaa ggttccagat cctgaggagc 2280 tggtggctgc ggaataggag tcttgacaga aaaatgtgaa gaacaaaaag gagaagttgt 2340 attgctcacg ggtatagtag catgaaatta agccgacctt atctaaacat gatatcgcta 2400 gaaatgcaca ttattattaa aagcagcaag aacttcaacc tccgtctaag tctgcactgt 2460 gaaatgagat catttccgtt ttaaaagaaa caaagaaaaa gaaaaaagaa aagaaaagaa 2520 aagagaaaaa ccgttcaagg caaaaccttg ggctctgcag caatcgtccg ctctgaggag 2580 gcgtccccag aactcttctt ttccatcctg ctgtagtcgc ctggtttggt agacccgtta 2640 ggaatatgga accgtttgtc aatccggcta aaggtcaaca agctcaagat catgatttca 2700 agtgcaaaat tgaagacata aaatgatgcc ttggagtgat accaagccgg gttggagatc 2760 ggccgcgccg gactccagag tgtacccgcc ttgaaaccag caatcaaaat ggacaggcac 2820 gttgagatgg tgatgataat gatcttagcg agcatactgc cctgtccaaa tgactcctct 2880 tgcttggacc gtggtatcaa gaccgcggga ataatatgga gcaatgggag gcaagtgaag 2940

acgagaaggt aggtgattgc agcaagctgc acatcgcggc agtcggcgcg cgtgcccgga 3000 ttgagggagt aggaagaaac cacgatcgcc gtaatgacca tgatcaacgc agcggggatg 3060 agatagtaaa acaacttgct gccgatacgt gcgatcggat gccaaccgat atggggttgc 3120 ttcgcccgga ggatgcgctg ggcgaggatc agattgataa tatagaccag caagacaccg 3180 gcattgacaa agacattggc cgcaatggca agtcgaacgt tatgttggcg gttggcccaa 3240 actatgcgca gaacaagagt cgtgatacgt gccatacaga aaccaaacag catgcccgat 3300 aggatgaact tgtgtttccg cttgttgttt ctctgcagaa tcgtcatatt catcactgca 3360 aacccaatat atatggcgag gagtacggcg cagacgattg tatccgggtt attgctcggg 3420 aggectecca tgeetgeegt tggggaggeg taagggeege egegettete gaacgaggaa 3480 ggcatcttct cgtattatcc cgtcttgata ggttttggta gacggctccg atgaggtggc 3540 aaaagatggt gttgaaaatg tcgctagtcg cgagaatcgc ttgcaccgac tagcagagga 3600 atatatgtgt catggaggaa agtgctaaat gcgtgaacgg gggcattgag gaacgtccgt 3660 ctttataaat tcgacggcat ggaagaaatt gaggcctgat ggcagcgaca ttcgcggctt 3720 ccaacaagga aaccttctgt cataaggcta attattgcgc acacaagatc tggagagtcc 3780 gatccactgg agaacggcag taacacggct gacctttatt tggctgacta tacagatcgg 3840 acaaagacgc cgtcggactt atgccagggc cgagtccgcg gtcgccagtt cgtccgtcct 3900 ccgccgcctc tcccctccaa ttccatctct cttcttgaaa ctccagccac tcattcccct 3960 tgttacctat cgagatctta tctccatatc ttgctgaatc tattttagct cccacgctgt 4020 tgattcctgc attgtgtaac ggcgtccgtt tcggacgaat gccggattcc ccacgtggcc 4080 ggaatgcttg caccgcatag tccagccgca ggtggcattc ggaaagggac caagagctgc 4140 accgaatgta cgtgcttcgc gaccaggtag cagtggctgt ctacttatta actgatgtcg 4200 aatctaggta ggagaagaaa agtccgctgc gttcgtatcc ctgaagacgc gccaacatgt 4260 cgtcagtgcg cagaacgcaa caccgcttgt ctcgctcaga cgtccagttc ccgtccacga 4320 caagcgaatc gattgccctc ccgataccgg attgcacagc tagagtctca ggttagtcgg 4380 ttgaccaaag ccgtcaacag tattgaggtc aagcttggag gcaacccgtc gatccagctc 4440 gatcagacgg tgacccactc ccccggatcc gacgagtcgg acgcagagtc cactgcatcc 4500 gagattttaa ttgcggagga gccttcacat ctgcgctcgc ttttccagaa tgactggcat 4560

actgaaaaca	ccaaccgccg	tgacgagcag	ctgcgaggac	gtagagtaaa	agegraegeg	4020
cacctcccta	gagagt					4636
<210> <211> <212> <213>	2238 1469 DNA Aspergillus	s nidulans				
<400>	2238					
atcttcgagt	cggcgatggg	tcttggatct	tgggcgattt	cattcaagct	ttgcgtttgt	60
caagtcctga	gaatgtttct	gcttgtgcga	cggcgagaat	tgctgagaca	taccagcacg	120
ctgtgctcca	gctgttatct	ctttcatgag	ctctgctgtc	tgatttgctt	tcgggttgct	180
ggagtggtat	ataaagtgga	ttgttcactt	tctgaggtat	ataatatcca	agcaggagcg	240
actactagag	aaagactact	ctcggtcaac	ttgagcaggc	tttttgaaag	agctactgcg	300
acggggacta	ggatgtgcga	aatattctag	atctgctcct	atattaccgc	aatgtggaca	360
tccgccaaag	aaaagtagag	agaccaatct	ggcgattgca	gtgaaacaac	agtacttgaa	420
aacctccagt	cagcagtatc	accggaaata	cagcacgcca	accacctcga	aattggctcg	480
ttggcctctg	ggggcacagg	agagaccctg	agaaactggc	tggcttgggt	ctcttgtcct	540
ggggtggtat	cgggcatcca	cagtaacctg	catcttgtta	acgccagaga	tgccacccct	600
gccagtcgca	gtgacaatgt	atgggaacta	taatagcgta	ttgaccagag	catttccagt	660
gtcatcatca	acagacagtc	ttccaccaat	acctaggcta	cacagtccct	ggacagcctc	720
tcgcggagtt	gagcagcaca	tttgtcgttc	cagatgccgg	ctagcgcaga	tacgtgctgg	78
agatgtgctg	cgaagtgatc	ggtatgtgga	gggattctaa	attctgtcta	ctgatagact	84
agaagtaata	cgcgcacggg	ttatgcttgt	acctagagtc	cttcttctct	tcgctctttc	90
ggctttcaca	gcggcatcca	aacagccttg	gacccaaagg	catgatgtgt	agacgttgaa	96
gatggttccc	tacaaatctg	gaatcgatag	ccagcctgct	gcgcagggaa	ccacggtaaa	102
tgctgtccaa	gtgcgtttac	agtaggtgtc	gttgagcatg	gcatcaaatt	tttgtgcgta	108
ttaacggtca	aacccggcca	gtttaagaaa	agtcgtgagc	tatctcatgt	aaagtttgcg	114
tagcatggat	tttcagcctc	tggaaggcaa	cagcttggtg	agccttagcg	actccaagga	120
aaaaaataa	, ccaaatatca	aaaaaaataa	atgaggetta	agagtccgcc	cggggactat	126

acategeece gttetacagg egtactecat agaettgatt atategageg agtatteteg 1320 agegtgtatt etteaaagte teeageecae aggagagete geaegeeggg tetecaacae 1380 taeggaaggt eaagettgga ageattttga ageeatgaaa ggetggegea tteatatte 1440 ggggtgetet eaatataga tttagttta 1469

<210> 2239 <211> 1623 <212> DNA

<213> Aspergillus nidulans

<400> 2239

ctatgctttt ctttccaatc tgaaccgtgg ccgcgcaggg gtagcgcacg cagggctaca 60 actatcttgc cacagtttac gtaggaagca gacttgttgg gccagttgta gggtgaagca 120 tgtaaaatgt tggcataggt tgttccgatg gcgatgttgg tgccgattgt gaggccgttt 180 aagcataagg cccagaatac gttggggaaa aacagcagtt caaacgtttg ctgtgcccaa caggacgatt agccgctacc catggatggc aattcgaagt gaggttaaaa tggcttaccc 300 360 ttaagacgtc ccaaacaagt ccccaatccg gcttcccaac ccaaagccgc atatcggact tccatgttct ggcagcgtac cgctcaaagt caagaggtgg acgctcggtg catactacct 420 480 ccacgcctac tttggcatct ccatcttcgt ccgaattacc ttcctggaac gacgcaattg acctttcata cttggtttcc gggaggaaga agaaggccag cactagctgc gctccagcca 540 gcgccgcacc aagaccgtac caccactgcg gcgtgattgc gttggcgatc tcccccgcaa 600 agaggaccca aacagctgtt aggctaacct ggatagcctg ttggcccatc agagctttac 660 tgcgttcgtg gaggaagaag atttcctggg tgatcatcgg aaccagggcc tcactctgcc 720 780 ctgctgccaa tccgactgca catcgggacc agaggtgcca ttcgtagttc tcttgggccg cgcagaggat tgctccaatc accagaacta ttgtcgaggc gagcagcacg attcgccggc 840 caatgccgat ggcaagaggc atgccaatga ggttgccgat gcccctggcc ttatagtcaa 900 tatctgccgc caatttcaag ctttggaagg gtagtgtaca taaagagagt agggtaagtc attaagtgcg tgatatcggg gtagcccttg ccaactgcct catagcctgg aatgtataag 1020 cccagaaggc cgccgaagcc gctgacgagg gcgaggccga gtgtcgagac tatccattgt 1080 caacacagag atacgtaaga gtcggtgtat ggactgacaa atccatatca caaccagaac 1140 gatecactic tgccagătag ccatgiteag ggggtetacg atgigtititg teageaegee 1200
tggcetgagg geatgggaaa ggagtgtaat acettgggga tetgetgteg gegteggaat 1260
atacaceace ttacegteeg tgagetteae egiceceatg acettettet tgccactace 1320
gteggtegee gacaceette egiceteaat giettegaea taggitgatgi etgetitgie 1380
taceteegte attgtgagag titeetette aggaaaaact geagitgit etggggggta 1440
taacacgitig tgetgggage tgiattetta geaggitgeta eggaagggia gggtatgeeg 1500
tatatatige agigeetaga atgecaatga gieeecageet aageeacage tatgeteaeg 1560
tatgitieae ggagtatteg aattegagit gggttiagti titaggggteg ggatggeaea 1620
tgt

<210> 2240 <211> 1295 <212> DNA

<213> Aspergillus nidulans

<400> 2240

tcgactaccc tgccgatgct gctgtatgtc taacccccct tccaagttta gcgtaccgaa 60 ctgacggatt cagggaaatg ccgcacttgg aggctccggc gggcctaaga tggccagcct cgtcgaaaca gccctcaagc agtgccctga cactaagatt gtcctaggcg gatactctca aggtgctatg gtcgttcaca acgccgcctc caagctctct tccggccagg tcgttggcgc 240 300 tgtgaccttc ggcgacccct tcaagagcca gaagcccgac aacatcgacc agttcaagac 360 tttctgcgca agcggcgacc ctgtttgcct gaacggcgct aatgtcatgg ctcacctttc ttacggcaat gacgcccaga ctgcggccca gttccttgtt agcgctgctg gactgtaaag 420 tgctagggct gagtgatatt ggatctccgt attagacctg tctagcaggc gttgttcttg 480 540 ttattgaatt tataatgggc ggtcatggat ggaatcgatg attgtatgtt tactagactg tgttatgacc tctttggcaa tcccttctgc gtgtacatag cacagaatta atctgatgca 600 660 ttgcactgta tccaacaaac tttcccttcc ctttccttca ccccccttca agtcctcatc tacageteag gecaataata eacceettee teaacegeet geacgagege eteategata 720 gagatgtatt ggtcaaagtc tgcatcaagc tccttcagca agattcccac aacgcccgca 780 aagaccacgc ctccctcctc gttgagatgg gtgttgtcgc cctcgctcag gttatacgta

tgcgaatcct cctcccaat ctcattgaca tactccctag aagcgacatt caaattggcc 900 cagagcgtcc ccgtctccgt cgcggcctcg atcgttaaat tccgcacgtt ctccaaatca 960 tccttgacga gcccatcgtc tccgaaattg cgtcttgtca gggacgtcaa gaagatcggg 1020 atcccaccgg caccgcgtac atctgcatcg aactggacaa gattatcctt gaatgcagcg 1080 agtccactct ccgtcttctg gtcgttgtgc ccgaattgga ttgtcacata gggcgtgcac 1140 gacccgcttg cggtctcaac ggcttccagg accttagccc aaaatccctc attccggaag 1200 gagaacgttg ttgcgcggg aatcgccga agtttggct gttgagccac cggtctaaga 1260 ggagacgaaa gcttttgccc cacctacaat tgggg 1295

<210> 2241 <211> 2455

<212> DNA

<213> Aspergillus nidulans

<400> 2241

agccgccatc cccctcggag aagtcgatca acgtatttcg caatcatctc gccggtcttt 60 ggattgtccg taccgcccgt ggcgtctgac tttctgccct tgttcatgaa gctttcgaag 180 gactcccgga gggcatggcc gaggccctcg ttgcgtcgaa acgattcatt ccagatgtcg tcgagttgct ttttgaagct cagtaggcgt accaccatgt ccgcttcgct ctcatcgaaa acaattccag taccctcttc cacgatatat gtgctaaagg cgcctttcaa tttggctcca 300 aggtccctcc gttcaagaag cgtataaagt tgccctaggg caatcttgtt ccctattcgc 360 aacaaaccga gaacatcctt ctggctcaat aagacgctct cttgatctgt tactagggtt 420 tgatcgagtg actcagacag tttttgtttg gtcgtccgat tgaaagagaa ctgttcgcat 480 cggttcatct cgcgctcgat caggcgatgg ctgttctcca catatgacgc cagatatcct 540 gtcgcctcct gctgagccca tagagagaga acgtccttgg accccgacgc gagcacaggc 600 tcgaagccag agacataaac gtcaaggctg tgaaatagct caatggcatt ccgtagcaga 660 gaagagtcag cgacgatacc gttttcgtcg ctgcgatctg ccgaaacaag atcacaggct 720 ccctgaagta tttttcctg cagtgtggga tcagagtata tgtgctgtcg gaattgctgt 780 aggcccattt ctcggattac aggatgttct ttggagtgga ggaggaagga ttggtcaagg 840 tagtagaaga tecagegeae ggtaatetat aettagttag taatteeaaa caaaaaaga 900 gaagtctaac gtaccaacat tgactgccac tctttccagg cctcaaccac agacctcagg 960 gtctcaatat tgtatgccat ttgtgccttg tcgaccaatg agccgtgcaa ttttccggta 1020 acatgttgtc gacatcgctc ttggagccgc tttgccagaa tagtagctcg tccttgacga 1080 caaacatttt ctgccccttt gtaaagctcc tcaagtgaaa tctccggttt ccctccgctg 1140 aagatcgctg acaatgccgc atccaactga ccccatactt tatcgaaata cgaatcttga 1200 ttcaaccggg gccctgtgcg gagattcttc accacaagtc ttctcgcgcc tgtatgcggt 1260 gtaaagttgc tctggtgcga cgaggtcccg gggcgagctt ggagagtgga attcgacaaa 1320 gtcaaaccac ctgtgttcgg accattcggt ttcggctcag cggttgagaa actatacata 1380 tegeeggact egggetggtt egetgegatg gaggaagaag atggtegaac tegettgtte 1440 gttgggggga ggtgctcgtc gtcttgttcc tgtgcttgat tctgtgcttg gttccggtgg 1500 aggageteeg agatagtege etgetgatgt egaggttgtt gagagagtte acettggtet 1560 ggaaacttcc ttttgccagt agctttgcgc ttaccgctcc tctgttccgg gggggatctc 1620 gagttctgct gcatctaccc ggttctatcc caggatagga tgacgaaggg aaacactcag 1680 agttggaaaa atccgaggac agttcggacc acgaggacca tcgccgctag cttccagttc 1740 tgagatgtct tgatatatgg tggtttgatg ctatagggag ctggtagttg gacgaagaag 1800 ctgggattga gggacctccg caacgttcga tcccagtcgg agataaagat aataccgcgc 1860 ttgatgacat aagctgcatt gcggagggtc aacctcggct ggtaatacgt tacttttcta 1920 cttaatggac ttggagtata gtcatttaag ttcatagtta tttatggaaa acccccacta 1980 gaacgtataa tatagcctgt cccaatatgc ttgataccgt aaatacacca cagtcgttca 2040 acgtcccatg caccgtcttt ccatgcaaaa cccgccctat gaaaacagct tcggcccaat 2100 gtgctgctcg acttcgctct cttcagcctg tcgcaaagtt agatcttgaa ttggaacagt 2160 gagcacaatg acctacctct aagaagttgg tagccgcaac aagggccgtg tatgacttcg 2220 caatgctggt aagtgcgtca tggtggtcgg gagcggcgga tccgccgatc ttagcaaagc 2280 gcttgaatat gcctaccatg ctctgcctgt tctccgtcag gaaggcccgg gtttgctcaa 2340 tcattaactc gttttgtaga ccacgggaga atgttgccgt gacaataaac cgcagtacag 2400 2455 aatcgagtag atcgtagtat ttccggaggg cagcggcgtt acaaagtctg ttgcg

<210> 2242 <211> 2828 <212> DNA <213> Aspergillus nidulans

<400> 2242

tgacaattat tttgcccact tgctggatcg gcgcttcctg tctgatcccc cccctgttcc 60 tcaatatcca tgggctgtcg ctttgaggga accgctgaat gctaggcttg acgctaacaa 180 tttggaatct cgatttccgc tttggggcgg taatcttgtg gcggcctcat tgatgatgct ggacgtatgt agatgtagag gtacagtgac gatgtagata agtgggattc tagggagcaa 240 gggaaccatc acatcactgc gaacctggag cctgcagctc cgtgtcaatc tgtagcagag 300 agttgtggat aaacgcagtg accatggcca agtgggaaga gagcgctcga gtgtcagttg 360 420 qqtccccttt ccttgcatat ccttggttga gttcagcttt tccccatcgt catcgtcgtg ccttcgacta cttgaaccgc acctcctgct gtatatttct tcctatattc ctccacccat caacgtcgac aactggcccc cttccttcgg cttggtttcc tccaactgtt caactcttct ctccttacca tcatcatctc ccctcaccaa ctccaactat ttcagattcc gcttgcccct ctcqtcqqqt qqtacaataa cgcttgtcaa taacgcttgt tacagccgcg ggccggcttc 660 tgctgtgcaa taacacattc cacatctacc accttctgct taccatctac aaccaccact 720 cttcatctct cagccatccg gcccaatccc actcgatcga attgggtgct cggtctcgat 780 tcgcttagat ccctttttct atgccaccgg accctgaccg gaggcggagt tctaatagaa 840 tggccattcc ttacgcaacc gggctgccgg ccgacaacca gcctttgccg tcatttcgcg 900 aggtaagcgg gcagtccctg tttgctagat tgtggtttgc cggttgtcag actagaccag acgaatctag cgggcgagca ggagcaggga agatgtagta aagatgctga ctgctttaaa 1020 agetectece accaeatett caegaagaga tegaatetae tteatatttt aaeteteaae 1080 ataactctcg gcaaccgcgc gagcgtccag catcatcaca cgaattgggt cttaactcgg 1140 toccaagaga geatgettea tegeggtett egegteecag teeggtgete ecaceaatee 1200 gcgatctgca gtcgtaccca gaccgtgcga cgggcgtata tccagacccc aggggtctcc 1260 cgccgccgcc ggaaatcacc gccaggcctg ttggtcccca cggatacccc catgcagcgc 1320 caqccqtqcc tggtccactg gccgacagga atgccgacgc ctaccgcggc gtgccgccaa 1380 tgcacggtca ggtgcgatac cactatccat cgatggcgta tcagagcgac ccggaccacg 1440 cttccgtacc gtcgctctcg cacgcgcctc agtcgaattt cggcattcta ggggattcca 1500 ccgacgcgag gaacagacgc cgccgaggga accttectaa accegteact gagatectea 1560 aggcctggtt tcatgcgcat ctggatcacc cttatccgag cgaggaggac aagcagatgc 1620 tcatgtcccg aacaggtctt acaatcaacc aggtaagtta tcttgatcgc ctctaggaaa 1680 agaactcgac taacgtcctc cagatcagca attggttcat taatgcgaga agacgccacc 1740 ttccagccct gcgtaatcaa agacgtactg gcggaagcga cctggatgaa cgacagtcgt 1800 tgagcgatat ggaacaaacg tcgcctgagc catcacctca tcgaagacta tgatacacga 1860 ggcaacgtcg agttgaccgt ataccacggc cgaatagacc ctagaaagcg ccgcgaggta 1920 caattacatt acgatttacg tgcgagatcg gatagacatg atgtcttttt cttatctttt 1980 gtttcttgtt tcttgttctc cattacccca tttcttcatt gctcaggtca gaccacttca 2040 tcgagtgatg cacgccttga taccctcgct atctcttttg gttaagttta cacgcttgca 2100 tgacccgact ttgaaccgtt acgttcagcg atctgcctca cattcttgcc tcatttatcg 2160 ggaagatcat ctacctctaa taatcatcat gcatctgagg gggtttggtg ttttgcgttg 2220 ctttattcct catgtacagt acaagcatga tcatgaccgt tatagaatca agatattttt 2280 tgagagatat cttctccagc tgtagcggct cggccgagac cacagctccc gctgcttatt 2340 cacatcatga tgacctgagg tgacccagcc agtgcataac cagggttgac gtaccgcaga 2400 tcaagcaaga tgacccggtt cctgtcattc cgatgaccga atttgggcag catgcggaga 2460 aagctaccac ggttcgcgcg agcaaaaaat tgcggtgaaa tgaagcaagg tacagtggca 2520 atagcccgtc ggtagttact ctcggtagtc ttcagtacca agagctgtca cggatgtcaa 2580 ttgttgatcc aggatccatt gatcgaatct ccaaaaaatt ggtcccagcc acttgggtga 2640 cagctgaaga ccatcgtcat gatcagccga ttactaatca tcactcagct cgtgagtccg 2700 ctcagggtca tccgataacg gacgaatgcc aaccacagag aactggcaga ctgagcgctc 2760 atgctacgag gttgtccaca aatgagtctg gccacaaaca gtacataatc ctggttttgt 2820 2828 ccaacccg

<210> 2243 <211> 931 <212> DNA

<213> Aspergillus nidulans

<400>	2243					
caatttcgga	catggacgag	atcgatatga	atgaacggct	atgcaattgt	acacgcagat	60
tgtcagctgc	tgcggagaag	ccccagtca	aggtgccccc	tcagcggcag	tggactacgg	120
aaaggtttat	ggagtcgaga	ctttgataga	cgcgatggcg	agatggagta	gaacagcctg	180
aaagagttcg	tatcgcggta	tctccggtac	atgtgttctt	accttcatcg	aacgtataac	240
ttccagcgaa	tccctggcac	tggtggcgta	ttttgaggaa	gctgactgaa	cgcctgcgtc	300
tgactattga	gacgcccctg	ggctgtcagg	cgatgcgggc	cgaggccgtt	gtttctcgct	360
gtttcaagac	atctggttca	caaaaatatc	ctccttátgc	acaaatgtcg	caaatggtgg	420
ttcctaccag	gacgggcgag	attctgtcgg	tagacgaaat	gaagaaaatg	ggtatggagt	480
tggagatagt	gggtacgaag	atactatgat	ctcaggatct	tcgccagacg	aaccctcgat	540
cgaagcgggg	gctggattgg	caggagcgcg	ggagcgcgga	agcttgggac	ctggacagtt	600
ccagagccag	aaagcaggag	ctttagcgta	tctcactatg	cagcctttat	tggttcagct	660
gaagtcgagg	cccgccaatc	gctgccgaga	cggcgcggcg	gttctggcta	aaattgacaa	720
actgcaggac	gactgcaggc	atttccggcg	ttcccgacgt	gggcccaagc	tggtgtagca	780
ttctgctcga	ggtcaatgcc	attctcgcaa	cgggaactcc	gcaaaggata	gtgcagtggt	840
ctgagagcca	aacggtaagt	gtcgacgcaa	gtagtccagc	gacgtgtggg	gttggaagag	900
aggggagagt	gcagaagatg	gcccagccta	С			931
<210> <211> <212> <213> <400>	2244 2358 DNA Aspergillu 2244	s nidulans				
			t aut aus aux	+ ~~~ ~ ~ + ~~	+ 4443 3 6444	60
					tgcgaacggc	60
					ggcgctgatc	120
gtcccgcctg	ctataaatgc	ctggagcata	aattttgcat	gtccctccgc	tgcgtcggac	180
tgttgaaact	cataagccgc	ggtgagaaga	cgaggcaagt	gcccaagcat	gttctaacgc	240

catcetgtaa egegggetag etatataggt gegateeaga gateaggetg tggggtetga 300

tcatagtgac ctttttggac cagttaggag tatgcttgcc tggacacgtc tctcttacac 360

acctcaaata aggtggatgg ggtaggtgta cagagtaaat gccgcgacga tgcctggaga 480 tagttaagac cggggagcct gatttgtttg gagatacgca ccgaagttat tggccccgcc tttgagggca cagaagaggt cttgatctca tcatgtgata agcctccggt aatcctcatg 540 cgggcataca tgggtgtcgt tgaatacgat cgtctcgatc gactcatccc accgttcccc 600 acagtggccg agccagagga cgtcccattc aagactatac ggcgaccggt ccgtttccgg ggccctggtc aggttacgca ccgccgttga gatgttcatc atctgattcc gcagagcgat 720 gtcccagtca acatcgtctt ccagaatgag ggccgtctca atctcggatt ggtagacgtg 780 cttgagcaag tccagatgcg cgacgcaagc tttgctggcc ccgggcgacg gatgctgggt 840 gtccatgggt cgccctggat gtttgcaaat gcttccacca gacgatcgtc cactggtggc 900 tgtgggggga tcgtgatctg aaggcccgtg aggtttgctg cggcatcaag gccccgcgtc cgccatgagg gatgttgtga caaggcgaag atttgttgaa actatgttgt acggttgtta 1020 gtcactcacc gaatcaggaa agcgtttcgc ttactcctaa cgtgttgttc ccggcagtat 1080 cccgtggcaa aaatgcagag gtggggctga gttcgggacc ctgaaaaagg tgcaagaatg 1140 cgaacaggac aagggcaccc gcgatcagat atatgaggcg taatcgagtc ggcatcgttg 1200 catctttctc ttttcagcct ggagtcgtga aacgaagaga tcgaatttgt tcgtgcttgt 1260 tggccccatc tgctttgggg ccgcgcccat aatcatcacg tgattcatat agaaacagaa 1320 agtgtcctgt cgatctacca gtctctgagt ggcgcaccga tagcgagttt cagagtgcca 1380 aacgccgtat taaagggtgt ctagcggcct aaggctctag ctcttgaccc tacaagttac 1440 aaccgttggc actgtgtcgc agatgtccac cacaattttt attgggcttt caaaaaaaaa 1500 aaaaaggaat tagattagcg gtcaaagtaa atcctggata atgccagtaa aaatttctct 1560 tattttttca ttgggcttca tcgttagact gatgcagtag gatgtatagt aagatatata 1620 ttactatata tagtacgata aatgtttgga tatatagtag cttagttcat acttcatggt 1680 taaaccaagg gcgtcgggca gtgtattatc gtaagcaaca agattctagc tgagtagaat 1740 gctagaatgg tagtccttgc taaacacttt aatgaaaccg ggcggcattg gctgttttta 1800 tgttttaagg tttggttaga ttcacgctga tgaaggtctg gatatgaatt gtacctgggc 1860 acgcagagaa tagcaattct tagcaaaata tgaatcgcgc atctccctgc tctggttcgg 1920 ccagcagtca ctactgtctt cttctgcctt cgcctgtgcc tctggaggtc aagactgccg 1980 aggagttacc attaacctct gatgttacac tttacagtaa aaagttgcat gagcattgat 2040 ggtaggcagg ccttagacca acagaataag caagcaacat gcctctagcc agagctgatc 2100 cggtgatggg tagtatggcc gcccaactct ataatcagcc tatgggtttc gtctacgcca 2160 agtctggtgg aggacgaccg attgagtatt agcggctatc agcgtacaat gctcccataa 2220 tgacatctag cacacttgct ttcttctgt cattcttaa gcttacaggg tggccgaggg 2280 cctatcgcct agtaggacag cagaaatgta acaaatttta tggatagaag catgtcgagt 2340 tgtatatcaa cgcaaatc

- <210> 2245 <211> 1141
- <212> DNA
- <213> Aspergillus nidulans
- <223> unsure at all n locations
- <400> 2245

accttcatcg acccatttct ggacgccttc agggcctccc cctcccattg ggcgagtaga 60 120 gacattggcg caacaactag ggttgtatag ggagccggaa cgacaccaga cacgggaagt ctggtcaaat taccaagact ctgtgttgga gggaggtttc tgtgggaatg aactaaactt 180 aacatctcga tggttttccc caggcccatc tcatctgcga gaatacctcc taggcaatgc 240 tgttcttgag cagggaagtc aagactgagc tctccagagt aaggattgac ataaaaatgg 300 tttatccctt caataatcgg caggtccttg tcatcaacgt ctttcagtgg ccaatcgtac 360 tetteccaga ggggatgtat cgagacetet etceeggatt tettateett etcettegag 420 agcatccaat aaagcgcttg tttctggtat tttcgcagat ccatggcgaa cgatgaggga 480 ggctgggctt caggcatgct aaagtcgaag gactgcgcct ttttgtacaa tgcatcaagc 540 tggtcttgct caagctccgc aggttcctcg tctccggagt cggtattacc agacttcgca 600 agcttttatg gccttccggt ctgcccattt cagctgcgcg gagcaaacct tcctttctct 660 gcttcttgat ttcgccatct gggttgcagg atttggacca ctcatctaaa acagtgcact 720 agagccaccg gccaagaccc cattgccttt ttttcccgtc agtacctgtc gaattttgag 780 ataccccatt ctgcccgatc cgggcccgcc tcttggctca aaacctctct ctcctctacc 840 ctctgggccc acctttttga accttttaat ccacgcccct acctttttcg gctactctcc 900

acaacgtgag atcttagete tactecete tetacteat egetette tacteett 960 ceeteetea etteetta teeceetta aaageeaaaa eacegeette eeetetaa 1020 acaecegee eacetattig teettateet eeeeetti etteeteet eteeteette aaaaceecaa 1080 teecagace eeestaatee eeaaaceege eettigtaaa tegeeeeee ennneeeee 1140 e

<210> 2246 <211> 2682 <212> DNA <213> Aspergillus nidulans

<400> 2246

60 ctacatgcca ggcctcaaat ttaagcgttc tgacaggtat tagactgtga tcaatggctt ttttcgtggt tggttaggat tttcattgac agacgctcgt catgacaagt ggccactaca 120 gattccccaa catttaccca aggctccttt tcagggcgtt tttattatca agcagatttc 180 ttggtttgct tgatttagaa agaccaaatc actccgtacc gtgatcagtg gaaccgttcc 240 agggttgtgg cgacttgctc tcctaatcac aatggacgtt cctggactct caactaccga 300 ggaaaactgg ccaacatcct acacggtgtt gaatcagtat aaaataataa ctttgcggca 360 cttcttgtcg ctgcgacatt gctcgacatt gcacctgaat aaaacgccca agtgctctga 420 atacagttgc accatgctct cactccctgc gccctactat aaacactgag acaaatatgg 480 agattcatga cacattcgct cattgccttt gagtcttgtt tgttcttgtt cttagccttc 540 tccactaatc ggagagacgt cccgaaaaca tctggtttct aaaagacaaa ggaagaccac 600 aacgtgcact ttcagcggca aaactcttgt cagaagcaat cagcgccatc cagtccttct 660 gtcaatcatt ctgtgctttg gcctgccaag catcgcaagc caattcaaca ggtcatctaa 720 aatggatcgc acccataaca ccaccagcca tggtcccgat agttccgaaa cgcctctcaa 780 gcctacagca tcagcaacga atctcggtct tgaggaagaa aagacatcag cgcgcttttc 840 gtgtcgctcg tcagcatcta gctcgtcaaa gggctatcct catacggttc aggtttcgca 900 gtcgaaggca tcccagtccg ataatgttac cgatgtgccg caaccagggc gaggggcgcg ctcttctacg cgatcatcga gccgggcacc gaggagacta agtgggagca cggcagcaag 1020 ctcaatgagc gaggtcgagc cacccctgc atttctgggg aaaattggtg tgtgtgcact 1080 ggatgtgaag gcccgaagca aacccagtca gaatatcctc actcggttgc agaccaaagg 1140 tgatttcgaa ggtatagagt ttggcgacaa agtgattctc gacgaagcgg tagagaattg 1200 geetgtatge gaetteetaa tagegttett eteggatgge tteeegetgg acaaggetat 1260 cgcctatgca aggctaagaa ggccattctg tgtcaatgat ctgcctatgc agaaaattct 1320 gtgggatcgg cggctgtgtc tgcgcatcct ggaccatatg agtgtcccta ctccgaagag 1380 aatagaagtc aacagagacg gcgggccaac tttggaatcc ccagaacttg cgcaacatgt 1440 atacaagctc acaggtgtga aacttgatgg ccctaccgat ggcacagggg gaggcacacc 1500 caaaacgaag aatgtcactt tgtccgatga tggcgattct cttatcgttg acggcaaaca 1560 cttcaagaag cccttcgtca aaagcccgta agcggggaag accccccata tacacatcta 1620 ctttcctaaa gaccagcagt acggaggcgg cggtagacgg ctttttcgga aagtcggaaa 1680 taagagetet gaatacgace etgateteeg taceeceegt teaatetteg aagatggete 1740 tagctatatc tacgagcagt tcctgagagt tgacaatgcg gaggatgtca aagcttacac 1800 agttggtcct gatttttgtc acgcggagac acggaaatcc cctgttgttg acggtcttgt 1860 ccgtcgcaat acccatggaa aggagctgcg atatattacc aaattgagta aggaagaagc 1920 gtctatagcc tcgaagatat ctggcggatt cgggcaaagg atctgtggct ttgacatgct 1980 tcgtgtgggc gagaaaagct atgtaattga cgtcaatggc tggagctttg tgaaggataa 2040 taatgattac tatgacaggt gtgccagtat tctaagggac atattcatca acgagaggcg 2100 cagacgtgaa ggtgtcgcgg aggctcctga agcatccttt tcagatcaaa gtcattacca 2160 atggagacac teggtgtege acegacaege actaaaaaca ttgetaaagt caeeeggete 2220 atcaaagtct aacggcaatc cacaacatca gagggattcg gatgttggat ctttggagtc 2280 atcacacccc agccttacag cgcctagtca cgacggcatg gacttcaata atgggcgtgc 2340 cggcgttatc ccaaaggaac agtcagcatc acccggtata tgcactcctc agggtgcgaa 2400 tcaaccetca ectacgatge acagtettga ggcaaateet eegeegeetg eetetaagea 2460 ctcatggaag ttgaagggta tggttgctgt cataaggcac gccgatcgaa caccgaagca 2520 aaaattcaag tttactttcc acagccagcc atttattgac ttattgaagg gccatcagga 2580 agaagttgtg atcaaaggag aatctgcgct tcgcagtgta taagagactg ttaacctcgc 2640 2682 tatggaacaa gggcttgagg acgcgggcaa gttcaattaa tg

<210> 2247 <211> 3299 <212> DNA <213> Aspergillus nidulans <400> 2247

cacgatgaat tgtagcacgg accgcttatg cacaggttta aggaagacgt acgtcgtagt 60 tcagccttgg tgagggacag tctcaacgca tctgacagag tcgacctccg acacagaagc gagetgteca atteattggg acageggtte gatagggaag ttegtttega eggatattge 180 cgcggaatgg atatagttgt aagcctgagt ggaagaaacg cagttcgccc tacctgccgc ggaacccggt acagctggtt gttgagtccg tagcaacccg aacagggaga cgatcttctc acttccacgg tgcttggtga tatggaaagg aaccgtactg accgtctgat cttctctaga 360 tctcgtctgg atctcgtctc aattcgagct tatatcgact gactgaaggg atacctagct 420 agaaatcggg agtggaagac acacacct agtacctgag actacgactc acggctcgaa 480 gacaaccgtg ccttggggcg ggcaatctag aacccctagc ttgcaagcat acttgtatat 540 600 agatcgcgcg gtatccacaa tcccgttgcg tctctgaata tcatgcaacc agcagaacga agtcgtccca gtcaaggtag tctcatagca ttggcttgag caaactaagc acatgaatgg 660 aaagcaagca cgcgtgtgtc tcagttcaat acttgctttc gcattatgga aaccagcagc 720 gagcatgtcg gtaatccctt tctgcctggc ggacgaactc gccataattt gatcatggcc 780 ttagagcagt acatcaataa aggccggccc aatatgtcaa gtaataggtt gagtcgttaa 840 acatgcagag aaataggcaa atggagtgaa tagacagcgg caaggacgtt gcccgttcga 900 gtggtatgct cgtcccaagg gccagggtga gccagccagc ctcggttaca gtacgactcc ttgcattaaa gacgagttgt atacgtctcg cagttcccag caaatcaatt cttctgggca 1020 ctccagtaaa ccgagcattc cacaaatatt gacccaagct actgtaagac cagatgcata 1080 ctgctcttca attcgaaacc tctgccaccg gccgaacatc tgcagcacaa gttgatagct 1140 ctgacgttcc aaaaacataa ctcgctatgg agtaaagaca ccagaggatg cggtaaccat 1200 tacatgagta atcccaggca ggataaagcc agagacccgt atcccagctc acggtacata 1260 cgtactctgt aaatacagcc aagcgagctg cagccggccg gccaggcggg cccggagccg 1320 gacatgctcg ggtgatctgc agcgaggatc caaggccggg tcattggaag agcaagatat 1380 gacaggtcgt tgttcggtgc gtttgcttgg actggtatag tttaatatat ggagctgcgg 1440 tggagagtcc aattaggtta aagctatggt taggtttgga actggaagtc agacctcgtc 1500 gcagtgactg acgacactcg gtcggagaat tatctcggtg ctttcataat attctgatca 1560 cctgataacg atgatgtcgg taccaagtag ccgttgacca tggatgcata ctcgaagcgc 1620 actcatacga gcaatgtgcg gcgagcaacc tgcaatccct gcgacctaag aggtccaagg 1680 ccgctagctt gcctaatttg gcacggagct cgagctcaag ctgacgtgat aagtgacgaa 1740 ataaaccggg ctagctgcac ttcagccgcg agtcgcgagc gaagagccaa ccaggtgtca 1800 tagacgcagt ttgggggctg ccgcaaacaa taaactcgtt atggagtctg gagcttttga 1860 taagacctct aggataacta gcatatagcc aaccccgccg aggctgctgg aggaagtctg 1920 tgcacaacac aaaatacggg attggctgca tggtgcattt aaagctgcaa gcgcttgact 1980 ctattaggga acaggatggg cagcctgatt ggtcggcagt gagacactga ggttggaatt 2040 aatgcaacgg ttctgatgta tagactctgc aagtacggaa ttacacatcg aatttgtcgc 2100 ggctatgcct gtcatctcaa cgggcgcgtc aagttgaatt tttcaagaga gctgtctgga 2160 ctgcggttgt ggaaagtgag accgtacggc aagaccccag tgcgggggag gtaacgcccg 2220 cataatatgg tgtgtatgag tagtatgctt gaagttgatg gcctaggaag aagctcacag 2280 agcaaatgtt tgcgcgttca agggacgtgg aatctgccat tcatccagtg aggactcgta 2340 tcgtggtgat ggtgggtttg tgcgtcgtcc ttcaagcagt gattcagttt cttcatgtat 2400 tagggtttga ttactcgacc gagagggacc ctctgtggct taggtacaga gtacttgctt 2460 catgcttgga tgcgagcttc ttctcacagg tcgatgaggt gtctagacaa tgacttgcag 2520 tcacggagtc ctcatcggcc gaaaccacgc cgtgaggcac cttgagcaca ttattgcgac 2580 tgcagagact agcttataag atcccatgca gggcgacgag tgcagttcac actgcagacg 2640 ggcgggcgta cggccggtcg tgcggccgat ctggccgatg atcaaatcat tgggttcgtt 2700 ctgccgcacc cagttggctc tgatagcatt acttgctttt tgcagtgggt agagaggtgg 2760 taggcgtaca gaaatgcggt ccgttgttct gatatcactg taccaccccg gttgaacgga 2820 ggtggagggg aagaggagag tgttggatag ttctttttcg tctcaactca gtactctgta 2880 gtatgcttta agacceteta tggeteaget etaaagggee teceacaaat eeetetaeeg 3000 ttagttcgta cgaatacgaa gagcctcagg tttcaatcag atcggagtgc aatctcaacc 3060 aggaaggtaa tgccggactc ctgggcggc tcaacccgct cgcgcaaaaa aagggttcaa 3120 ctacatgtac agtagacagg ccgagtatta gcccaggcct catagccgtg gctgaggcga 3180 tcccgaggtc gcaagcgcca ccggcttcaa tctccgactt ggactacaat gttcagacga 3240 agttagaacg aaatttgaac tttatgttca gctgctgtaa aggagaaaat agccccgta 3299

<210> 2248

<211> 1895

<212> DNA

<213> Aspergillus nidulans

<400> 2248

agtaaatgtt tgtctagaca caagtcagca ccacaacctc aacctcaact gtacattgtt 60 gtatgtacga ttttgttaag ttgcctacac attgattgtt cactgttccc caaggagccg 120 aaactgtcta atgacaggca aatgacagat atgaagtgat gctatcagag gacgatcgct 180 acagggtgag ttgtgcaatt tgaaactgtt catgagtgct cttcccccat agcatttagt 240 300 cattgcaatg aacagacaat cactgcagga acaaagtgct caaatgtcat atgaaggctt 360 taattagaca ttgaattgag agttgaggta tgggtgaaaa caacgccgag tgcgacaaag cccaagattg ggcttgacct gtgcatatgg cgccgcctca taacaaaatg tcaggcaaat 420 agccggggag gaaaactagg ttggtcttcg gttttaggaa taaataccta gaagagtttc 480 tgctggatcg aaacgcgata gatcgagctg ctacatagta catagagcag aatttacaaa 540 600 aggaccatgg agttgtacac gagaacaaag cggcagaaga atatcattta caatatctgt tgcattaatg ctgcgaaaat gtagtcgaag aagtgaaagc atgccatcaa gggtgggtat ccgttagaaa agatttagac cggaagaaaa gaagaacaat gaggtagtgt cgggcagggt 720 atagagcaaa acacctcaag tgtatgaccg tgggcaatgg taagagaacg tgagcaggta 780 840 gtgcatgtaa agcggcacga ttatataacc tagtgttaga gagacatcaa aagagagata 900 gaaagggaat gtgttcaata tgtacaagcc ggtctaatat aatagagata ggaccggtgg cttgagagga caatcatatc accactcgat ggctagtcgt ccgtctgcca gaaactcatg gcatcgatct aatgaaggga gacaaggtga ttcattacgc tttgagctcg gcaggggatg 1020 gttcgacggg tccggtggga gtggtgctgc gcttggatgc gccgtccatc ggctcagtgg 1080

teccegttaat aacgtegegg gtgagttega egtagteata etatgeaaaa gteagtagga 1140
agegttgaca gatteeaegg gggacgtaca gcaaattege eaatttegge gteategata 1200
ccaaggactt catettete agggacgee aggetaagge eggggateat gttgatgata 1260
aagagaatga tgeagetgee gaagaaggag taggeeatge eggtgaegga ateeggeagg 1320
tggtageegg ggtggatgta attgtggttg ateeageege eggtegatee eggtagaggeg 1380
tecaggtggg caatgtagte actacatagt gggttagtta gattageaaa gagteaggtg 1440
gaagggetta egetgegaag agaceeggtea ggaggttaee gacaagaeea eegataeegt 1500
geacagegaa gatateegag geateateaa eteggatgag ataettgaet ttagteega 1560
agttgeaage ageageaeeg acaaegeega agataaaeeg ageeeagga gteaegatg 1620
cagaaceeggg ggtaatggea acaaegeega agataaaeee ggaaceagae ecaaeggttg 1680
accaetttet ttetagaegg tagtegagea ageaceaggt gacaecaeet acagaageag 1740
ccaagtttgt cactacagea geeateaeag eaegeagat agegeteaag geggageegg 1800
egttgaaace gaaceageea acceaaagaa agaaaggtga caateacaae atgagtaaee 1860
ttgtgaggge gatagttgag gteatgagt ecaga

<210> 2249 <211> 472 <212> DNA

<213> Aspergillus nidulans

<400> 2249

ctttaacgac tccttagtct agtgccagaa gggggaaaaa aaaccgctac acttgcattg 60

tttctcgcgt tgatatagtt aagtcaaagg ttgacaaaaa gctaactaaa aagaaagtca 120

acagaaaacg gccccgtacc gaagagtccc ccgatgataa cactgagcct gtcacaccac 180

aagcaaacaa acgccggaat cttggaccgc ctggtagtac ccctttcgcc cgacgggcac 240

gcgtcttact ccccttcgcc gcctcccca tacagtatcg ttctctgaga ggaagcgacg 300

ccgtgacgag aaagccaagg ccgcatccac agtacaattt ttcgtcttcc tcaatacgtc 360

gctcagactg aagctgatcg tcgcgcatct gaaaccaccg cactaacacc tctctccaac 420

gagcccttac aggccgattt taatttctca tctgaaccag ctcagacgga cg 472

<210> 2250

<211> <212>	1006 DNA	
<212>	Aspergillus nidulans	
<223> <400>	unsure at all n locations 2250	
cttgcttggc	ctgccagagt ccatagtctg acctagtgct cgataaagtc cctgacgaat	60
tgtctcagag	ctcgaccgcg gcaacatggc caacgctatc accgacaact ttatagaaac	120
gtcggcataa	accaagacca attcaacgtc ggtcagcaga tgctttctct tggaatcgtg	180
ctgacggaaa	ttccaagcaa catgateetg tacegegteg geeeeggeaa etggeteaca	240
ctccaacttt	tcctcttttg catcgtaagt acgtttcaag ctttccagcg cgggtacgga	300
gcgttcattg	caacgcgttt cctcctgggt atcaccgaaa caggttccat tcctgggggc	360
ttatggacac	tctcaacgtg gtatgcacgc gacgagacga canagcgtat catgatcttc	420
ttttctggga	accagattgg ccaggcgagt gcaaagctgc tcgcgtatgt catcttgcac	480
atgcggggtg	ttggaggtca aagtggttgg ttctggctgt ttgcattgat gggttccttc	540
accgtgttta	gcggttttag attttggttc tttttgctgg actcgttcat gaacccacac	600
agcacgttcc	tgccgaaaat gttcaggttc acggagcggg agttgcatat tttgcagacg	660
agggtcttgc	ttgatgatcc catgaaggga aagaagaaga gaaagatagg gcttggggct	720
tttaagagag	r cggttagttc gccttccatg ccttttaata actgatgcta aacttatata	780
tatatatata	tctcgcgcgg atagttcacg gactggcgta tctgggtcca tttcctgatt	840
acactgtcga	acaatggccc caacgtgctt tcgacactta tgctccctca attatcacca	900
gtttcggctt	cggtaggctg gtcagcaatg ctatggcagc tgtcggtcta tttctacagg	960
teceagtgte	gttcgcattc agctggttct ctgatcacta gtgagt	1006
<210> <211> <212> <213>	2251 853 DNA Aspergillus nidulans	
<400>	2251	
gatggtacct	gtatagctaa ctgggccgtg acaacaacca accctcctaa gaaagagcct	60
tgactaagcc	gtcacgagta ctaatcctac ccgctggcgt gccctgaccc acgatgcgat	120
taccccagac	c ccgcagaccc actactaacc tctattttgc tagtgtcttt cacggcttcg	180

tatcagcctt	atagtaaatg	actatagctg	gactcaaatg	acgagatatt	tgacctaaca	240
gagcctgtga	gacgtgatca	agcttgtatg	agtttgtttc	caggcaagca	tactgcaact	300
tggactaagg	tcacacatat	ctggccatag	cccatagcct	gatctgtcag	gagagttacc	360
tacatattta	actagcccgt	gacaagggcg	cttaccagtc	taatctgacc	gtaatatcta	420
gaagaatgct	aggaccagct	gtttctctga	gtaatagact	tgctttgctt	ataaatcagg	480
tggttttgac	tgttggagat	agcttcaaac	ctaaaaatgg	aaccatctca	gcggctagag	540
ggtgacggat	cggtcgagga	gggcgggccg	tccgggagat	acgggaacct	ttgccggacc	600
cggcatcttt	gagagccggg	agtgccaaga	acgtatcagc	ggaagagcca	aagaatgagc	660
tcctggggcc	attccagcag	ttccgacttc	cgaagagcgc	ctagccgtaa	gttgatgcta	720
tgacattaga	gatctgccca	gttatatcga	aactatgtgc	atatatacaa	gacaacttgt	780
caaaatctct	tcttattcta	tccaccagag	gtcatgtaca	gaaaccgtga	tggggaaaga	840
ctctgagggg	gcg					853
<210>	2252					
<211>	3009					

<210>	2252	
<211>	3009	
<212>	DNA	
<213>	Aspergillus	nidulans

<400> 2252

cgtcaaaggc tgatgacttc cgctattatg agtcaaggtg ttgttatgta atattatctc 60 aagcgaactc gagtacttta tactcgtaac ctttttttcc cttttcatgt ctatgtagtc gttactgatc gtaaacatat ttttcagagg ccattcgtac tcagacagtc tgaacagcct gcggcttcgt cctccccaaa ccatctttcg catagaaatc cattggataa acaccttcat 300 gcgtcttctc ccagtcgtct cgaaccccaa gtgcaataag cgcctcgtag ggcgtcaata gcggtctcgg gaacgcataa ccccaatcga tacttaatcg cggacaagca atctgcaccc 360 420 aacactctac atccgacatt gccgccaact ttccgggaaa gatctcgctc aaaagcaaat 480 tgacgaaggg gatacccctc tcgttgaggt gcgactcaat catggccatc gtatgtgggt ttccctgacg accgagggag ccaagaatga taccccattt tttcgcagtg cgggcggcgg 540 cgatggcatc gcggcggagg gtgtgcattt cggtgtggtc ataggattcg cggctgaggg 600 tgcgagagta aggatcgtcg cggttagcgg gtatggaggg gttatggatc atggcagatt

cgaggtggaa gcggccgtca ccgaggtaca gcaagtagtc aatttgctga gcagataggg aaggggaggt gcagcctaat atctcgcctt ttgacagcgg tgtaatttgc gggatgacga 780 900 ttgtgccaac agtggcgatt gtcttgcctg gttgaatgtt gcgctcgaga gtcgcaatga ggtgcgaagc gtcaatgcta atgtcgacga agatgtatag cgttttgatc ttcgttacgt ccacgggaat caggcaggag tgggcgtagt ggacgagaag gtcacagccc agagcgcgtg 1020 ccgtgtagtc gtctatgcag catgcgccat aggtgacgtc gcccatgatg agggtttcag 1080 tgccggggca aaattgagtg aggatgtcgg aaattgtggt tgcgaagagc aggagtcctt 1140 caggaaattg gagagctatg cgttttgcgc cggaggtgcg gatgcgatgg atggttttcg 1200 gaatctcgaa cgagtaattt tttgggagga ggtcgatggc ggcgagaatg tcagggtctt 1260 gggatatttc cggaggaact tgatttaagg tcctgggggt ccttcggggt gttgctgttg 1320 ttttttagta cttgggcatg gctgaaaggc ttctctactg tacctttttg tatgcttgtg 1380 gattcaacat cttggacgct cgttgatgac tgtgcttggg tgtctgctgt gcgtctccca 1440 acgaaccttt tctttggttg ccgcagagag gcgttcgcct gaagtttttc agtagagtcg 1500 cccattccgc cggttctaat caactttcgt gcagagcgtc gactttgaag tgggatgaag 1560 ccattttttc ccacttgggc tctgactaag aggggtcagg tggggtttcg agtctaacct 1620 ctttcggcat tgtcacttgc ttctccgcat ttcgccctga cagtattcca ctttctggag 1680 ctcatggcat gattccatca tcgttcatca tcgtgatctg aagtgatgtt gagactctgt 1740 ttcttttcaa ttctccacaa tgattaaatc acggcccgga tggagatttc tgtcctctct 1800 tcgagcccct cctaccagac gctttgcgac agaggcgcgg ttaacttcgg accatgtccg 1860 catagttgaa gtcgggcctc gcgacgggct gcagaacgag aagaagtcta tatcgctcga 1920 gacaaagctt gagcttatat cgaagcttgc aaagacggga gtgacgacca tagaggcagg 1980 ttctttcgtg ccggcgaaat gggttcccca ggtatgtctc caaatgccgc ccgctcgtaa 2040 ccgataaagc caacgaagtt cgaaatttga tgctgatatt tgcaaatgat agatggcaag 2100 taccgcagag atatgcgagc acctecttca aaccecgccg cagtecetga acgegattge 2160 atacaattat cttgttccca acgtcaaggg attagagggt ctcatcaagg tcatggatgc 2220 aacaggggcc tcggcaagca caccgggaac caaaacaact ccgcgacaac gaccgagatt 2280 tetetttttg etgeagecae agaageettt teeaaageaa acaceaattg taceatecag 2340
gaatetetgg acegeatteg eectategta geattggega agaceaaaga cattegagtt 2400
egegggtatg teteegttge eetaaggetgt eegtacgaag gteeagatgt teegeegtea 2460
aaggtggetg atateaegge aacettgete gagatgggag eagaegaagt ateagtagee 2520
gacactaegg geatgggtae tgeaeegge aegatggage ttetteagge tetgaaggea 2580
geeggeateg ecaatacaga tetggetete eattteeaeg acacttatgg eeaagegttg 2640
gtgaacacta tegtaggett agageatggg gttegeattt ttgaeagtag tgttggegg 2700
ettggtgget gteettatte aaaaggageg acaggeaatg tetegaeaga agatetegte 2760
eatacaatte atggtetegg gatgeataca ggtattgaee tggaggagat gtegaggatt 2820
gggeaatgga teagtgatga getaggtegg eegaatgaaa geaggetgg eaaggegaet 2880
atageaaggt tgeaateata gtetgtatae tatgeaagga aggeeatgt etgeaagate 2940
ggaaatacgt tgttateatt eattetgtge gtatagaaeg gettgeetta tetatgtett 3000
tateteett

<210> 2253 <211> 2464 <212> DNA <213> Aspergillus nidulans

<400> 2253

ggagttaatg caatagcgaa ccttaccaaa ttctgtgaag caccggctgg gggggttgat 60 gtgacgcagg gcagagtcag tgtgggagga tgttataaca aatgctcagt tgattggata ggaggcctac tccgcacaaa cgccaggata tatatacccc agccatgtct tgaatcattt 180 240 aaaqaqacga cgatgaagat gtctagtttc taacgcaaag aatgaatata atacacaatg catagcactg cagcaggata tcataaagcc ataaccaaac gccattccga aaaatgccac 300 caacctggcc gacctcatgc gccgttgcta aaccgaaata gtgataatac agccataagt 360 gtcagttgaa aaagtggtgt tccccgcaat gccaacgcac ttcatctcaa gttctgactg 420 tggtaaaagc tcgatggtca gaggtaaatg ctctcacctc gcttgggaat gtggaaaaca 480 catcccaaat ttcttattga ctccacctca ttcaactctt caagaatctt tgctgcggga 540 tctgggccgt catgcaaaag ttctttcaca tgaatgacgt acactgaaag gccagccaaa

ggcttttcta cttcgagagc atccctagta gtgcacgtct gacggcaaag accttgacgc 720 tcaatggcga ggggtaccga gtccgatgtc tcggtagcct gtctaattcg ggttccggaa gacgcacgct teetgaeget gettegaate gacacagete teeetttget ateteeeege 780 tgactactcg actcggaact actgtcccgt ttgcgtttgg gaatcggcgg ccacattagt cccttgatgt cagctacgcg tgcagctagc acggtcaatt catcgactag atggcgcggg 900 cagaggtggc caaataaata gatatcctca gtcgaatcaa cataggaaca ttcgatgaaa 960 atggctcgca aggtaccaga agcgaccttc ggtgcagcga tttcccatac tttccgatta 1020 cgcggattga aggataccga atcaggctca acatcgccaa aaatgatgat ctcagttcca 1080 gttttctggt cgcggaggaa gaaggcggag ctttcgaccg tagtccacaa tgtctcctgg 1140 ctcgaagacg gcggttggga atgaattgga tccctaaacg ttgttagctc agttgttgat 1200 gcaccttcaa ttatgccgct taccattcac ttggttgccg tccagcttgt ttcgctgaag 1260 atatacttag gcgacgctca gtacctgctt tcaccttgca tcgcccatgg ctgacactaa 1320 aacctcgaac gagcaatcct tcgccagctt gagtgtaacc ttgttcatcg ccagagccca 1380 gcattgggtt gcctccattc gcgagacgct gatatgtgat caaaccaata ccttcatcct 1440 cgtcggaaaa atttggccaa atcaagttgt tgaagatgtg gctcttcatg gcgtctataa 1500 cagaaggcag cgcggcaaca gtctttggac cgttttcttt ggttagaatc gggatattca 1560 tggccaaagc cgatacatgg tccaaatgag ggtgtgtgat caggacccgt ccgataatct 1620 tcttgaaaac atgctttgcg tttgcaccgc tggtctcata cggtaggcgt aacccagcaa 1680 aagggccaga cgtgacgatg ccgttcttgc tcctgcactt ttccatgacg tgaacgattc 1740 cagcaagcag ggtacctgca tcgacagcga ccatggtgtt tggagcccag ttagtggccg 1800 tggaccgaac gaggataccg gtgactctgt cttcacgagg gccccccgtt ggaccctggc 1860 gagagacaat tagtttgatg ctgtttttct cgccaaacga gagcgggaca atctggttgg 1920 gataggagag acgggcctca taaagagact cggctgggca aagcttcacg gcaggtggca 1980 aggacttacc aaaacaacaa catgtagcgc aggctctctg cctcctcggt aatcgtttct 2040 ctggccaccc gtatcatcgc tagattcatc atcttcgaga gtttcaatgc tttgagcagt 2100 agagagcgaa gaactttctg aggttgggta aaagactggc ggataatctc tctcttcttc 2160 agtcggggga ggggctcggt gagaatcctg attgtcatcc ttcgagccct tgttgatttg 2220 aggttgaagg teegtgtegt eatgegeage ettgteatga acceptetgt egaegtgage 2280
accettggeg tettgageae teettetggg tetgaeegge ettetaegge tettetaggee 2340
tgtgagggga eggeeattet teettggagg eataatgaet atatteteeg aeggtagaaa 2400
taageetggg gttgegeega taeetgeage eegetaettg etggeegggg tgeagaaaae 2460
caaa

<210> 2254 <211> 4517 <212> DNA <213> Aspergillus nidulans

<400> 2254

cggagaaagt agatgatcct tggcgagacg catgacgtac gtaggtttga ataacagctt 60 caacctgatc gcgcccgact ttccgtctag agttagagaa acctcttgag cctggaaggg 120 ttccagcatt tcaaggttga tcggcacacc gccgagataa tcagccttgt cgccaaagtc 180 ccaatcatag acatcgcagc ggaaattggc accaatacgg gacttgattg gcgtctcgaa 240 aaactcgttc caggcaggat ggagggtctt cttctgcact ttagtcttga agatttcctt 300 accgtccaag cggaatttgc agtacggatc actgtagccg ttgcggtcgg cagacggtag 360 atcggcagcg tccaagacat ccacacggag agttcccatg ttgttgatgc tttctgatgg 420 atccagtttc atagtgacag gaatgtatcg agcactaact gtgactctgc tcacctctcc 480 atcggtggat cggaggacaa gctctgtagg tgtgtacagg atgcgctgga gcgtactgaa 540 600 cgtgtcgcct gtgagtttgg ccacgatatg ttcgtcatca tcagtgtcgg cattgacctt ctccacaatc cgaagggtga tctttgagaa ctcaagttca cgcacaaacg catcgccaac tggataaaaa gtcagccaac ttcaaatttc cagaaagact agaatactta ctgtcctcga 720 tcttagcagt cttagtgcgg attttgggcg atgaccacac tgggaacata taatcatcca 780 840 ttatgatttc cacatgcacg ttgctgcgcg aaaggttgac ctcgtgaagt ttaaacacga 900 tgaagccgga ttctacaaga tcagccgggt caacgacaaa tacaacaaca gaagggaaca aagacttacc atggttggca aggtcgtcca cagagatata agtcttgggg acctccttaa 960 tagacctaac cgacgccgtc tccgagtctt taacagtacc agagcgagac tcaaggctag 1020 gacgtccgtt cgactgcaaa tctgcggtcc cattggtagc accttattgt cggagatctt 1080 cgagtccacg ctcctggact tggagtggta gctcttgcgt ctggaatcag tgctcttcct 1140 cgtcaaccca gctgcctcag tctcggcctc ggcctcagcc tcagcctcct cctcttcctc 1200 ctcttcgtct tcaggattga cgacggggat tgttgggtag aaagcgacag tatagttcaa 1260 agttcccttg gcacgttgac caaggcgaag ggaactggat acaagttgtt tctcgtcatc 1320 gatttegtat teaceggeet catteteatg aaegtagtet getgeagaga geteeacega 1380 gccaagtgac cgatcacttc caacagactc ctcatccatg acttccaagg tgagcttctc 1440 gcgagcactg tgaatcggaa cgtacacgac ttcatcccaa tcagggttga ggttgttcct 1500 aaaggtaact gtgcggccct tcatgtagcc agccagcagc actcgagcat aaggatcaga 1560 cttgcccatc ttctcaaggt tgcgcagatc cgctgcgtcc ttgaagtgga ttcgcataac 1620 tecaattgga tegaegtage eggegettee tgeaatgeet eccaeegeaa egggetteea 1680 atccaagacc agtttggcac gtccagactt agcaccgtgg agatggaacc actggtggcc 1740 tttctccatc attttgagca tgtcattcat cttgatctga taggaaccga ggatggggtc 1800 cttgactaga tcccggtcgt ccttgatcac cagaccaagc cgggcagtct tacgatcagt 1860 gaccaaaaac tctttcgagg cattttggaa gatagggttg ttcgttcgct tgagtttgtt 1920 ggttatgtgg atttctttgc cgttgagtag aagaacgccg tatgggttca gttgcccaac 1980 caageteeta etteegteea ggteettgge ttgttegaet gtgaategag egataceagt 2040 gttcagctct ggaggcggtt cagtctcacc gttctccaat tttctaccct ccaaaacggg 2100 gaagaatcga atatctgcgt ggatagaacc ccgggatcgg ccgcttgcca agacttcgag 2160 gtatacactt tcatgctcgg gctcttgctc aagcttgtcc agggcgaaag ttgcggttcc 2220 cagctccttg tccttccgga attcgttcca atcgtaaggt tggatagtca aagtgtcagt 2280 gaaggaggtg ataatcacgt agatagtete gttecatett gggetateeg tatettgtat 2340 cgtcttagtg cggccaactt cggtccggtt gttcagagat accactgcat aagggtcagg 2400 agtaccagcg aacttgtcag ggttctttag ctggcgcgcg ccgtgaagag ttacggcaac 2460 aacaccgatt gcctgatcaa cagcgtttcc agcaagcatc ttggcaatct caatcgggaa 2520 aacgttgggc tcatacatca tcggaccaag attggcgtgg atctgttctt tgataaagct 2580 ctccagacca gggatgaagt tgatatcgaa cccgagggta tcgccaccga gaggcttgca 2640 aacatagtca agttccggcc gtcccaaaaa gcagacatca acccgttcaa tatgtgggaa 2700

gggaatetga agetteacet tgaeteteat aagaeegetg caageeatgt eeteaacaat 2760 cacatcgaga cccttgctga cgacgccttt accaacacgg acttccaaga caactttggg 2820 gttgatettg tetttgaeet ggegggeggt caaatceatg gtategttag gtgtgaaget 2880 gaatttccag tccatgatga cagtgtcaac ttcggtctta ggataggtct tgacgtgctc 2940 caatcgagge ggtttgctgc ctaggataaa tgtcttcaat cgtaggctgt ccaggaatgc 3000 tggggttget gtgetgagea eetgateaae ggaattgatg ategtgtege acateaetgg 3060 cgcataaatg ggccaaaact tgacaaggaa actgttgatc cactccaagc tctcggtatc 3120 ggtttccagg cgttgcttcg ccatctcgcg gttaacgtca tcgcggaagt ttcgccgaac 3180 tegeeggata gaggttegat aataggtgee acaggeggee atgataatga agaceeaage 3240 cagtccaccg cctagaacgg cgacaatcca tgatgataag catgcaaaaa caatgacgcc 3300 ggcattgtga taccaatcta atacactgtt agttatattg gggttcaatt gtccgcagcg 3360 acataccqcc aaagaacttc tcgtccagtt tggcctccaa gaaggtctga tggtccaaca 3420 atgttgette ategtgetet tettgagttt eeteatgaae gaacegtgga geecageeeg 3480 teeggtegeg egeceaaege tgeteateat eaaceteete etetttettg tetgetgeag 3540 gttettggga tttttcatca agcaacgtgg ttgcggattt cggtggagga agatcatacg 3600 gggcgggagt gccatcgtcc tttaagcagg atatcaataa gcaaatgtcg agtgtacaat 3660 tgaatgtacg cgctcacctt gtctgtgatc acgccgattg ccttcggttc ccggtcacgg 3720 tgaaatcccg ggggaacgca ctagcggaac agagatgagt gtcagtgaac atagtctcaa 3780 gcagacaacc cccagtcaaa gacgtacaga ttcagcttcg gcggcctttt cttggggtga 3840 tgcgtctggg ttgaattggt aagctggtag acccgctttc cgggtctctt caaccagttt 3900 tttctcgact gtttccggtt ggatgtgcga ttggggatct tgagaggcag cctgggcggt 3960 ctcgataget cettgttget teaatteege agaetetgea ttttgagaag ceatgetate 4020 gctgagtctc cggcgcgcag tcgcccactg cagttcaact cagcttataa tcgacgggcg 4080 aagtcagcca agacgctcgt aacgttttcg ataaaataga agcgtaagaa actgcacagc 4140 tagcaattgg gaaacagaat aaaaagaagc ccagaaatcg aagcgcggcg gaagaatggt 4200 gggtagatte gggaataggt ggttgeettg cegetgaget eggeageggg gaggetggag 4260 tgtggcaggc ttgaacggtg gaaggatacg agtcgaaaaa ctcgaaactg gattagtgaa 4320

ttactcacat gagttggatg tacgatgatg atgatgtact caagtctgct ggcgggtgac 4380 cctggcctct gacaatcggc gagtgtttag gagacggaga tacggagcag aggaaggcca 4440 ggggaggaaa gaggaaagtg gagaggtga ggggggagtg ttcagggcag ccgaagaaaa 4500 gaaagaaaga ggagcca 4517

<210> 2255 <211> 1253 <212> DNA

<213> Aspergillus nidulans

<400> 2255

ccaactcccc ctagcccgca tcaagaaggt catgaaggct gatccggaag ttaaaatgat 60 atccgcagaa gctccgattt tgtttgctaa gggctgtgat gtttttatta ccgagctgac 120 tatgcgggca tggattcatg ccgaagacaa caaacggaga acacttcaga gatcagacat 180 tgcagcagcg ttgtcaaagt ctgacatgtt cgattttctc atcgatattg ttccccgtga 240 ggaagccacg tegeatgeaa agegetegag teagteageg ggtgegeeag etgggeetgg 300 aggacctacc gctgcgggcc agttgccaca aactcagcac ggggttcagc atcatcccca 360 tcatatggcg ccgccagatt atggtgcgtt aggacagcat cctcttcaag accaggaata 420 caggcagcaa actatgtatg gaggagcagt acagtcagac ccaacagcgg cqtatgccca 480 gcctcaaact caaatgtttg aaggaatgta tactgcttac cctcatttac ccccgcagca 540 ggtacgcatc ggttgattcc gtttggcaat ctagtgcttt cgttttattt cgacctgaag 600 tactgatete atgaceceta cagtgaetta ttagegaatg ategategte teteegeage 660 egggeggttt etttgtttea gattgteeac egggegaetg caccagetat getttaagag 720 tatcgagact acgttttaaa tacccatttt gattatttac ttctttgcgt tatcggtgat 780 acaacagtaa aattagaaga gtaataaacg ctagccatgc tactttttcc cgaatcttga 840 cgataacgtt gaaaatttgt ccatcttcac agggctctga accgtgtgcq taagtctgcq 900 acaattaata tgcgtatgaa ttggccgagg gtgcgccact tacttctcca ataaagtagg 960 gccgttgatc gcatctacac gcccatactt tttatttcgc atggatatgt cataaaattc 1020 gtccgcgttc tccgcttgca ttagctgaac cgtctgttgc agttcatcta gattctctcg 1080 aagaatgggg ttgttgagac tgtcgacgaa ttgatataag tattcaacat ctttggcgag 1140

agccatcact ccgttagggt taattettt cactteeget gaaageggga gggeetaggt 1200 agteggttag teetttetge aaacatateg cagccaaege aatgacatae gag 1253

<210> 2256 <211> 3576 <212> DNA

<213> Aspergillus nidulans

<400> 2256

tttatgtggt caatctccgg cgcttaaatg cggcaacccg gcacttccga gattgcgatg 60 gtctcgagcc gccgtggggg ttgccaatgg acgctgccac tagaggctgg aggctggagg 120 180 ctgggagctg ggagctgttt taagtgctcg cggctcgccc gtggcttgtg cgaatcatga ttcgacagca ccaaggaata ccgtgactgg attcttcaca gcagtaaaca ggtgtaacac 240 aaagtgtgat ttccctacat ctcgctaacc gggctgagga tgaccttttt ctcccatgca 300 360 aggegageat egecaggete agageetaaa accagetagg tgeaeggaea tgtgeteegt 420 attgagecea geegagaegg getaaaaget geggteacea gegeeteggt tatatteett gttagggaag cccaaggttg cgccccgggt cgccatcggg cagccaaaag aatatgccga 480 cgagatgtat atcagcaagg acaagcatac attttccttc accccttgtc gattgggacc 540 600 gctggaatac acttctgagt ctgaacggga cgccggaaaa gggccagaac ccgcggacac gaggctgacg cgagacatcg aaggtgcagt tgggtgcagt tggagtcggg gcatcttttc 660 720 gaatctggct tttggaatcg gctttcgaga tccttgtcgg tgtgcaactg agcgtctggg aatacgagca atcccagcgc ggcagagcta gcattgagca catcttcggt gacccgtcat 780 tattctaagc ccagccaggc agacatccgt tcaatcggag ttttgcttct ctttcgcatg 840 gatatttgga aagcctcgaa aagggtctgc tcgagagaca aggtctcggt accgtaactt 900 ggtgaggacg gactacggag tagatgtgtc gactgtctcg cgctggatct tggttgatac 960 ctgtcatggc tagacccagg atcctgaaaa atgaatgata ttgggccgat ctgtgccaca 1020 ccacgtgtag gaactgggaa tcgaccgctg cctgcccgtg acaatcactc acctttggtt 1080 ctggatttta aagccggaaa actgcagcct gtacgcagca tctcacctgc tccaacttcc 1140 tactctgagt acatctaatt cagtccgagt ctgtaattgg gtaaacacga aatgctcaac 1200 tctgtgcctt gacgtcactc tatatcgttc cccacacggt acaccgctca gtcagtggga 1260

tegeetgege tetgtgettt gtataaaatt tagttegegt ttettttttt ageaggatag 1320 gtatttccca aaatgaggaa gcctagttct tatggcgctc aatagctttt cctatcaaga 1380 ggcggtcaaa tttcagtgcc agctttgttg gatctcagaa ctccccacac catcgccacg 1440 cgttgctctg gtgttccaga agatgtcatc gatctgtgag aggtggagcc tgctgccgac 1500 tgtcgacttc gccgtcggct tatcaaaaag atggcgccga tctgatgact gcttggaacc 1560 tgctctgcga ctatgactgg catttgtgag tcccagaatg tgagcactct accctttatc 1620 ggcagtcgtg cettetette gagetcggag gttttacete gaatecegag etectgtaet 1680 ccctcgtgca cggttcactt gtttgacaat ctcactctct atcgtcgact tttctgcgga 1740 aagagactaa cggtttgggc cctggatcag atatctacat gtgcgcttga tcactcagcc 1800 ggccgtctgt ttcttacagg aactacggtg caggtcaagt gtaaggtatc gacgaaacac 1860 gattacctca ataagagctc attgaaacgc aatgtgctcc tacgatgcta tgactcgaac 1920 cgtccgagct ttgtggtcag cgtcgtacaa ccgcgtgaag tgaaacttct cgctgtcttc 1980 tegaateeat gtteaagttg ettgggatee teaagattga gttttateta gtttegagta 2040 actacactcg ttcgacgtga acatcgacgc ggatatgggc gctgattagt aggtttgtct 2100 tetgetagtg ettggaegtt aggtaggata eeggeetgge agetgetttg aatteatgge 2160 agtgctactc cgtacactgc gtatcatttc tgttgtccga gtgctgcatc cgctgaactg 2220 tggtcacgga gcccgagtgt ggatatatct ccagctgaca attcctccat gagtgatatc 2280 atgggtcttc cttcgtcgga tggtgacgat atcgtgaaat atgggttgct gaacgacgac 2340 caatcgctcg gacgtcaact tgccccatga aacacaaagc aaggctgaca ggctacattc 2400 atccagaggg aagcacaaaa gacgcattgc aaggtgctgg cacgcagcag ctgtcatgct 2460 tagtacttat ctctgcaccg tcattcgttg agggctagcc ctccaaggcc ttttctgtga 2520 cgtggctgag gccagaacag gctgtatcta ggctgataca agactaagtg tgcggtcctt 2580 actaggecae gaaatggtat taegeetgte ettgeegeeg egeategtga tteetteeae 2640 aaactatctc tecaggggga tggaatgcac atgacagtct etgagaggca actaeteegg 2700 agtagatage egetgecatt teeetgaaeg gecaeggeae eeatetgaae aetggtgeag 2760 gacetegtea tetgaaegag atgteeaate ggaeateaga tgtagettet eggtetgega 2820 cggggcagcg cggggtgtgg agcttgcagt ataagttgca tgacttgtct ggccgcccc 2880 geettattgg attettgeeg ectggageag ggaaagteee tetggacaeg geeeggggag 2940
aaagtegatg ageeacteeg atatteeteg ecactateae actegteaeg tetatgatga 3000
ceatacatgg atcactagea atttaegtae tettgeaatt taegtaetet teatteeta 3060
tacaacetga gaagetgaaa aagggateat etatgeettg eegeacteetg tgeeetetea 3120
cageetgaeg etgatgtgat gaagategta tetteeggae gttetetaag ageegettet 3180
ceettttgga tgetgeatet aattagette attaegaata ggacacaeta aaagagegee 3240
ctageateae eaegeacagt accaagaata tgeeeagtee taatgtttge gttttatate 3300
aattetetgg agetgggaet tgggagtgt gaagttgatg gtgtaaagea accetetaae 3360
cacteaegat etaggeeaea ttgegttatt tegageteag tettegtgaa ggtttatett 3420
ateaggacae eccatgatee eaacaeagae ggagtaeaeg ttegteattg tetteagget 3480
aaggeaggea atatteaaaa tagacattag tteaataetg agtagaggta tgtegtatte 3540
cattaggggt gegtgeatge aatgeagate teaate

<210> 2257 <211> 1852

<212> DNA

<213> Aspergillus nidulans

<400> 2257

tcccaattct aaatcggtct actgcaaatg gaaatataac aattttatcg gcatataatg 60 cgctacttct cgatatattg ttgcaatcaa tgaaaatagg ttccatgcag gtatacatgc 120 accgccggtc tggcgtagta ccctctgttc ctcaatgtct tacccttatg agcagtgaga 180 taaccettta catteatega tgtaggettt taateetegt gaetgteata eagtaatace 240 atcagcgact gataatctaa tctacgtagt atttcgcatg aattctgacg ttgtgcaccc 300 gggaactgga tacataggca cgtagggcgc aaatctagca acagaaccag atccaaattt 360 acaaatagaa geetgacate titeacataa aggigetaca tiqqiqqiae teaaciqeaq 420 gtgtcatgca gctgacgacc tccatctttt ctagacatat caccaggtaa tggctccgtt 480 540 cctaaaggag tctaaccccc ccgggtccag gccgccacca agctggatat agaggcaaca 600 aaaaaaaaa aaaaaaattc tcgagctaca agcccagtcc aaacttgaac aacttgcaac cctactcaca atcgaaacga gggagacgcc ccgcacagga cggggcgccc ggggatcggt 660 gccttgcatc gaagtttcgg tttctgtacc actgtcaggg gatacaccac gatgtccacg aataggeget ggacatgttt aaaacateca egtegeggtt gteecagege taegggaact 780 attggatatg actgccgcat gtttccatta tggatgggag agatcgttcc ctccccaccg 840 taacgggtct ccagcgtcac gctcaatagt atactgaatg gtgggcttta ccaggaacta 900 gctccctcaa ggacatgggg tggtcagagc ccccgaagtc aagttactat ccactaagtt acgatetaet teatgaagtt ttetateaaa tggeetttga etgeaaggge eggaageget 1020 ggatattgca tgattacgca gcacactgca ttgatacata aattgaactt gtactaaagt 1080 atttcttggt ttaccctgca gctggagggc gtggggatgt aagggagggc cggagcatca 1140 agctacetee gtgaegtggt accegagtae acagatatgg teegatgate ceacagtata 1200 ttggccgcaa accaggcctg gacagtctgg aacggcctcc tttagtaaga acactcttac 1260 cagcaatcaa tggagttgcg ttgttcattg gacaatgtaa ggtgccctgg tcccatagcg 1320 cctgcctcgt accctaaatc agaatatgca agtctcgctc gttgacgtga gtagagaggg 1380 aaaaatcaat atgcctacgt agtagaccta tctccggtat acaactgcta gggtctaagt 1440 caatgtttgt gaatagtaga cccgtgccga ggcttaccat aatagaaaaa tccctctgga 1500 gtttgaagta tctagttatg ctattcatta ttagtcatta aataacatac gctttatgca 1560 cattcatctc cgagagccgg actgactctc tgcactcctc attcctgtgg ctcccgagct 1620 cctacgctgg ggaaatcccg agtcgccgcc ttctgcaatg gctgatgatg cttcagcttc 1680 tatttcaaga tgctctatat gcctcgaaac cttccggaga gcagagcatc tgaaacggca 1740 cattctaacc cgtgaggacc tcacaccgtc agcacctagt acatgcccac taaccgatga 1800 cgcagatgac gacgccaagc ggcatacatg tcatttctgc atggcccagt at 1852

<210> 2258

<211> 3629

<212> DNA

<213> Aspergillus nidulans

<400> 2258

ccgcgtaatc aatcatttet gacactatgg acccgatacg tecagatagg gatactagte 60
gaatggaaga accetgtetg etettegete ggeggegaet ggaaaggtat etgetetacg 120
gegagggegt tecgtgetae aggegaetga atcagatgte tacaaggeag aaaaggaaga 180

aaagggagag aagagaggc cggggtcctt ccgaccatag ctgagagctg aaaaggggag 240 300 taacttaccg caggcatcta agaatgtgcg aaatgtatcc tcgttacgga ctgtggcagc aatgataaac tccttcaggg agtagttgtc gaagagatct ttgattgtaa agacgagaag 360 ggtcacgata tccgagtcgt agatctacgc tgaatcagta ggtgtcgcat cgttgtgctg 420 aagagtcata ccaggtccgc tccgagggca atatcaaacc ctgcacgatc atttttctct 480 aagagtgaag ggacctgaag tggcattccc cattcccaga ttcccgcctg gatttgcgtt 540 ctctccaacc catttttqtc aatacaatca tcqatttqtt cqataaqqqc qqqctcccqa 600 660 tccgtaacaa tgacgctctc cgcaccaaga tgtttcgcgc aaagaaagga tagaaacccg gtgccggcac caagttcgag aacgcgtttg tttgctacca gggatttgcc agccctagtc 720 gttgagagga atgtgcctag gtgtagagcc gcttcccagg tgcggaaacc agtggtcccg 780 ccggagagaa taagggagcg gttttcagag gttataattg ttcttgggtc tatggttcca 840 900 tcacattcgg atgagetete tgaaacaggt attaaggaga egggageget gtatttgatg taggtgaget tetgegettg ttggagagea gaaggttttg gtgttgagag taaagaggte 960 cattleteca tgagactgte gataatttee tateeactta ggteagatat egaagegega 1020 ggacttggta taatctttga tcttgcaata gctgtgaaag cttaggcata ctcatacatc 1080 ctcctcagtg ttggaaattg atttttcaat ttgtgcgata atcgtcttca agacgcgtgt 1140 ttggtaggaa gctggaggga gaggccatgc tgtgtcctca ttgaacattt tctcatagat 1200 ggcggtttgt atggtggaag aaacgagggc ggggccatcg ggaagagaga gagagggagg 1260 atcgacttgt tgaaagtact gcgctgtcag gagcgctatt ctgtccatga agctgagtaa 1320 attggattct ctgtagctta gaatggaaat agatttgcta cagtatgatt gacttgattg 1380 ttctacagct aagtcccgtt cggtatggcg gagcatgcag cggagtagtc acgtgagcac 1440 tageteagaa eggetagege geeetageeg ageeeacage egaetttgea eagaaaageg 1500 aaattgaacg aagcgcatct cgacgcccgc cagaatcgac agtctacaac gacgacattc 1560 aaccaccgcc ccctgacctt gtcattctcg ctgctggtgg ttcagtcttg tcaagcctac 1620 aacaaccaca accatgggcg acgctcccgt taccctgcgg actcgcaagt tcatccgcaa 1680 ccctctgctt gcccgcaagc agatggtcgt gtaagacccc tttctcctgc accgcactgc 1740 atctgcctac gttagactgg atttgggaga tatttgcaac ggtctctgcg cgaaaagaac 1800 gaggaagagt tggaaatgtc tacatttggg cgcacaaacc gaatgagtcc gactgggtac 1860 tgatgtgaga tgatagggac gtcctgcacc ccaaccgcgc caacgtctcc aaggatgagc 1920 teeqtqaqaa qeteqeeqae etqtacaagt ecaacaagga ceaggtttee gtettegget 1980 tecquaeaca atacqqtqqt qqcaaqaqca etqqetttqc tetcatetae gactecaetg 2040 aggetetgaa gaagttegag eetegetace gtettateeg categgtget geegagaaga 2100 ttgagaagcc cagcagacag cagcgtacgt ctatcccgag ccatttacac ctcattcttg 2160 agatggcagt ggaggagcta acattcgttc aggcaagcaa aggaagaacc gctccaagaa 2220 gttccgcggt gtcgccaagg tcaagggccc caagaagagc aaggactaag cgtgtgcttc 2280 tcgcgaatga ttacgttggt gctcggggtt tggtgggaga ttgtggctag aaaactggcg 2340 cctggagtgt gacttggact cgggttcgca gcgcggactt gggcgcagca agcaaaactg 2400 gtqtccacqa tgataataat gatgaaccca acaaccctgt gattagcaac aaaaagagaa 2460 caaaaaaagc atgctcgtcc aaggttttcg ccatggtata tcattattta ttgtctttcc 2520 caatctttga gegteegtee eegtegtgae caageggata gacaggttte aagaggataa 2580 aaatttcact ggattcctgc acgggtatcg ttatagtcgg ctgttcaatg cattttgttt 2640 cattcaatac atgtccatag cogtgtccat atcctagggc caggctttga tccataccaa 2700 catctcagat tgggaagtag aggtacaggt aagtaccggc tgtaggtact ttagaccgat 2760 ctagaaaaag aaaagaatgt ccacggtccc acggagcctg tcgtgaatgt gatgatcgcc 2820 ctcagctgca agcaagaacg cccgctccca aaccccagct cacgtagcct ttattggatc 2880 tggcatccac atccaccaac cggacattga ccctctgagg tattacacaa ggtactttgt 2940 tcctaaacge aacccaattt tetteecaca gttggegtgt egateagaca gegatgeact 3000 gcagactage cagactaget agccaacate aaccaetgea agtaagtgee etacegaate 3060 cgagggcatg gacggggtat ccctgctgca catcttcata tatccgatca actcccagtt 3120 ttcatagttg tcagcacgca aattgectat teettggtca cegagatage geectcatee 3180 aacettatee tecaaceagg ttgtggetge agacagaact cegetgetgt tecettetea 3240 agttgatett caetgtagat ggegeecaet atteacetae taecegggga etageageta 3300 gagectagag getggaacae eeagatgeea teeccaacea ataaegaaet ettgatttge 3360 tegagteget gegteaggae ggattegaea acceegggag ettegtgegg actteegaeg 3420 ggacgggacg cgccaaggag aacgtgtgcc gttgatactg taagtaattt ggacctccgg 3480 ccctgagtag cgtggtttgc tcgttttaga gatctgtaag gtatgaggga ttatttccgt 3540 tcttccatat gccttagtcg ttttgaggag tagttgtaac atacacgcag ctgatctagt 3600 atttgccaga ggctgcgtgt gtggcataa 3629

<210> 2259 <211> 1581 <212> DNA

<213> Aspergillus nidulans

<400> 2259

60 tcaagtaatg ataagtcaga ggatatactc gaccaggttc ataggatgta tcaggaaccc acctggtcgc ccgccgacac accagcgctt acggccgccc tacgcaggct tgtcgacaaa 120 gtccaggaat ggcgaaagca ggtcgaagat tttgatatct tgatagccgc acgccgagac 180 240 ctgctgcacg aagacgacgt acgtaccaac caggcagaac aaaatctcgg aactcctgct 300 cctcgcagta cggaacgata ctcgtcaaac acaccgagaa cgccgccgct gggttttgac caagggacac cacgtggcag acgcgacctg cggaacctga catcgccaca gcgcagcatc 360 420 gtcgggtcgc ctttaagaga ggttacggta aacaaaaccc actcgcctcc tccccgcgac gcttctgagg ctcgttctgc ggcggaagag ctgcgcaagc gcctagcggc accgttcttg 480 ccagaaagca aagttagtac attcaacgac cgcaccgaca acagtgcgca agagccatct 540 ccagcagatc aagaggtagc ggtcacggac gaagaggagc ggaaaccgaa agctgagacc 600 gcaagteteg gecaegteet gaccaaegtt gtgateetgt aegagtttet eetggagate 660 720 teggeageeg taeaggeaeg eggegetata ttegaggaag egggetteea eggtgtagge tegtetetge cagttgaega tteetgaaac tatgeetaag eggegggegt eegtggetgg 780 eccgagegae geetttgtat ttagaeetgt tgatateeaa gegageeaaa catttgegaa 840 ttgcaattgt attataaccg atcatataca agacctaccc agagtacata tcacaatata 900 atgagetgge ggattecaag ateagaaaat ggttateeet atgteggtag getattateg attatcaatc ttggctgcct cccaagttag tgcctaaccc tccggaatca tccggaactt 1020 gacgtccttg qgaatccgga aagatgqatg gttttacccc cqaggqcagt gctactagtg 1080 ctgatcatca ggattccaag gagtacaagc ccagagtact cctaaggcaa ccctgactcg 1140 agttgggagt tgagaccagt ttcagccatc gtaatggggg cgcagggcat gctctcattg 1200 gctgctaatt caggaactgc gcgagctgaa gaataattcc attcaatatg gtagcaggga 1260 atgccgttat gtagaccatt atcttcattt acaaacacct ttgatggata aaaccggtaa 1320 gagcttttc atgctgctct agaataaagg tagagaataa tgttattgtt ttaagtgggc 1380 tgcttgcgca tctttgcccc ttttcctccc ccaccaaacg actcgaacta tggagggcgg 1440 atcatggctt agattttacc taaccggcgc ttgatgatta ttggcccct gtatcattt 1500 tattgtttga ctgccaaatg agctgcttat agtcctgtga atttataatt ttgcttccgc 1560 cttgggtctc atctgattac t

<210> 2260 <211> 3144 <212> DNA

<213> Aspergillus nidulans

<400> 2260

60 ttgactcggc ctcccgcgcg gatatcccga agaatcgatg atcaaaggca tctgggcgcg cgaggtaatt tccaaagaat ggcccttttg getctctctg cagactgcca cttttaagcc 120 gactgttggg cattggactg acggtgcact ggcccagatc taagattctc cacagttctt 180 ccacggaatc ggcttgggga tatcggcatg ccatcccagt aaccgcgata ggcactgcgg 240 tggtctcggg ggccgtgaca tttaccccga catcaagtgc agtggcggac tgcatcttgc 300 gtctgccatt tatgtgctcg cctttgttga actcaacaat gttcaacata cgacatctag 360 cgtgtcgcgg tacgaattgg cctgcaccta tggggataat gcttctagca tccgattgcc 420 480 ccatgttgtc tagagtagcg gtgacggtga tcttccaatt tgcttgcgtt gtcaagatcg actogactge aacagtgaaa agcgagtcag cttcgcacac tctcccgttg atattggatc 540 teggeagact gegettgtga eacttegatg geaggeaaag teggetatte egeteaeaag 600 attgcaaaat atcctccaca gcttgagtgt ggttcgagtg atggaatcgg cctctaagtg 660 tegtagtett cacegagage ecatgtttet ceageteett tgegaaggaa aeggaetgag 720 agtcccaaac ggtgaccgtt acagcgtttt catcagtcac gcatgaaatg tatgcctgtc 780 gcgttcatta acaagaagaa aagaagaata taagcaagga acaagcagca ctgacacctt 840 gataacgagt taagacttcc gtcagaagct tatgctcctg agcagttctc cacctgacgg 900

cgattgacct tgcaggctgt tcacaaagct cgtccaagtc cactgcagcc ccaatgtaga eggegagacg caagacggtg etcacaactt tgeegaatte atcetegttg teegaceage 1020 atgcagctgc gatggctgcc aggaatccga cgcagaatcc ctggatatcg cagacgtcgt 1080 agttettgte ttettteage tegaggaaat egactaaatg tegeaagaet gtggetggta 1140 ctagcaagaa attcatcggc tcggccatat caggccgtag cgttccaccc ccgagaaacg 1200 ctgaaagctg acggagacgt gcgtccccat gaagcttctc ggctgctggc cagagcctca 1260 ggatategtg ceagaeggaa ggtaaatete ggattgegte gtgaageeag tttgeattee 1320 getgattega aagatatetg egtatgtgee eagetggeag tteaacetee ggatattteg 1380 gtccgaaaag gaccgaaacc tgctgcaaag tattatcatc aagggacccc atctttcgaa 1440 ataaagtgat cttgactaaa aggaatgaga cacagtcgct taacaaagtg tgcttatgaa 1500 agaaccaaga accaacggcg ttgaagcagt tgctcaaatg actagtcccc gactcttaga 1560 acttgaccga gaatttcaag ggatataggc ggagcccatt gaaggaaccc tctaatctca 1620 geggaeggte taettgaage teaagagggg ttaetgeage agegeetgea etaeegeeea 1680 tageggteca agaateeeca acetatteet geeagetgea agtgaggaat tttgtegaga 1740 tctcgtcaat aaagactcag aagacgatat cctgacatat tgttctcaaa acaacgcctg 1800 tatagggcaa agtgcgcata gcgacagtcc gcccgtgtcg cacgaaaggg cgcctqctat 1860 ttcagcgtcg atcaacagcc ttctttaggc cagatttcga cttctgcagg agccactgtc 1920 tggttacata cgaccaattc ggtccaattg ccagatagct cgttatgtat ataagctagq 1980 gcaaaggatc cacaccactt tggaccgaac cgcccgaaag ctagaccaga agaatgttgg 2040 cttctcagtc aatatgcggc ccccttgctc caggctcgag ccaagtgggc acgcaaggct 2100 tagtttgcat ttgcattgtc ccaagtgagg aaccagatcg gactcagatc aaagacataa 2160 cccaaaggac ggcattttgt acaaccctaa aaagcgttga tcgacatata aaaacagcct 2220 cctttgctga ttgccaacca cagctcgtgc ttggatccgt ctttccacta cttgaggaat 2280 gaacgggcgt atccatcatg cataacacat ctacgttcct tgtagattat gcccgagtaa 2340 ttccgatcgc agcccttcat gctcaacgtg gaatcatctc gttgactccg gactgtctaq 2400 ctgcaccgcc attccgttcg tggctcgtaa cagtagctgg caaggtatgg cagctctgca 2460 gcgtagtatc acatacatat ttcacataat atgatactct ggcgcaacgg atttccttac 2520

ggggtetete egtgatgagt getettaatt ecatactagg ecatetatet etgetatte 2640 agtttattge tegttattgt eatetteatt tetactaaet atecaeteat tatageaage 2700 acaageegtt eteaagattg aaegatgata geaatgeaae eegaaaeeea actaaaaaee 2760 geeettaaga aegggtttga eeegaaeate etetacaaag aeeetttaae aateegtaaag 2820 gageetatgt gtactattet egagaageae ageaagatee eagtggaeaa agtegteagt 2880 eatgteaaea aggtggtgag taaateagee ageeettea aateegtaa tetgaettee 2940 tetegeeaga gagategege tettgeegtg gttagtaete tgtateeeta tgeaeteee 3000 aateetgaee eatggeega etaeeegaa atgeetegage gegtgaagaa tggeeaaa 3120 ettetggaee taggetgage attt

<210> 2261 <211> 1796 <212> DNA

<213> Aspergillus nidulans

<400> 2261

tectatgete gttageteat egataagatt agaetgatga tgaaatgege acegttetgt 60 toggtaattt ototacttto cataccocca ogotgaaato cagggoogtg gotgogtaca 120 tgggtctggt cttccccgac gaaagaacct tggacaatag cagcaccaga ggcggattca 180 ccaaacgtca cttcggaaac gatgttggct tcactgacaa ctgtaccaca cccggaacag 240 accttctggc catcatcctc aatgatatga ggggctggac agctcgggtt agggcatgta 300 gtggtcttgg ggtgagtggt tggctttgcg ggctgcggcc gtgcaactgg ctgggggcgc ctgatggccg tagcaccggg ggatttcaga ctggccaagc ggccaacagg aggtttgggg 420 cctcgcgggg gaacgggagg acgcatccca ggtctcgcag acatggtgca actgcaagtg 480 gtgcaaatat taagagatag gggtaggcta tagtggcctc agagctcgac aactctccta 540 tgcgagcctt tgcacgggcg agtagatgtc caagaagata tagtcctgct atatcgtcat 600 tttttatcga taaattgctg atgtaggaac tagacaacag ctttggatac gaaqctcgqt 660 atagttccga aaacggcagg aatgtcagtg attagataag gcgggcaatt ttcagcgctg 720

gggcgagcga cgctgaatac gcgacaaagc ttgaaataca agaacaatag atgttataac attqqqqatq gagcgcggtg gatgaggatg gagagagctg gatggcgcga cgcgagaatc gggacgcagt ggcggaaaat tctgtctgga tggtggagtg gaatggatgt gtcacgtgca 960 caaqaaqqtc cqqaqtcqaa qtqaaqqaaa acagatcctg aagaggataa aaccagccgg 1020 atgacaattt gatagaagca aatgcattgc tcatatgact agcactaaca atgattccca 1140 tggtctcatt gctcatgacc tccctggcgt tggtctgggt gcgcgttttg tgcgcagttt 1200 agecteatee actificiant tecacateat ecquacaaaa ecceptatee ageceattea 1260 ccatcctctg tcattgagta atggtaatag catagcagag tcgcccttag atatttaata 1320 atgtcacaac ccagttccag ttcacttttc ttcacttttt cagatetete eccecettte 1380 aatctctcaa cacccgtacc ccttccaqcc aggaaaaagg aagaattccc agattcagta 1440 caacatacct ccatcatctc tececcatcat ccatctetgt ttetteggta cetetgegga 1500 ttgagcaggc tggaacacta gccgccactc gtcatggcgc agccggctga aagacaccgc 1560 agtacgtttt ttatcagtaa cgtgcactgc acctcctgcg tcgcgtatat caatcaggtc 1620 ctatcggaaa cgcaagggat agcagatatc gatgtctcga tcttcactca cgaagtgcat 1680 gtcgtccata caaagggaac aaacccgctc tcgatagctg agatcttggc tgaggccgcg 1740 ttcgaggtcc accatgtcac gaccaggaat tcagcaggcg tcatcatagt cgattc 1796

<210> 2262

<211> 1225

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2262

gatagagatt gagtgatgga aagaagatta taagtcaact ttaagaaaaa aaaaagagat 60 ggtttgttaa aaaaacagg gtgcaaagag ttggcttaag catatttaag ggggaaagct 120 atcggggacg caagtagacg tctatccaag ataagggcca aaaagatatt taaaagcgtt 180 aatgtaggag tgggagttga aaaaccaatt aaccaaaaaa aggaaccgtg agtaaagtta 240

300 aagatgtagt agcatcgatc cacataccta cctaggctat gaactgattc gtaataagag 360 gtacactaag atcgcttcaa gccaaagcag tatcaaccca ccaccatggt aacccgctct 420 gaaaaactcc caacgcatcc gaaaaagacg agcattggcc aaatatctcc ctatcgtcaa 480 gaataatccc gtccgggccg acgaacgcca cgtcgagatt caccgcccag acggccttgt 540 gagetteete tittgagteg teatageaga gaegeaggta gaggeettea tetagggage 600 ctgtgtagtc cgcgtagggg cggagttgct cggggcggag agggcggagg attgttcaa 660 tetgggegag egttgggegg etttettet eggattggga ttggggtgttg tagggetgta tacagttcat attcacatta gacattcgta tcaatgtgaa tattacaggt taaaaaaaaa 720 aaaggtggta gggggtcttg gagaagaaag gaggcgcacc tctcgacctt gacttcccag 780 ctccaggaat tggcgtatta gacgggtgcg acgctcagag ggggtctccg atattggcgc 840 900 ggggtatget cetgetggtg etggtetgae ggagteecat tgtgaaagga tgtatttete tagtggaagg gagcccaagg gaggaggagg aggggcttcg ccttctagga tttcgagggg catgatgata atatctgaag agagtagata ggaattggta gacttgttaa accatgggtt 1020 ggggcgggtt ttcaggccta gctaatccgc ccgcgcgggt tttagggtgg gttacctgga 1080 cagcaaaccg cccatgggtt tagcaaataa ttctaaccga acccaaataa cctaaaataa 1140 gccagttatg catatcatta cttaaatcac cggtgatcta catagctaat gagatncaag 1200 1225 tcttgtggtt cagaattata aacaa

<210> 2263 <211> 1215 <212> DNA

<213> Aspergillus nidulans

<400> 2263

cgacacagat tcagccggtc ctttccacct gatcggacag tgcctaagta gccgattatc 60
tggtaggcga gcgttgcgag cccagcgacg ctggcggtga tgctcaacgg gtccatgccg 120
ggccatcacc tgtggaaata aactggcgga ccaaaattcg agagaaaaaa aaatgggagc 180
atatcaaaca gcggcagggg cagtcacttt tatttatgat ttaatttatt ataaatagag 240
gctgggctgt gtgactgcag aaaaccccca actttgctgc cgcaagctag tcagaggggc 300
taaaaagcag atcagcgaat cccaccatct gtgcagacac tgacggcaag ccccgtgcat 360

420 480 aatcactgct gtagttgcgg ctgagatggc tgcagccagc tcgtgtatgg gtctagcccc 540 cacgagtate tecagecaat tgaaggeeet aaaaacgtga egaatgeatt cagactgetg 600 acttqcaatq acttattttq atctqatcta atttcttcaa qtqtqcttat tqccqctcat 660 gccggggaat actgctctag tactagagta gtacttatct ataatctgag actcacaagc 720 ctacagccgg ctacacagcc tcacggttgt cataagcata atacaagctt atattatggc 780 ccttctgcct ccaccaggca aacagctgca tagggcacgc cccattcccc gtctctgtaa 840 gcagtcatcc gcagatcttc atgccccttc cagaacccat gataccaagc ggttgctcca gcctcgccag tttattccgg gatctgatgg ccctccacac cggcatgcca ccgatacttt 900 gctgccggat gatctgccgg agggccactt tgcccgggct tgccgtagag attctcgcgg 960 tacgtggccc taggtgccgc gtagtcctcg tggaagagcc cgcgacggcg cacgtcgggg 1020 atcagcaggt cgatgatgtc tttgaacgag ccgggtttga ttgcgtaggc ctgtaacatt 1080 cgcatcagcg cgacgtccct cgataggttg taaaaaggaa aggaaagaag aggacagtat 1140 aggaaaaaag taaaaaaaa aaagaactgg aaagagaaaa aaaaataaag agaaagatat 1200 1215 ggataactta ccaga

<210> 2264 <211> 2019 <212> DNA

<213> Aspergillus nidulans

<400> 2264

tggggtcctt cacgatcggg taaggtgccg tcgagtcaaa catgaaggcc tctttcggat 60

ttgcgatact gcttcaagag ttttgttctg tctagggccg ggtcgccata gactgatcga 120

aagaggagag gtttgcgagc aggcgcgaga tgaactggtt agaccatgct gaaaccgtat 180

tggtcgtgac atgcttgtag agtttcaaat gctgctcctt tttgtcagcg acagattctg 240

ttagggcttt gttgattgct tctgagacgc cgatagtgtc ccatgggtta atgtggatcg 300

cgctcgataa tgcgccagcc gttccggaga attcggaaag aatgagcgga ctatggttt 360

cctgctggca aagtatgtac tccaaactcg tcgtgttcat accgtcgcgg actgttgtaa 420

taaggccgac atcggccacc cgcaacaacg cgaagtattc gtgcggcgag agatattgag 480

qataatattt aacaqqaqaa aaactcagcg acccgaaacg gccgttgatt gtactgacta 600 agttggagat gcggctggca atcttttgtt cttctttctc ctcttcgacg cttgtcggac 660 tggtgacctg gataagtacg accttgtcac gccattcagg gaatcgttcg aggaacgtct cgaaagettg gagettetgg gegaeeeege gggeaetgte taggegatea eggeeaacaa 720 780 tgattttctt cccagegtat aactgtegea accettetae ageettetee gtgtetgegt 840 tttcaaacgc aatcttctgt attgcttcag catcgatacc gataggaaag acatccacag 900 ccacqtgagc accatatgca tcgacgccag ccgagtcgga ctcaaatcct agtacgcgag tacagcagga cgagaagtga cgcgagtagg agaacgtctg gaagccaatc atgtttgcac caagcacgcc tgtgagaatc tcctttcttt tggctaggca ccgcatgtac tcgctgctag 1020 ggaacggcga gtgcagatag aaaccaatgt agatattcgg aacatgctgc cgcagaatgc 1080 ttgggagcaa aaataagtgg taatcatgaa tccaaacaat atccccctcc ttgtattcct 1140 ggagaatacg ctctgcaaag agctggttca ttctcacgta gtctgtccaa gaatcgcgct 1200 cgaacctgcc gtcagttggt ccattttgtt tatagtgcag aagagcatag agctctttct 1260 ecgcatageg cetecatetg etttgateec caagaattat tgtgteeteg ggeaegtegg 1320 attcatctga cagccatact ggaacaacct tgccgtggcg acttgaactc aattgatcct 1380 ccaacctttt ccgatcatca ggtcccacag tcgaggtttc tgcaacggaa ctatttgatt 1440 gcagcaaact tatatcgggt accacaggag ctgatccttt actaagagat cgcgaagtgt 1500 tgtcaagagc tgcaggcaag tttgtattcg cattggagtt aagtgcctgc aagggattgc 1560 tecectegtt gagtggttee aetteaeegg tecaeeeggae aagtgtatga etecageeeg 1620 atttctcgga ggctaaatat gcaaatgaat cgaacaaagc agaagatcca ggccgaggtt 1680 tcaactccta cacagccgta ggttagagct aatcatttta tctttgatga cgcggaattt 1740 catacccaat cacqqccaqc ccqqaaqtat aacttatqtq qqatacaqaa aqcaqcactg 1800 atgatacgac cagaaaggtt caagccctqa tactgcttct ggaaatcggg tgctcgcatt 1860 gtgagaatet cetttaaget caggegatge ageaaatege teeetgattg ggtgeettta 1920 teggettetg atagagegga eegggtettt gaggeattgt taaagttega tgagacattt 1980 2019 ggagcggaag cgtcagtgaa ggaatcgaat cggacctct

<210> 2265

<211> <212> <213>	1045 DNA Aspergillus	s nidulans				
<400>	2265					
accaattctg	caccctcagt	atagtggccc	ttggccatgt	tgtttcccgc	actggactgc	60
ccgtagatga	aattatctgg	ccgatacaaa	gcaccgttgg	gaccggagcg	gagggcatcc	120
atggtgccgg	gttcgagatc	gataagcacc	gcgcgcggga	cgtatttgtt	accgccagct	180
tcgttgaagt	agacgttcat	ccgttcgagc	tggagatcgg	agtcgccagt	gtaactatct	240
gaattagcca	ggtaaaagaa	tgcagttgga	ttggattact	tacattccag	aggcgtcgag	300
gccatgttcg	ccggagatgg	tctgcctggg	tagtgttaga	gaacgagcag	gaacgagaat	360
tgttgataga	cttaccagaa	ggcagaacca	acctggttac	cctgtgaagg	agagagactt	420
cagtatcatg	aggataattg	gctcgagatc	ggtggactta	cacactggcc	ggtctggaga	480
tgaacctaag	agatggtcag	ctggataaac	aattgtagtt	gttggaataa	actcacaatc	540
tcacgcatga	tgggcttgaa	gggatgggtt	tttggttgaa	gggggtacaa	ggaagggaat	600
taaagaagga	gaggtgggca	ggtcagatgt	tgagcggctg	cagtagtacc	taattgggct	660
tactgggctt	actgcgctaa	ctaggccaac	taggctaact	agatcaaggt	actcggctag	720
gccccgaagt	cacgagcact	ggccactagc	agatcaacta	cctgcttcgt	tagtagactg	780
tagctctaga	agccgaatca	aagtgaccct	tgacaacccg	cggatacgaa	atgcggcata	840
tgccgcatat	gccgcaaata	ttggctctgc	agctgtacgc	aaaccaaaag	agtcggacgt	900
ctcctactat	cacaccgcta	tcgattcccc	catccaattg	tggctagacc	ctgtaaacag	960
accggatgga	cggtttccga	ggtggagccc	gctacggaga	agatcgacca	actttgtctg	1020
aggttcttta	tttgttggcc	tttta				1045
<210> <211> <212> <213>	2266 3140 DNA Aspergillus	s nidulans				
<400>	2266					
				agcgtcaccc		60
cttatctgac	atccttggtt	atcttcatta	atgcaacctc	ctgactcgga	taaccctgac	120

gtaccatttt tttctcttgc agatggcgca tctggcgacg tcacaccacc agttacagat 240 gatcaggaag ttgcggactg ggtcaaagat aggctggaga aacggttgaa tgggcttctg 300 aaagacgaaa ctaagccagc actgcacgcc gttccattgg atgccgtgcc tgggagcccg 360 cttcttgatg acceteceat egetaacete tegettgegt cetecatgee agaatageea 420 tttacacgcc tccgttcacc accattatat gaagacacat agcaaggcct acggcctacg 480 catttgctct gtttcattaa ttctgccata ccctcttttt gctgctgttc cgacgcatac ctccaagaac ttctggcgct ggcgccactc aggcagacag tctggctttt tgaaatcgtt 540 600 ttgtcagcta tgggccacgt ttggtggtgt tttgtatgaa agaaaaccgc tagctgatat gaacgtgcgg tcttgcttcg atttttccta tgtgatgagc agggcctact caatacaaca 660 gtgtatgaat gctcccatgt accgtattat cttccaattt cagtataacc agaaggatcg agcttgtgcc atatgcttcc acaccttagt aatagtctca acattcctaa tgcttatcaa 780 840 ccggcataat aagtgctgag taatgttgct agtctacgat ttttttggat gagtccggga ataaggcaaa cagtaaaaaa actagatttt tacagtgtag gaggttacta actctcagtt aacttggaat aatcttttgc ttcctgttgt gcattatttg tcagtattac tcggttattt 960 teccageact ggtggtegat agegteatee tgegeetaag etegeacete eggetteget 1020 ccccgccagc tttttctctc caatccagcc tgcagattcc cccctccccc tccttttatt 1080 ccttcgggtg cccgtcaata atctccctcc atgctctctc gctcctcgct tcggtcatta 1140 agtgeccaag cgtcgaagat teggeteace cgttegtete tegtetgtte gecaateact 1200 caatccaatc gagcctacac aagctacggc attgccacta gaaaccagaa gagaggagtc 1260 ctggattctt catctcgctc agctatctcc actcccactg ggctgcgtct ggcctcgctc 1320 acaagacaat tttcatccac ttcgcctgca gcgaactcga gcaacatgcc gccggtggag 1380 acaaaacagt atgactatat cgtgttaggt ggtggtagcg gtggtagcgg tagtggccgt 1440 agagetgeeg gttggtaegg agegaagaea ttgattgtgg agagtggaeg egetggeggt 1500 acttgcgtta atgttgggta tggaatgact cgaccctggt gaaccagcgc attgctgatt 1560 gataccegtg tagetgegte eccaagaaga tgaeetggaa ettegettee ateacegaat 1620 cgatcgaggc cggccgccac tacggttatg acctccctca taatattgac gtaaactaca 1680 cacatttcaa gaaactgcgc gactccacaa ttgagcggtt gaatggcgta tacgagaaaa 1740 actggggtaa cgaaggaatt gacctcgtgc acqqccgggc tcgcttcgtt gagaaaaaga 1800 ccatcgaggt caccaaccag gacggcagca ggacacggta cactgcgccg cacatcctaa 1860 ttgcgaccgg tggccgaccc agccttccgg atatcaaggg ctctgagcac ggtattagta 1920 gegatggatt ctttgagatt gaggagetge eecetaaget tgetgttgtt ggtgeggggt 1980 acategeegt egagetggea ggtgteatgg geactgtegg egttgaeaca cacatgttea 2040 tccgtggcga gaccttcttg cgcaaattcg atccaatgat ccagaagacc atgacggacg 2100 atacgaggcc gtcggcattc acgttcacaa gaagcaccct ggtatcaagg aggttcagct 2160 ccttcqcqac qqcaaqqqca aggacaagct tctcaagctg ataatgaacg atggctcgga 2220 gatggaggtc aacgaactcc tatgggctat cggccgtgtc cccgaagttg aggatttgca 2280 tettgagate eeeggtgtgg aacteaacaa gagtgggeae gttgttgteg aegaatacca 2340 aaacaccaac qtcgagggca tttacgctat tggcgatgtc acaggtcagg ccgagctaac 2400 cccaggtatg ttacagcctc tactcttctc aaatccattg aggaaatatt cttattaata 2460 tqtcaacaqt tqctatcqct qccqqccqcc aactcqqcaa ccqcctcttc gqcqqacccc 2520 aattcaaaaa tgccaaactc tcttatgaca acattccaac agtcgtcttc tcccaccctg 2580 aggteggeac egteggtete acagageege aageeegega gegettegge gaegagaacg 2640 tcaaggtcta ccacacccgc ttcccggcca tgttttattc cgtcttcccg cccgaggaga 2700 aggcgaagaa cccaactgag ttcaagatgg ttgttgcagg accagaggag aaggttgttg 2760 gattgcacct tctgggtctc ggtgttgggg agatgacgca agggtttgga gtagccgtga 2820 agatgggtgc tacgaagaag gactttgaca gctgtgttgc tattcatcct actagtgcgg 2880 aaqagcttqt tactttgcgt tagttggata gaaggaattg ttttcacata gaacctctga 2940 atgaggttat gccggagatt attgataatc gaggctgata gtacgtattt gaattttttg 3000 tatttatget tgtacttata agatatatga aaatgageta catategaat gtgttegett 3060 ctcaagtatc aatagatcgc aagttactaa cgatgtgatc aaggctattt tcgtaaggtg 3120 3140 tacccgctag aaaatccgct

<210> 2267 <211> 896

<212> DNA

<213> Aspergillus nidulans

caaatgcaaa acagacaaaa agaacaacca agcgtcaatc ttccgtacga gtatctaagg 60 tcaaacagga gcctgagatc aagcaagaac ctgaggtgaa gcgggagctt gaacaggata 120 180 taactataca agataacaat cttgaagttg ttcctgggcc tgctatacag aagaaatgct tatttttaat tgcattaaag gagaaggagc cagagagaga tattcaagag aaggatctag 300 agcaggaact attagagtta ctgtttgttc ctgggaagaa agatagagtg gcttattata caagaaagtg ctatatcctc tagcaggagg atattaagcg ctctgcagag tttggcattc 360 taatttagat acagagatat gatgttttaa cagctggtaa tgaggaaggc attcaacatg 420 gccatccatg taatttgtac aaaggcattt agtaacacag ctcaaagttt gaaatctcta 480 540 600 caccatggcg tacgagactc ctgttcccta tcccctatca ttaaaatcat ctgctgacta ttttacttqc tctqtacqaq tatactgctg cctctgtagc ttgtatctcg tccgaagcag 660 acaaaatage etecaagete etegtacace caacegegee cecteettee etgeegaceg 720 gcctctcagt cgagaagagt gcctgagcct ctttgccttt gttaatagac gagctggacg 780 840 agcaccaact getatgette caettggggg teaagageta tetgggtata teatacagat 896 atacagaggc attggctggc cctttcttgg cgggattgtg agtttattcc gacaga

<210>	2268
<211>	1791
<212>	DNA

<213> Aspergillus nidulans

<400> 2268

tgagattgtc ttaaatataa ctgacgccgg ggctctacta ctggcgggcc tccgacccga 60 cggcaatctc tctgacgttc cttctctggt gtgtgctgag tcgaccagaa gtccaaaagc 120 aagtcgaggc cgaggtcgcc actcttgaag gtgaactgac cgacgaagcc tgcgagcggt 180 tgcccatcct gaatgcggtc atcgacgaaa gtctacggct atacggggcg gctccaggat 240 gcatgcctcg cagtccacca tccgggggtg tgacaattgg ggggtatttc attcccgacg 300 acaccatagt tgctacgcag aactggagtc ttcagcgcaa tccgagtatc tgggatgatg 360 cagacacgta agtggaagcc cagtggaagc gaatcaacaa aaaaaatgcg gatggcagtg 420

ttgatacaga gcggctaggt tcgatcatac gcgctggcta tccaactcga gaatcactga ccaagccaag ctggctttca acccgttcgg gtacggggca cgccagtgcc taggtattca tctcggccgt atggagatgc gtctggctgc ggccatgttt tttcgcgaat gtgttggggc 600 gcgattagga cgatcggtga cggacgagag catgcacgtg gtagacagtt tcatagcggg 660 720 cqttccccgc gatcgtcgat gcgccattac actgacatag acgccgattg atggaacgag acgctgtcgt ggagagtctg gcgtaccatg ccagacgcac caacaatttt ctaactcgct 780 840 teggatagag eegacegatg egegatgttt gteggggeat aetgttetat ggeaeegeee agattgcagc tcggttagac ctgattttta gtcgcgcgat acaaattggt tatataagca 900 acattagtca tgactgtcac gcgaccataa agacgatgat gagtttcaag tcgcgtcacc tgccctaggg gtcgagctcg cttagtcatt atttagtaag ctaggtatag ataggcggca 1020 acqttqqcca ccaataatqa caattqtccq tccctttcca cagtgctagt tagtcacgtg 1080 tcaaacaccc tacgctaagc ccagtttagc gatcgcggtt aacattgacc ttggcgttcc 1140 quatttccat tagaaatact caccettgte agtttagtea tgegetetgg atagtgatat 1200 ttttccaatc ccaagccctt tcttgacttg tgtttcttcc tgctgttctc gtagccacta 1260 gtagatetea ggeagatgtt aaactegeae eggeetgttt agaccaegea gtggateeae 1320 tactgaatcc tctgccgcac tttattctca cgcccagcaa catgccagca ttaagtaaga 1380 tcatactata agggatcatt attacctgga ttggtagagc agtttagagc tggtactttg 1440 aattgataga tgccaatgat taattatgtt tgtacaaaca agaccaattc tagtactata 1500 gacaaacgaa agagaaatat atatgtgcgt gtatatagtt ttgcgctgca acgccgagcg 1560 aaqqcagtqa ccaaaqcctc agaaagatag atgtctatca agcacgaaac ggaagggcct 1620 tettegeaaa eeteeegaca ageteagaga aatgeetett aetgaaacee gggtagtteg 1680 ggggagteca gatgggagge gtgeeatgge agegggteaa aggeetgtet geaaaeggae 1740 1791 gctggtcgaa cggcatgcca atgaacttcg ctaggggtgc gcagcgccag c

<210> 2269 <211> 2543

<212> DNA

<213> Aspergillus nidulans

<400> 2269

60 acaacaactt caataatgta gtccgcagcg ttggtaatat tttcaggctt ctgcccgtat 120 ttcgcaaagt agtcgaagat agagtgccct gcctctccaa cttcgccaaa ataataggtc 180 ttgccaccgg gactcagage cagcactcga tcaaacatct cgaactgctc ctggtttgct 240 tqqtqtattq tqcaaaqqat tqccaqaccc tggtcggcga gtcgtcttag tagggcacaa atactaqacq caqcctqqct qtctagqcca ctaqtqgqct cgtccaggaa tagtagcagc 300 traggtettg caraaagtte aacgeegatg gtgaceettt tettettte gatgteeaaa 360 gageegataa tggegttetg caattecace aagtetaaeg tetetageae egttettgea 420 480 taagccaact tctcctgatc aggtacagtg gagtcttgac gaagcagtgc agagaactcg aatgettege gaatggtget getttegtea tgaatgteea tetgtteaea gtageeaatt 540 ctagatttga aagaagagtc gataggtctt ccgtctacat acatcgtacc tgtaaggtcg 600 ccagagettt geetetgggt aagegeagte aacactaaga atgteaggae acaateetgg 660 gatgagcaaa aacacagacc aggttcactc acaagtcgat ttgcccgctc cagaagctcc gaccaaagca gtcagggtcc ccggtttgca atatccacta acaccgtcca atagcttgcg 780 attttccttt ccaacacqqa caaacaqttc cagqttatcc cagqtgaagg ttgatttggt 840 qqcaqtqaqq qctccaacag acggtccatc agtgtcagat gctgaaggcg atgtttgatt 900 gacctgcaca gggcgctctt cttcatcact aatgttcgca atcttcctca gctgttttcg agactttttg tactggactg gtccggcact gtctggttcc cattccataa tttcactcag 1020 aaggcaggta gcagcaacgg aagcaacagt gaaaagacag aggataccga agttgcgcca 1080 aacatgacta aaatagaacc cgtatttgac tgcaagatag tcatcgccgt tgactatagt 1140 gcttccgatc tgacttccag cataagcaca tgtctggtag gcaatgtcag tatagacagg 1200 teetgeaggg acaaccgaag etggggagea ggtaaagttg gtgttgtgaa aceteegeag 1260 ccatcattgc ctcgtatgta tataacgctg gtgtgatata ctaggtatgc attagtttta 1320 ttatatagac attaggtaag atactcaccg ctatccatcc gacccaggga acatcagcca 1380 tcatcttgtc cacagagagt acgtaacctc caaaaacaat gcaaagcaga acgaggaatc 1440 ctgtgtagcg gagggcaacc tcgaagttag aggacgcggc ggcaaacagc cggaattgag 1500 ctgttagaga tatcgtgcac atatagatga acaagaaatc gatgaagaag gccccggcct 1560 atgatagagt tagcgactgg gtgcacaatc gcttggcaga tactcacatc agacttcaac 1620

cctgacagaa aataaacaac cactaggtag aggaaagtaa ggagagctgc aatgaagata 1680 tetgegaega etegggeeag geacaeagea etgggeegga egaatgeaaa titettetgg 1740 cgactgagga tgtcacgtcc ctgcattgct tcttctaatt cagacatttg gagccaggcc 1800 agaagaatag atgagtaaaa aatcacgccc cctcgtgagt acatcccgtc cgtggtttgc 1860 qqttqqtcat aaaacatgga cccgacaagg agtccgtaaa tgaccgagga gataagtttg 1920 atgtacaagg gcgacatgtg gcctctaatc tgccatatct gacgtttagc acataatacc 1980 acctgtcgga agagggagat ggtatacgga gatttggagg acacgaatcg ggatttgtcg 2040 qtttqqaqqq cctctttqac qtcttctaag ctttcatagt ctgtatcaqa qtqcqactcg 2100 qcqcqqctcc tcccaccgaa tccctggctg tcatagctcc gtacttcctt ctgaacgttc 2160 atgaacqcaq cqctctttct qaaaqcttqt tccaqctcaa tgqqtccttt tqqtqcqcqc 2220 tgttcccacc cttctcggaa cttccttctt ttttggacag tagaactagt aatgagatca 2280 tatgctgcaa gcatgcgaac acactgatct gtaggatcat gtaaggatgc agtgccagcg 2340 tgcacgggac ctaggtagag cagatccctt tggcggtgtg aacgccagcc accagggcta 2400 tgtcatttat cgcggcaaca gggtggtacg cggtcataag cgtggcatat ccgcaagtgt 2460 cggtcatgag ccaagaaaac cgggcatagt ctagaccgaa taaggcatca agacctcggg 2520 2543 tcgggtcatc aaagcacaat cgg

<210> 2270 <211> 1984 <212> DNA

<213> Aspergillus nidulans

<400> 2270

cagcatcata ttcaccatgt aaaatactgg tttgcgtatc aggtgacata ctgtagatgt 60 tcatcttgga gtgaccgaca accttcttga tctgtccctt ttcctcgaga tcagcgaggg 120 ccttgcgggc caagctgccg ttgatcttga gacggtcaac gagagtggcg acggtgatga 180 gacggtagga ctggacgtcc ttgttgagtc tctcagcggt cgccttctcg aggacgacgg 240 cgtgctgggc cttgtccttg actatagcgg aaaatatgtta gttcgggtat tcattatcca 300 ttttcatgtg tagatgagtg cgaaagtcgg tccaattttc tggttcgtag gatgttgcga 360 aatcgaggat tgttcggtgt tgggtgatgg agatcattat gaggacggag aagcatccct 420

tqcccttqqa ccacttcatc ttttgcttgc ctgcaggagc ctatttcatc tattagcatc 540 atattgggca gatatatcgt ctgttctgag gagggctgca gcttaccatt ttgactgtct gtgtggttgt tgagagetge gagaetgaag egteeagaag ttgageetaa gtgeaaaatt 600 cqaqtqqqqa qaqaaaqatc acqtqaqaat aaaccctagc cctgggatgg tcacgggtcc 660 aggeteggtt actgaattet agetactaat gtgattgget gegagaacta tgaagttaat 720 gcctggaacg taaggcagtg acataattat ccctttaaaa cggcaacata aagatggtta 780 840 tgcaacggtc gcttatagaa tattagacat gtggcgcaga tagataatct catcggttcg 900 tgtaagtgcc atggctgcct gataatacct ttccaccaag agtgtttaga gccttaaatt ctgcaccatg ctcatccagc tcaataaatc ccaaaacgta gtcctcttgg gagccaaacc agaatctaga cttctgaccc atgtcagagg ataaccatcg cacgtcgtat ctcccactgt 1020 cgcttcttga aatagggact cgaaagatgc atggtggtcg gtgcgggctc caaaatcgta 1080 caccgggaag agcattgttg gctgtagtaa tgagcatttg cgtgctggaa tgatgccata 1140 taacctgtct aacagcatgc tcgtgaacca aaaccgaaac aagaactgga gtgctctcca 1200 agteceatae ecagacaatg ttaggeegeg tetggteeac agtgeteaga agtttaceat 1260 caaagctgaa tcccatcaag gaaaccccac gggagacact cgtcggttcg gggacggttg 1320 aqaatqcaqa tqaqcttgac gactcagcgt attctaagct catgcctcca gcggcgtagc 1380 gttcccgcca taggctagga ggggattggt cgatggggaa gatatgtgag agtgtagacg 1440 agcaaqaqaa cttcqqatqt taqtaatqag acataaagca acacagtaat tataataccg 1500 ttttcgttcc aagtaggtcc accgtgccat ctatcttacc aacagccaat acttgcgata 1560 agccatctcg cacaacagga ctccattcaa ggcctctaac tcctagatca aataatccat 1620 cagattccgg taagcctgta taggtcctaa agagctgcac atcggcagta aagacgagaa 1680 ctttggttcc tgcacttgca gcctcccata cagctatcca gtgcccatca gggctccatt 1740 tcagcccttg cgcgtcgacc gtcggaagca cttcgcgtcc gatgacctca taggtcagag 1800 gctcatgcac ggtcagcagg tcactagtct ctggtttcaa taagatcgcg agctgcccgg 1860 tetteggeeg atateegtaa eeattetgat gegagaactt ggggggaettt ataataagae 1920 tgcggccaga gtccaactca aagacagtga gcttggtgtt gaatgcgtgg aaagcaacaa 1980 1984 tctc

<210> 2271 <211> 3651 <212> DNA <213> Aspergillus nidulans

<400> 2271

agacacttca cttgggtggg ggttatagac tagaaagagc tcttactata ggtaatcata 60 ctaatgctaa ttagaggtgg cgacacctgt cactcgccac aatctaccaa tggccagatc 120 ccttctgaac cctggatgta ccgacatggc aactccgcaa aaaagaagct aatgatgctc 180 240 aatcgacgca tcgacgatat catcgtagac cgcggcccag ccagagctat ggatcacgac ttatgactic atcicctitc gicaagcaat caaagcagti tcicaacgci gggatcaagc gaacagctga cacttccgta tggaggaatc tcgcactcat agctcggagt gctgcgtgtt 360 420 cgcgtcatca ttcatcatqq acqccacctq ctggctctta tatcgggaac tgtcaccaqa agctttgcaa aacaatcaaa taacattatc tatcaagaac catcattact gtaactcaac 480 ccaaattqca cqtctcccct aaacatqqaa qtacacctqc atqctaatat catcaqcacq 540 atgtcgtcaa aaaccaactt catgagcgcc ggaaaccaga cccaacagtc cggaaaccgt 600 660 tegeaaaegg gegetagete gaagteacaa aaagateega eetetggetg gagtgtegag 720 gaaatgcttg agactggact cgatcagaac ggcaacattg tctcggacga ttattcctgg 780 attgacggcc gtcgactaaa taagggccaa cacggcggcc aagaggccga tgatgttgcc gcttcgcttg atgagcattt cgcttaaagc gacataggtc gaattgtgag gtgattacaa 840 actgegeete ggtttatgae aggttggtge ttttegttee tteattetta ggattggagt 900 ccatgtcgct atcgctaccg cactaaccga tggaacgagt ttgactatgt cggcgctcat ttgatatgta acttaaggaa tctttgatca attgaatatc ataatcaatg cggctacgag 1020 tacgctgcaa ggtaaatgct caagcccttg taatgtagaa cttggttgtc cttgataagt 1080 agtagteggt ggtagtegte attgetatgg caacegaceg cactgegegg gaccaggata 1140 ggcctgaatc ttgcctgggg ctccacgcca tgctcgattc ggcaaaaccc aaacgaagct 1200 ggtttggagc cagccgtttg tgacgctaca agtcggtgtt attgttcctc tcgatattat 1260 cctcctgtcc cggcagactg agacaaagat gagaagcttc gcggtgttat cctgaggaca 1320 attgattcat cegetgteaa ttgttatett geggtaeett geegtatete ategegttge 1380 cetteettge tteggetgea tgtttegete ttttaettea categeagge tgtetgeatt 1440 ctccatccgt ctttatcatt ccacagtcaa tacagtgtcg agcactgaac aataagcttg 1500 cattttaaga cgacctgacc ctaagtccac gtctatactt caccgcaacg agcggcagcg 1560 acagcgaccc ttgcacttgc ctccacatct tttcgtgttt ccgcccttag tggtacaccg 1620 accttctgta tgtaccatca ctttatccgt cgccaacgag aaatcgtcgc tcaacttgaa 1680 cagacattgt cagatcacgg tgaagagatg gcgctggacc ctcgcttcta tcaccatctc 1740 ggccccggca tcggatctgg ttcgcagtct tcggcttcgc tgtcggggtt atcttcggcg 1800 acgggaatca cgagcccatc tatacaatcg tctgctgctt cttctgccgg cttgcggtca 1860 actgetteta gtecatecet aeggteaega caaggegttg ttgccagace ttetgatgge 1920 gtcccgggcc tcggtcctgg aggaaatgtt cgtgtcgttg taagagtgcg gaagtttctg 1980 ccgagaggta cgtgcagcca gtttgatgga catgaaagct aatatgattt atggttcaga 2040 gctcgagcgc aaggcaccat gtttgatttc aatggatccg gatacacaga cgacgaggct 2100 aaaggcaccg agctcccact atgacgaagg gaaaccgaaa tcgcaggcgc gcgggaaagt 2160 gctggacgat aaggaattcg tattcgataa ttcattctgg tcacacaacg aggcagacga 2220 acattatgcc caccaggagg atatctataa ctgtctagga gaggagtttc tagaccacaa 2280 ttttgaaggt taccacacgt gtatcttcgc atacggtcaa acaggttctg gtaagagtta 2340 tactatgatg ggaactcctg agcagcccgg cttgatcccg cggacatgcg aggatttatt 2400 ccaacgaatt gaacacgccg agtctccgga tgtcagctat aacgttcgcg tctcctattt 2460 tgaagtctac aacgagcatg tacgcgactt gctggttcct cgaactgacc cgcctcatta 2520 tettegaatt egagaateae etaetgaggg geegtatgtg aaagatetta eegaagteae 2580 agtccggaac tatgcagaga tcatgaagta catgcgcaaa ggcgatatat cacgcaccgt 2640 tgctagcact aagatgaatg atacgtcctc gcggtcacat gccgttttca cgatcacact 2700 gaagcagatc caccatgatc tctctacaga cgagacaaca qaacqcacag cgcgcattcg 2760 ccttgtcgat ctcgctggtt ctgaaagagc caaatccacc gaagctacgg gtcagcgact 2820 gcgcgaggga tctaatatca acaaatctct taccactttg ggtagagtta ttgcggcttt 2880 ggccgacccc aaagcaggac ggacgggtaa acggaaggga aaggaagttg ttccttaccg 2940 tgactcaatc ctcacatggt tattgaaaga cagtcttggg ggtaactcaa aaacggctat 3000 qattqcctqt atctcqccca cagattatga agaaacactc tccacgctac gctacgctga 3060 ccaggcgaag catatccgca cgcgcgcgag agttaatcaa gatcatctgt ccgctgctga 3120 gcgtgaccga cagatcgaag aaatggcgga gactatccgc acgctccagc tcagcgtcag 3180 ccaagetqcg cagaatcqcc qaqaqaccqa gqtccagaat gaacggcttg aagagtatca 3240 gcagcaggtg gagaagcttc agcggctcat ggaggagaac aagatggtta gtgaatgcaa 3300 aatcaggcag ctgcagaccg agaacgaagc cgatcgcaac cacctaaagc tggctttgga 3360 tagcttaaag aatcctattc ctccagtgac aatcgagaag gctctcagcg acgttgatat 3420 tecagaegag gageageega tegaegagea geageeggge teteetaett eggaggeaga 3480 aacagagccg gatctaattt gggaagacga gaacctccca cccgacacaa gcgagttaga 3540 agcccaagaa atgcaggcaa caatggagaa tettttggge gatetegatg tettcaagat 3600 3651 aaagctggct acagaccacg aatgctttgg tgcaagtcga aaacacgagg g

<210> 2272 <211> 1533 <212>

DNA

<213> Aspergillus nidulans

<400> 2272

tttgtgcgtg tgcatcaacc cccttttcta agagcattct gacaatatcc gagttcccgg 60 ccattgttgc caggtggaga ggctgggctt cgtaggcatc cttccggtac aagccagtcg gtttcacatt atcgttgttc cattgcgaag tctctgcgtg cacgtcgctg ccggcttcta 180 240 tcagtatttt ggcggtatca gtgcggccaa agtagcacgc tgcgtggaga ggggtccagc catataaatc tgccaggtct acgctagcgc cctgggtcaa gagaagctca actagaccgg 300 aatgccccct ttctgctgca tagtacagta gtggtttccc gtcacgccac aatcatgaca 360 teegtgtgtt egggteeatt ceatatgeea gtaaatgttg ggteatatge aagttteeta 420 ggatgggtgg ccattcgaac atqctctgqc qttqcccqta ctcacatqqa atttcqactq 480 gttgggttag gatattgagc caaaaagcta ttgtctcagc atttccggaa atcgcagtcc 540 tcaaaggcaa cagtgcctgc agtgcgtcgg tcttgagatt tgctcctgcg tactggacag 600 catatcgacc gtctgcatct acgatatcag gacgtgcgcc gtgggccaat aaactggtaa 660 tgagcggcac attccctctt tccgcggcca gatgcaatat cgtgcgcccc ttgtcattaa 720 ctctgtccaa ggctcctact ttctcaaggc atacgcatac acgcgtgatg gggtcagaaa teteteccag titgeegaga atteeggiee aatgaeeete tetaggaegg geigeageaa 840 catgaagaat gtaatccaaa cacttagtat caccatgtac agcagcagtg ataattggat 900 caaagctagt gcctgaggcg gagaacacat ctgcgcccat gtctactagg tctttcaaaa 960 catcaactgg gcctgctgct ctggctgcga cagtaagcgc ggtatcgccg ttctcagacc 1020 ggaaattaac atctgctccg gccagtatga tcctgcccag tatatgtcta aactgagata 1080 ggtcttcgtt caccctctta ctctctgaca gccgatgccg aagggcacct agaagagaat 1140 ggaccgcaga cggactgacc tgagcaccat tatcaagcag aagatcaaca gcgttggcca 1200 caaagtetge aatageaget gatgetatag geceaagate tagaceatea gggatgegag 1260 caccagagatg gtagagcgtg atggcgactt cccacctatt cgcccctagt gctatatcca 1320 acqqcqtaaq qcattcqaqq ctatctttct cqtctqatqa qctattcttt tqatctttca 1380 tggcactcat cccacgatgt ataggcatgt tcagcatgct gacagaatca gcaccctgtc 1440 cgcctcgqat aagaacacga gcagtttcca ataaactatt gttttcttgg gcttgatgag 1500 ttccgcgata taaactatgc atatggctcc caa 1533

<210> 2273 <211> 1579

<212> DNA

<213> Aspergillus nidulans

<400> 2273

60 aaaaatatgt ttcagaactt tggagatctt gggcaaaata tcaaagaata cgtggagcag tatcaggtga agactaagaa cactatgaac atcgagtcta ttgccgatat gaagcgtttc 120 gttgaagact atcccgaatt ccgaaaactt tcaggcaatg tgagcaaaca cgtcacactg 180 gtcggggaac tcagtcggcg agtgggtgag gaaaaccttc tcgatgtgag tgagttqgaa 240 300 caaagtetgg ettgcaatga caaccacaat agegacetaa aggtatggta etettacatt tgatctgtcc tcaaatccta acgctttata gactctgcaa aggatcattc aattacctac 360 agtgccccct gagaataaat tgcgactagt ggctttatat gctatcagat atgagaaaca 420 accytecaat geeetteegy teettettga tettettyty acgycegygy gtytteette 480 tcaccgagtc aacattatac caaaattact ggcctaccac cactctctcc aagctccgcc 540 aattgccggc ggattctctg acctctttga gtccacatcg ttgttttctg gtgctcgcga 660 cagattcaaa ggcttaaaag gcgtcgagaa tgtctatacc cagcattcgc cgcgcttgga 720 agcgaccete caaaatetga teaaaggeaa aeteaaagag etteaataee eetteetega aggtggcggt catgttcggg acaagccaca ggatattatc attttcatgg ttggcggaac 780 840 aacatacqag gaggcaaaga tgataactca ggtcaacgcc agctcacctg gtatacgggt agttttagcc agcacgtctg tccacaacag taagagtttc cttgaagagg tcgatgatgc 900 tgtgagegga tggeetgaga gtgaaceete caeegeeget ggaeggette ggaggaatat tgggcgatag atttccaatt atgtttatca ttctctacat attttttttt ttcttttct 1020 ttttcggtgt gctggcgttc atatgactgc attttgagta agggagatgt atatccaaaa 1080 gggtcgagat tccggcagcg atagtttcat tcacaaataa gatatatata cagactgcca 1140 cgttgtattc atttgagctc gaattttcat tgcaagtaac gcaaaagtag aggacttgat 1200 gtgaagacgc cgccccagaa ccccaatgcg gagaagcgga gatcacaact gaatcctcag 1260 cagcytcatc aacquatcty ccctctytct tccaacaagt tctccatgga atttcacaat 1320 teccegeega gggeggetae agetttgteg ceetetacag etgttageag tegagaaceg 1380 aagctccage tteettegae aactgaeeet ccaggeeege aaaaccegee caaaccgett 1440 gtctggctgg taggtcactc cattatcgca agagtttaca tgcttaatcc gtctattacc 1500 gcgaattaga tetttggtge aactggeeat atgggeeget ceetegtgaa aacegeeett 1560 1579 tcgcgcgacg acctggtct

<210> 2274

<211> 1643

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2274

acctgaccaa acagcgtttg aacaagagac aaaagacaat gtcgtcgact gggatgggcc 60
aggcgatccc cataatccac ggaactggcc agcatggaga cgcatgagcc aagtcgtgct 120
cgccagcggt ttcttgctca ctgcgtaagg cggttactgt actcctttgg tgaagccatt 180
cccgtgctga ctgatagccc tacagcaacc tcgccgcgac aatgtttgcc cctggagccg 240
cctcgcttgc gaaggagttc catatcacga gttccaccat tgtcagtctc accgtgtcca 300

tttacctttg cggcttcgcc qttgggccaa tqttcattgc cccgctctct gaactgtatg gacgtcttqt gatctaccac gcctgcaatg tcatttacat tggcttcctc atcggatgtg 420 480 cgctggccaa aaacacaggc atgttcctcg tttttcgatt tctggccgga tgtgcatctt 540 egggeecatt gacagttggt ggaggaaccg ttgccqacgt cgtcccqccc gctcagcgtg 600 qaaqqqccat qtctctattc tctacaqqac cacttctqqq accaqtaggt gacatcgccc gcatgatccg tcataatgct gacgatcatt caggtcttgg gcccaattat cgggggtttc 660 720 gtgtccgagt taatcggctg gcgatggaca ttttggatca ttacagttct agtgagtgaa gtacgacctc tgctattctc gagtcgctga cagttcgacc taggcaggag tattgttcat 780 catatcgatc ttcttcctcc gcgagacaaa tgccgccgtg ctgctagaat ggaaggctgc 840 tegteteegg aaagaaactg gtaataegge tetggttteg aagatggate gaggeetgae 900 cccccgccag ctattcgtcc gcgcgattac tcgaccaaca aagtttctcc tcttgtcccc 960 tategtgete etectateae ttetgtgege gttegtttte ggeeteettt ttatgetgtt 1020 cactacgttt cccacggtct ttgaggaaca atacaatttc tccgccggca tttctggcct 1080 gtcatatctc ggcgttggaa ttggaatggc cgtctctctc ggagtctttg ccgctgtgag 1140 cgacaagctg caaaaggcac ttggagattc gcccaaacct gaagggcgcc taaagcccat 1200 ggcgtgggtc atgcccgccg taccggtcgg catcttctgg tatggctggg ctgccgagaa 1260 gcagactcac tggatcgtgc ccatcatcgg gacatccttc tttgggttcg gccttctctg 1320 gatcataatg ccgacacagc tctacatggt ggatgctttt gggcctnnga gtgccgcctc 1380 tgctttggct gcaaacgtca ttctccgact tctttttgca gcttttgttc cattggcagg 1440 gccacctttg tatgcggatc taggacttgg gtggggaaat agcgttctag gttttatagg 1500 cgtggctttt cttccagtgc cactcttttt ctatcattac ggaggatggc ttagggagcg 1560 tttccctgtg aagctatagc attacattga ggtagatatt atagatctat tttaccattt 1620 1643 cagcgctaca cgaggatatt gtc

<210> 2275 <211> 1319 <212> DNA <213> Aspergillus nidulans <400> 2275 ttgtgccttt actccagaag attgtgaaga ctgaacgtcc actcaaggag tttgcgttgc 60 ctattctctg cgatatggca cactctggga aagttggccg tcgggagttg tggcggaaca 120 agggactege attetatate teattacttt etgaceetta etggeaggtg acegetttgg 180 atqcaatatt catatqqtat qtcacattct ctctggctgg tatgtgccta gctaataacc attgacaggc ttcaggaaga gaccgctaag gtggaagagc atctattgga aaatcgttac 300 gatcagccat cattcacaga cgcgatcgtg agatgcttga cattgtccaa ggcgaatgcg 360 420 ttcqaqaaca tccttqaqcc gctgcaaaag cttctgaggc tcagtcctcc aatagcctcg accetggege geceagactt gtteageegg eteggaeaga aacteeatea tteeaagget 480 qcqqtccqtc tqaatctcct qcqcataatt tctagcattt gcgactctag tgagcaacag 540 600 ggcggactac ttgcaagcta cgggctcctg gactcaattc gcgagttaga gcatgatcct gcgattcttg ttcgggatat ggctggaaaa ttaatccagt ccagcgagag aaatgattcg 660 720 tacggactct gtaaactcaa gcccaatgtt aggcggggaa gtacatctgc cacttcccct ggtctccttg ccaaccaatc agcgcctgtc actcctcagt tgagtcgaca aaaccagtcg 780 840 aaaggatact acgatagtcg ggaaacgcaa cggcggccgc gaagtgcaat cagtggctct 900 gcactggctc tccgtcctgg aagcagagac gggccaactc cgggtattgt agggggtgct aacggaagtg ctggtgcctc aagaaatagg atagctcgcg gagtgtccaa tagattgtcg cacatcgage tgttaccgaa tgatgatgat cgaatcccga gttctataac tcgtcgatcg 1020 teggteetee caegtegteg acgattgaeg cagtttgagg eggagegagg ategtaateg 1080 gttggtccgt aatggggcat ctatttatca ctatatttcc tttgcgaatg ggttctgtga 1140 gtacttetet tegatgtetg atcactatga geceatgeat categtatag gegtattttg 1200 eggegtttge cateagttat etetettttg eeettgggtt tacaatacat catatgtttt 1260 gctggctggt agggtatgga atttggtgca tcggcgacct agacaatagc gcatgtaga 1319

<210> 2276

<211> 2502

<212> DNA

<213> Aspergillus nidulans

<400> 2276

catcttette tecaagttge cagteattge atgtaagage gtttggatgt tatgeagegt 60

qcttgtctat tgaccatctt gatctctact tcttggttta ctttttccat tcgccgactt ctgggggaac agcccattgt gccctatcga ttcaacatgt ccttgctttc agctgcctca 180 ccggaaactg gccgtagaga ccacgatgag agaacgtctt ccaatagcgg aaatgttgaa 240 300 attcacacqc tatctqqtqq acgtqaqata tcagtaagtt aacatacact tgccatcgca gtataaaccg gactggttaa tgaattctta gggtcacaag cactcaaacc cctgtatcag 360 ctctcccgac cctttggcta cttcgaagct tgggaacctg cagtcccccg tcggccagaa 420 aaatgacaat gcttccaata aggtcaggtt accgttgctc ttgattttcc ttggcagata 480 qtqtctqaca atcctaqaag cagaagttqg aacatacaag caataccctt cctctgacgg 540 gaaattctqa aatqqaaaqq ctcctggcga agctttcgcc aaagccccag ttgtcagact 600 660 ccaagcaaac gatcaaccag gatatcctct caaagttgtc tgagcagcag ctactcctcg 720 accagcaaaa gagtattttg gcgaaaaata aagttgttgg cccagggcat ctcgaagagc 780 gcgataaacc tctcaccatg ccacagcgta tggacgctaa acaggctgct agccccaaag aagttgegeg tttegagget ttegacaceg agggtteega gttgettegt etaaageggg 840 900 aactccaggc tgctaactcc aaaatcgccc tacaggagca ggaactagca caaacccgtg ttatcaaaca tactttggac caggcccttg gtcctccatc cgaagctgac tttagcggac gggatataag cgaacaaaca atcagcaatc tgcagagcgc cttcaacgca tccataccgg 1020 cgccgcatct acttcaagac ggttggaata cgcaggaaga ttcgcagtca gatatatccg 1080 atgcactete egeoggtget tacaatagat ceaggggatt ttgggggeeet cetgeteage 1140 aagtttatgg tgtgggattg aactcagata aagcctacgc tgatagcaat atgcctctcc 1200 ctggcactgc tttcggtcac gattcgagca gattttgggg tccttcaaac acaaacccct 1260 egattecage gaacagttet ttecaacece ategegtget tteaggeeca tecacagete 1320 cttgcagctt tgatggacct ttctccgacg accaaggtag gtatttgcaa agttcaggtt 1380 ttggcccgcg ccctccaaca gcccagccaa gtcgtattgg gtcatgcttt cctgggacag 1440 getetecetg gggtacattt geteetaget eggeegacag teagggttet egateacege 1500 cgagtaaacc gaacagtact tatcaacaag taggacttta ccctttgccc ccctaccate 1560 aggggggagt tgcacctccg ctctcaccga cagggaccga gttttcagca cctagtggaa 1620 cctctgtacc ctgggcaacc tcatctgtgt gtaacaccga ttctgatctt cgtgctcgat 1680 tgacagttta caggtcggcg aaagctccat tcaaacgtac atttcacctc tcgaaaccac 1740
ttaattatcg gcgactgtta gataagaatg tttcttgtga ttggaaatac atagtcgaca 1800
agattgtttg caacaatgac caacaagcct ctatattctt gcagcaaaag ctcaaagtcg 1860
gcacaacaga gcaaaaattc gacatcatcg aagccatcat ccaacaggct tactcgctca 1920
tggtgaatcg attcggaaac ttccttgtcc agcgttgttt cgaacacgga acttctgagc 1980
agatcgtcgc aattgcgaat gctattaagg gtaacacttt gagcetcage atggatcctt 2040
tcggctgcca tgtagtccag aaggcctttg actgcgtgcc tgaggaacac aaagcagtca 2100
tggtgcatga acttctgcgc aggatccctg aaacagtcat tcaccggtat gcgtgccatg 2160
tatggcagaa gcttttcgaa ttacgctga gtggtgagcc tccgcaaatt atggcaaagg 2220
tcaacgaagc tttgcgcgg atgtggcatg aggttgcatt gggagagact gggagcttag 2280
tggttcagaa tatctttgag aattgcgtcg aagacgaaaa ggtatgactt cgctgcattt 2340
ttgcctctcc tttacgaagg ctttctaacc acaccatcta gcgccctgcc attgaagaag 2400
tcctagcgaa gatcgatgtg cttgctcatg gtcagtttgg aaactggtgc attcaacaca 2460
tctgcgagca tggtgcccc cgcgataaga gtcgtgtcat tg

<210> 2277 <211> 1875 <212> DNA

<213> Aspergillus nidulans

<400> 2277

cctttgcagt gcattccacg gaccactgga gagagcgagt tgaatcttct caatttctgc 60 ttttttgctg tggcctgtcg gttgcggaac cagccgtgac tagcgcattt gattttacct 120 caatcgcgtg taacaaccgg cacttgtcgc atcggaagtc gtcgatatat tcggtcttga 180 gaaggccgtc aaagcaagca ttgagtgtgg tagagctcct ctgcgggact tgcagtgtca 240 aattgacaaa tgaagtttgg ttcggcttgt acttgtagtg gcagaattgg cattcaatct 300 gggactecaa ettgeettea aaaggaaage cataetegtt gtegatetee ttgagettgg 360 tgtctattat ggccggaaga ccattctctg tgccgtcatc cagtcgcact tcaatctcag 420 acggcgcctt ctcgcgctct tggtagggat tgaattcgat tgatttctcc gccctttgac 480 gtgctttcac accagcatgg tactcgtcgg acagtctttc agccacaatc tgcaggaact 540

cctgcgcgtc ctgctggttg cgactaatgc gagtgcgata tgcaaactcc aaggcctgga 660 tgaatgcccg cgccgagatc gtcttcttat aaattggccg ctcgtttaac cgatccagca 720 tctccttcaq cqccctqqta atqqtaccct gctgaagctc ccggatcctg tccggtctct tctcacgcaa ttggtcagcc tcctctggcc cgggcagctg gttgtagatt tcaggcccgt 780 ccagctcccg ccgatggagc tcgcggatca aatataaccg tagatcgccc agaccggcaa gtgcctggag cacggagttg atgaaacagt cattcgcggg attcgagagg cccacgatgc 900 tetttttgcg gttccctcct gcctcatctc catcgatggt gtaattcggc ccaaagacat 960 agaacagagc aacggccgct agggatgctc cagccgcata cgcggcgacc gtagttggtt 1020 tttcctgcat caaactgcgg atttcacgaa ccaagactgt ttggctgtag ttctatggcc 1080 tttccatagg tcgcctaatg atacaaagcc tgcgagcgat gtttgtgctc gcccgtcggc 1140 tctgagagac aaagcaatca cagtcgcttc caaaggacga tgacgcttcg actcctcgac 1200 ttgaatccag cacactctcc aagatgtcgt cctcagctcg ggtgagcccg gaagtgggtg 1260 aatqtcaqcc qtcqacaatt aaatttgcca tgaaacccca accaggtttc ccgggaaggc 1320 tqtqcqccqt qcgggctgcg gagagaaaaa agactggggt aggctgagaa ggctgacagg 1380 gttccgccta cgtccggagg gagtcgtgag aaatgtaggc agcacaataa tcgggctgcg 1440 ccccqaqqac ttatcaqtcc qtttcctccq tgaaatttgc aaatttgcaa taataaaggg 1500 agaaagaaag tagaaggaag gctgcagagt gcaggagttc ggatgttctt cagaatcagt 1560 gccgaccgta gtcgctgtac ctagcgaccg gccctccgtc ggcgtcccca catccttctg 1620 tttcaaggcc agctcgcttc aaacagtgag cagtacagat taaaaaccag ggctggtgga 1680 ctggtaaggc taaatgcgtt gggactccat gttattgctt aggaccagtg tcgagatccg 1740 cagaaccaat gaatgtggtt gaattggtga ccgtgaagtg ggcgcaacat aggatttgcg 1800 ttgatagacc tgcagatccc ttgctagacg gtcagtgacg cagcggccag atgtgactgg 1860 gtcatggctc cgagt 1875

<210> 2278 <211> 1295

<212> DNA

<213> Aspergillus nidulans

<400> 2278

gcarcgacge	gategeaatg	aagegetgga	gggcgaacgg	ccgggtgagg	cggttttcaa	60
ggccattttc	ggcagtgatg	acgaagacga	ggatcaagac	gactgattat	atagattata	120
atcatattgt	tacttctaca	ttataaattg	tactaccaca	gtactaaaaa	atagcgtaag	180
agagtgcgca	atcagaccga	accccgcaga	gaaaggctgc	tcctagtctg	agtctagagt	240
ttcggggcct	ctcgaagcta	agcttacgat	tgcaccgcag	gtggtcagac	ggttgaccga	300
gattgcgggc	cacggaactt	tctctcttag	caacctcgaa	cctactagta	gcaggtatat	360
ttagctgatc	ccgagtccac	ttttgtcggg	gttctacttc	taaaagacct	tctgtcatcg	420
cttaccgatc	ctcaatataa	catatagttt	tatgcatctt	acctatgtct	cgcgattgca	480
gctgatggag	tcgaagtctt	ctctccgcca	aaatggtacc	tcacctctcc	cgcctcattt	540
ctgcagtcta	gtactgacag	ccgaccgcaa	caccgcaggg	ctgctgcttc	tccgtgtcgc	600
gtgaacccca	cgactccaac	ggccaaacac	ccacagagga	gcatagctcc	gcaatagcac	660
cgccgtccca	cattccatct	tcatcccgcc	agagccgcca	gcgtcatctt	acgcacaacc	720
cctccccatc	ctcctctcac	catgaccgcc	aaagacagca	acaacaggcc	gtacccctcc	780
agcagcacat	aaacgcaccc	atccgaccgc	acatatggca	ctctaagaag	cgcctatgga	840
ctcgcgcgct	tcttgaccgc	gagcgaacgg	agttcttcga	gacccgcgtc	acggggcggc	900
cggaagtctg	ggacgcactg	tctgcggcat	tgcagttcat	gcggaacgga	gactacgaga	960
ccgcgcagag	catcattgat	gcggcgggag	tgacagttcc	gactggggac	ctttgtcagg	1020
gagtttatga	tgagcagggg	gttctctatc	ggttgccgag	gtgtattgtt	agtgatcctg	1080
tgaatattgt	agttggggat	gtgggtttgg	gtgggagtgg	gagtggaagt	ggaagtgatt	1140
ctgaaggaag	tgacggcggg	gcagatgatg	atttggggtt	tgagacagat	gagaatgagc	1200
atggggatag	gaaggtggga	tatgttcgag	agggcgaggg	tgttgagtcg	ggagatgagt	1260
tgatcaagaa	cggcgctggg	gcgagggcga	gggtt			1295

```
<210> 2279
<211> 1884
<212> DNA
<213> Aspergillus nidulans
<400> 2279
```

agatgatatt gcaaatctca gagaaccccg cagccagatc tgtctctgca gatattctat

60

cccaatttct gttgcgctga atcagtgcgg gcggacaaac acggcatcat tcgtttgtct caatccgctt gcaatcagct tgccaaacca gatccaggac taggatatca tacgctgcta 180 tgaagttgaa tgcttccgaa ctcagtattt tcaggggagc agtctggtga tcgggacact 240 tegtgatgtt gtcacgttcc atgcgcaacg gtcgcacacc tgctcctgct ggtgactttg 300 gagetagega gacegtaege atattetetg caceaaegae aggtgteaga ggacetgatg 360 ttetetegta gatgggttgt tetataceag taccettggt egacgteget etetggtetg 420 cgtcttatct ttcagcaatc gagagcggat tggtaatcgc tgcaatgtct tggagggcgt 480 ttccatgtct ggaccttttc tttctctgga aatgctccaa ggccggtttg cattgatgac 540 gctcggaatg ctttttgctt gtcctgggag gtatacttca agcgtctgtc ccatqctctq 600 tcgtcttcta gtagcggtct cgaggccagt aagatcagga taaatagcgt ttcgaggtaa 660 ataagtagaa aaccaagcac gcactttggt accgtattct ctggtcgagg acaccgagtg 720 aggegeaagt teategetgg ggetgaaget ggtettgeea gaagaeeeat etegaegaeg 780 tcatctttgc catatctggg ccagaggttc aggttatggt ctaggtcaag gctttgctct 840 ccctgtaatt tggacagatc aacgagaagg tgtgaggagg cgcgtcgtac ggagtatcta 900 tccggggttt gcaggctgga gaccgaactg acagataaat agcctgcggt gacatgctgg ctgggtctga tcaatgctgg ggtaatgccg gagctgaatg gcgggaaaga tgaagtgatg 1020 gacgtctatt gaatgggcat gggttggagg gaaagaaagg agagaagata cggcctatac 1080 ttegteeett etgeeeetga eataaettta taaegegaat eaagaaeage eaetgegtag 1140 accettagae tggatttggt agtaattggt aagagacete getetteetg geteacagte 1200 tcactaggtt gagcccacaa tgcagcagca aaacaagcct aatgtgcccg attcctctca 1260 atcatgatca tcatcaccac aattatgaac cgtacaataa acccatcacg atggctgcga 1320 cgagcattgc cgcacaaatg cagaaaacgc ccaccataca gtttgccaca aacaggccgc 1380 atgaaccagg gtcttcatct cggtcgagga agggacgggt tttggttcca cgccccttgg 1440 agtccctgac aagaggcata gttgactctt tactaaatat cgagggggtt tcatgggata 1500 tccctgtttc tttggggtgt gaatctgatt actgaatgag ggaaaaggcc tgggcacgta 1560 cctagatctt cgtccgagtc ccagtggcag taggaatagg gggctatcca aggagaggta 1620 gatatgggca tactgaggta cctgagtatg tctgagagtc ccaggggatc aatccttgca 1680

aagcaagaga agataatcaa gcggaggcca gtaggagttc tggaaggaag ctttgttatc 1740
agaagaaacg gaagtgcatt ccgatacccg acgatgttga tggcccctca ggcggtggca 1800
tcataggtag gtcttctagc cgttcgaatt gaaaaagaaa catagcgttg aaagccaaag 1860
caagagcttt caatgtagag accc 1884

<210> 2280 <211> 2110 <212> DNA <213> Aspergillus nidulans

<400> 2280

aaaactggac gggttcactg ccgccactgg tcctgggaat gcgacaacca ccaaaagccg 60 ggcagaatac cacagccatg tcaacggtaa acctgatgct cccggcttcg catcggggca 120 180 cetteegaca ecettgaegt caageeacgg aceggecaca eegaegecac atggecagae acaccaqtac cgacaagtct gcggagtcac atccaccatc tcacagagga catcatctgg 240 300 gtcttcggcc tctatcaccc accttccagt ccacgagcag cagaatggca atggaggatt cccgggtacg ttgcatgccg attggtccca gccgcaaccg aggcacgact tctccatcaa 360 420 ctccaatgat agcatcaaca ctggaaatgc gattctagat ataccagagc ccaatatggg tgatcagtcc agtggcttta ccgagtcgtt tccatttgag gggttcaatg tcgaggagtt 480 atggaattgg atgttatatt ttgacagccc gccgcggacg gatatgctat agtccggaag 540 aggtgcagca taacagccgg catatatcta ttgttatttt aagaatctta ttcaccggga 600 cgggtattta tttacttagt tccggcggag acttacgata tgtaactgca ggttattgtc aggagatttc ccggcgggg atcgacctac tcactctgca ttctcaaaat ctcgcatact agtgtagaag ataatcatca tgcaactaca gaaagcaggg attagcatat gccaaggcca 780 ctgacgtttg tttctccgtc acggcatccc cagaagccga gtaggacggg atctatgccc 840 catataaagc gcaacagtgg gcaaattcat cagttcaaca gaatcagcac ctctcgatga 900 agttactcac gatgcgcttt caatctagcc ttctagcact agcctccctc cttccccagg gactegeege caeceteect atecegegee agaateaace gggteaatac geegggtate 1020 tgctctcaac attcacagac gcgaacccat cggtcttctg gtacttatca tctgctgaag 1080 atccacttgc atttaaaccg cttaatggtg ggaatccggt tctgcaagct accgttggaa 1140 cccgcgctgt gagagatatc ttcctcacgg cgagcgaaga acggaacgag tatttcatca 1200 ttgcaaccgg taagactggt ccgctttacc agaaggatat tatcaagatc ttttatgact 1260 aactatgatc ctcttgagca gatctcgata taaatgctga tggcttctca tgggacgagg 1320 caacaagacg cggaagcagg ggcctgacaa tctggcgctc cgacaatctc gttgactggg 1380 acgatgetac attagagatg tacgtttete ataacatatt getactgagt tatatecaat 1440 ctaatgecta getgeagaat egaateaece gaagetggaa tggeetggge aeegteegta 1500 gtctacaacg ccactgaaag cgaatactac ctcttctggg cttcacgcct ttatgcagag 1560 gacgacgcag accacaccga caccgcatct cttgaccgaa ttcggtacgc gacaacgcca 1620 gatttcagca cgggatcgtt cagcgagcct gccgattacg tcgccctaga tgcggagaat 1680 atcccactca tagaccagga attcctctat ctcggtaacg aagggcacta cgcacggttc 1740 ttaaaaagacg agaatgtgct gcatgtgtac caggaaacaa cgacaggagg cctgtttggt 1800 gaatggacga ggacgcagcc ggagggcgaa tatatcagga cgagcgtata tgaagggccc 1860 gcggcatttc ccgatgttaa tgttgaaggg cgctattatc ttctcatgga taactatgag 1920 gagtatgtgc ccttcgtgac ggaaaacgta ctctctgggg aatggggagga gttgagctct 1980 gatgagacgg ggttgccgcg ggggttgaag catggaaatg tgttcttgct tacggagtca 2040 gagtatcagg cagttgctga gcggtattgg gtgtaagata cctaagtctg atggtgtcta 2100 ccaaactacc 2110

<210> 2281 <211> 2176 <212> DNA

<213> Aspergillus nidulans

<400> 2281

gtggaggggg atcgagtcag agagcaatca agacccaatg ataaggaatc aagaccaggc 60 cgttagggag aaaaagaata ctcgaccaca aaggtacgaa aaccatacag cgaccgagta 120 ttaaatcgcg attaaagccg aaaacctcaa ggatcacgct tccctccctg aacacgctag 180 tccaaacccg gtaacattag ctagctctaa ggcaccaggt gttcatgcct gaagataatg 240 tgaagaatat gacgaaccaa actacatgag tacaggcttg agaactttca tatggatcta 300 aattaaatcg ccttaaagga aaattacata tctacctaga ctattgtact atgtcattgg 360

agttaccaaa gctactgtat cgatacacaa aagcgaccaa atggcggagc agcggagatg 480 qacqaaatga acacaaacac gctatttggg ggtgtacaaa aaatgataga caaaaaggaa 540 tagatgcaga cgtctaatct tcgagttgat gtacaacgcg acttttaccg cgaggtagcg 600 cggctcagga taaacactcc ggcaatgaca gccgccaaag tgacaattgc tcctgggagc 660 aataagtcat tgggaacgcc tgcaataagt tgctcttcgg gaggatgggc gggatacgcc tgagttgctc ggggcttagg gataggcgat tcttctgata attggtcgtc tgaagcaggt 720 780 gtcttaacct ccacaggctt gacaggggcg ggttccacag gggcaggaat aactggaggt 840 tgagctgggt cgtgaacgaa gaggtctacc ttgtcacgac gagcgtgacg agcaatgtac 900 acggcgtcaa cgagatcctg atcagtggtg atagaaacgg tatccccctc attgtccaca 960 tagctcaaag cgtagcctgt gttgctaagt acgccatccg cacaactggc cgcaccacca acagetteaa eeteggggee aagttttgea gtaacetgag eeacgagtte ggegatacea 1020 gcagcgggga ggatatttac tctgtgcacc cggccactgg gtgctttgaa cttgaagggg 1080 aacggcgaga gttctccgtg gtggaactca gagtgctcgt ctccgccatg gtgagacgcg 1140 gattcattcg gaagaacgct atcccgtgcg tcgaagctag ctttgggcga ctcgggattg 1200 actattgacc gatgcggttg gtggctctgg cttccagaaa ccatcgaatc ggactcgtgg 1260 tccattgaca gccagaactt gttccaagct ggcccttcat catcttgggt cgacattgag 1320 ttgatctaaa aagcagtttc agtggcagcc ctatagagac atgcgcggag tgtccacata 1380 cctgctctag ggtagcgtat gtaagtttga gcacatctac catgcccaca atctcgcccc 1440 cctcgttcat tacaggcaga ttcaggtagt gcccgtctgc aaatctagtt aactctaatc 1500 ggatctacaa gcaggtggat actgaccatg catcttgcgg agcgcagctt gaatactcat 1560 atcgcttgga gcaaaatcgg gatggggggt catgacccta acgacactac aggttgcagg 1620 atcaaggccc ggggcgatta cacggaggac gatatccttg ctggtaaaaa tacctgtgat 1680 ggateettga tettgeacga geagageagt egtgtgatgt teetteatea atgeggeage 1740 tettteacag tggteeggae ggaaactgtg gtgggeggea tacegtetag taeggatteg 1800 agtgtaggac cagacatett tgaacgaagg geeteaaeat attggataat etgttggggt 1860 tggctagagc caagttetga etggacaeee teeagegeat egtaaagett gegggaggag 1920 ctgtaggcgc gttccagttt ctccatagcg tcgtagaagc acttggtgat atccaggaca 1980 ccagaaatat cctggttttc gtccatgaca ggtaaatgcc ggaatccttt ccgaaccatc 2040
aaatcgaggg catctgtagc gctagtatcc gtcctcgcac atagtgggtt cttcgtcatg 2100
atctcagaga ccgtgatatc tcgagccttg agaccagctc ctactaccct aaatgcaagg 2160
tccttggcgg taaaga 2176

<210> 2282 <211> 3722

<212> DNA

<213> Aspergillus nidulans

<400> 2282

ggaaaaccaa tctcaaacca cagctccaac ttcggaaacc aagtcagaac aagaacaaca 60 agaacaaagc cagaaaccca agcacgcctt cctcccttaa accaccccaa cagctacctt 120 ctcccttttc ctcaaagaag acttccgcgg ccacttttgc cgctgcccga cctgctatcc 180 caaccttgca ccacatccgc aactccgcga agaagaagaa acatacgagc cccctctctc tgaagatggc gacggcgaca gaagtacagg tacaggtagc cttcttgacc gtggggaagc 300 ggcgctcagc aatattgacc gcgtgcgtgc catagagggg gcaatggtct ataatcacct 360 gcgcgaaaag gtgaaggagt ttctgaagcc gtttgcggag agcgggacgg ctgttggcgc 420 tgatgatatc aaagcttatt ttgagaagct gaggggtgac gagcagcaaa tcaaggatgc 480 tgcggcggcg ggaaaggcct ctgcagatgg gggagggaat gaagacgata aagacgaaag 540 tggggatggg gttgggagac gagaacagag tggtatgtag cccaagtggt agattgcatg 600 gggggacctg cgcttctgtg ttctttgttt cgctgatata taacaggtta ctgagtactc 660 tcatgtgctg aagggatatt tactgattaa tgggctgatg ttatgactta aaatttggga 720 aggcgtttag gagctcttga acccaaatgc gagatacaca ccaaataata atccatcttt 780 gagaacccgt tgacaccaac aatgacaccg gatcatgagg agttcgagaa cgagagagcc 840 tgataataga tatctgcaat actagggaga atcttacatg gtcggcctaa gatcatcaga 900 agtgcacagg caggtcggac tgaaagcggg tgaaggtgat tatagaagcc tatgtactcg 960 gatggcccga agtgcacaag gctgggcatg tttcgcctct gagctcgtta ggcgatgggt 1020 cagtctatgc tgtgcttctt atagctgtaa ttattagaga ggtgtagcgc tagcagatag 1080 gageteetea eeacagtgga tgeagegaae gegaatgtet ggetggetga agttggeege 1140

ggacaaatgt aaaagctgtt cattggccat aatcgtaaga tatcttggag tatcactggc 1200 tgaatcaatt cgagtcgacc ggaaggctca acgaacaagt accaggtagg cgttacgaga 1260 ttagggagac caatagcttt tgaccatgtg tgtagaagag tgatgagtgg aaaaagaaaa 1320 aatgagacca tgtaaagaat gttgtattgg gatccacgat ctatgataga taggcaagtc 1380 caaaqaacaq tatacqccaq aaaacccqqt ttgcaactcc accgaacgcc ggtgacctct 1440 agatcaatat aaaaaaataa aaataaaata aaatttacgg gctctgttag tgtcactcct 1500 teattegett tgeegeaegg eteateaage tategteagg tageeeacte egtttagtte 1560 ccggaagact cccactgcgg atatcattgt cgtcgtgggt aatgcgccgg tgggggtatt 1620 tgccctcgaa tccctcaaag caattggccg agatcggccc gccattcttg aaatatggat 1680 gttccagggc ttcctttgct gttatccgtg aggttggatc gtaatccagc aatcgggaaa 1740 ggaggtcgaa gccgtcatcg ccaggggtgc caacgctgga gttgacagag tacccgccgt 1800 ttttcaagca attctggtac cagcttccaa gattcgaggt tcggctaata tggtttgggg 1860 cgcgggacat tgccagagat tgaagctgag aatattctgg catgtggacg atgccaggcc 1920 agttatetet gtgaggtage eccattatat egataatttt cateatttgg ttgegetgaa 1980 acggaactgt cttcttgctg tccatcttgg cttcttcacc tttgaatatt ggacgaagcg 2040 agagcaattc cgcgaatatg caaccaacag cccatagatc cacagcaggg gtgtaatgcc 2100 gactgcccat gagaagttct ggggcacgat accaaatggt aacgacgacc ttatcgccgg 2160 aaaagagcga attgagaggc ttgtagaaaa gacgcgcgag gcctaggtct cctatgcgaa 2220 ttgcgccact ggacgttacc agaatatttg ctggtttcag gtctcgatgc aaaacccagt 2280 tcgtgtgcag gtatagtaag ccgttaagaa gctggaaaag aattgatctt accatcgctg 2340 cggggattgg gtgtctctgg ggctgagtat ggtgatgaat gatctgaagt aaatcatgct 2400ctgtgtactc gaagaccata aagatgcact tgtcttctaa gatgatctcg gcgagctgca 2460 ctacgttggc atggtcaagt tcggaacaaa gcgccatttc tcggatagca gactgcgaga 2520 ggccagtata ctgaatgata tcaccttctt tatcgggttt gaatctattg aatgtcagtg 2580 acaatataag actctaaccg ggattctgac ttcttgatgg caaattcccc accctggcca 2640 tttcggccaa cagctttgta tactcgacca taagtaccac tgctgataaa gccgacgatg 2700 tggtatttgt cccgaacacg gaccttgctg gtatatccag ttccaggttg tctcctcgag 2760 ttttcttcgc acgggcgaca agtcagcatc acagggtcag caattcgcga acaacacaaa 2820 cgattatgtt caaaaagaat ataagtgaaa aacaaaagcc gaactggaac ctaaaagcga 2880 acgaacaaga aacaacaatg ttggagccct ctcaagctaa gcagctacga gggtttaagg 2940 gaaagccatt accacgtgaa taaaacccgc cgacagagtt gaagtacggg aaattccttc 3000 caagcatgat gaaagagaaa tacaggaagt tgcaatcgaa aaaaccgccg ttaagcgtta 3060 tgagtccgta gaggatagaa ataacagatc ggtccccttc agtcagtgta catgctgata 3120 cacgcaacca gataagcaac gtggcaatag agggtcgttt aaaaagagtc aaaaggggca 3180 gaaatatcga ttagagtaga ctaatcggta ttaccctcaa cagctttcct gcagacctat 3240 ttttgaagac agactctttc tttctgtgtc tcctgccggc ctggtggttg cattcagtgt 3300 acccgtttat ttaagttttt tacttaagat ttaattatta ataaactctt atgttcacat 3360 ataattttct atttattata agtcatcttt actattctct tattcttcta tctcaatctt 3420 tttactattt caccattttc ttttttcctt cattttttta tctcttttat tttctttatt 3480 tttttttctt tcatctaatt attatctact tctataaata attattttct cctttttctc 3540 ttttttatat attaccattt tatttctaat attatatctt atctctttt ctctattact 3600 tattttttat actatcattt tttattttct tctaattatt ccatttctac tttatatctt 3660 cattttcttt cctctatatc atatctattt acattatttt tactctatct tattatatat 3720 3722 tt

<210> 2283 <211> 2467

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2283

cgtccatttc ggacccgaac atggtgcgct ggagtcatgg tttctccgac caaatttgaa 60 ggatgctctc cgctttaact ttggctctgc tggtctcctt ggttttgtcc ctaccatctc 120 gcttccagag ctgatgagct gtttttgcat ctcctacgta cgagagatgg tcggctttcc 180 tagcgcttct acgtcacacc agcggtgaaa ttcgacgtt tcatttttc ttttctaccg 240 gcgtccagcg acaatttgca agaccaacct cagccacgct tccctttttg tacgaccaca 300

ccccaaqctt ttttgcttga gcttctttgc cgacctagca tcgtaattgt cttccagact 360 ttcttccacc cctgatttcc aacggccgca ccgatcgact gtatagcgat ccttctggtc 420 cacttattgt tetteceegt tgtettgeat tttgateece geacagegge ageageaegt 480 540 qcccqtccac cggaatggag tcacgaaata cgatgtgacc acagatccgg cgcaacaccg 600 aaacattcgc aaatttctgt actacgagtg tcaaagctgg gatttctttt cgttgatccc ccqtctqqqq cggtcqatcc gccqttqcqa tgcattcaat actccaaccq cqaqqaatct 660 720 atteggeggt teeteeagat geeegeacaa gaetteaaga taateetaeg ettetagtga gctggtgggc gaaaagcgtt tcgctcgcca tcatcgtcac ccgagtgtgt ggccggtatg 780 ttcgtattga gcgtcttttc cgcgaagaca agattatgat ggcgagcatc attcctttgc tggcgaggat ggcgtttgtg catgttattt tgatatgggg caccaacaac acaaaggtgg atggtttgac agacgaagat attcggcata gggagatcgg aagcaggcta gtccttgcgg cccqcatctt ctatgcgatt ttgtgagact gccctatctt tattttctgg attggctatg 1020 ctgacgcgag cagtatctgg gctgctaagc tcaccgtatg tgaatttctc aaccgaatcg 1080 ctggggtcac atggagaaga tccgtccgaa tatttctcat ctttgtatac tacttcctag 1140 gatcgacctt gctggcggta gtgattgcga cgcttgccga atgccagccg ttcagccata 1200 actggcaagt tgtaccagac ccgggcccca agtgtcgcac aggattcgcc aacgtcatca 1260 ctatgggtgc ctgcgatatc atcaccgatc tacttctcgt cgcatttcct atttttatta 1320 ttttaaggac gagaatgtct ttaaaacgaa aaattgctct cgttatcctg ttcgctctat 1380 ccctgatatt ggtcgctatc accagttacc gggtaccgtc cgtgattcag cacaaaggct 1440 ctcagcagta tcgatccctt ctggcttcat tggagatatt agcagctact gcggtcgcaa 1500 acqttqtcqt cattagctct ttcgtcagag acaagggcgt caagaaagtt aagtacaagg 1560 atattctagg ctctgcctca gtcaacgagg gtctcgacca tagctctact cgccgtacaa 1620 ctatcacgca tcaccaatgg ggcagcgact ccgaccttgc tcgcgatctc ggcattcgcc 1680 tegaceetga cetetaetee caegaceeta tagaacegeg tecageecet atggecaetg 1740 gaggeeteaa teeaaaetgg teetteagee aacgagetat tgaatttgae gaegaeeaat 1800 cctccqqaaa caqcctcqac attaaaqtta gcccgcacqa ataccttcgc tcaaacaaaa 1860 caacccatag cccgcctgaa aactctcccg atcagcctgc aatttttgac gtcggcggcc 1920

teettactea geecteacet tegeceacea geeataacea caatacteaa atacceaace 1980 geectggtgg ceaaageact aatgttacag eegaceeegt eettegagae gtaggaggat 2040 taettgeeaa etetggtgae atategeeat tgaetteace acetteeaa caccatacae 2100 aategteact caacacgeet egteeaggeg gteteegaeg tggeteteaa caaggtegge 2160 gaeacteaag tgteeatte agegatteea atgaeteeee agteegae teaeggaacae teeggaet atagttgaaa atgeggaega gtteegaact eaggatgtag 2280 ggggettget etegaagaga eaggategee egtgatatta ttatgatgta eacgtetgte 2340 tteatggata aatetatggg tggattggte tttatgtgge tatataacet tggttaaaca 2400 gtttggetta gegaeggegt teetggattaa taggttegae ttggatget gtagaacat 2460 ntegatt

<210> 2284 <211> 1499

<212> DNA

<213> Aspergillus nidulans

<400> 2284

60 accatcttca ttgcattccg ccttttgccc gcactttctg ccgtcagata tagcagtaga ctgttgttgc tctgtttcca caggctctta tcgatattgg ctcacgtgag gcggtcgcgt ctcgtcgcgt tcagatatcg aggcgcctgt cgcctacagc ctgccaggca gtcatttcat ggtccaaggc caccagcatg cttggttatt tgcttatatt tcatgcacag tgccgcacaa 240 attgacaacc tatgcttcag cctgcaactt tgcagtttca atcgctcttc ttcaattgtc 300 gatgacccaa tgcccgtttc gcagcaaagc cttattcgct ttacgtgctt gccctaacct 360 ctgcgtcatc cattttcaat acattcagct acgaaacatt gcgtgcactt cagcgcattt 420 gaatagactt gtacctgcgg tattccaacc ttccaatcag ttctcaaaaa tgccagaccc 480 caaggaagga aagcaggcaa ccctggggta cgtcaaagac cggcaatcga ctctcgggta 540 tgtcttacga gactatattc gggcttctta tatccctaat gccgtttaat tgtgcttatt 600 agatatacag gaggtttttt ggatccaata ccaacgcacc gaagaagcag acaatcctta 660 720 gttttggcgg caatcgaagc aagtcaactt ctgcaagtcg gccgaacagg gaaccctctt ccttaaacgg aaataccaaa aatgcatcag ctgttacaag aggcgacgat gtcaatacgg 780

gggacgettt tgaggttaag eetgagatga gagegggtge agateaaaac eegetgaaac 840 gggacaagag egaggacgta agegatageg atgagagega aaaagtacag eecageaaca 900 agagggeggeg aaaateateg ggeaaaacte eggeeaaace geaaattgat tetteteetg 960 aaaageacgaa aggeegaaaa teecaagtea aagageetae accagaaatt gtggtaaaag 1020 eatetggaga ggaaacacca gaggateetg aegttteaga ageggaagaa gaaggaetat 1080 etgetagega agatgaaacg gataagaaa etgaattgaa gaaaaaggag attgaaaaag 1140 tteaageaac tataaagggt agegggaacg ateegtatee tgaetggeag eetggggage 1200 etgtteeata egetgeteta tgeactacat teteteteat egaaatgaca acgaagegac 1260 tteagateet tgeteactge teeetttee teegacaagt eettegtett aeteeteagg 1320 attttettee taeggtacaa ttaatgatea ataagettge egetgaetae getggeateg 1380 agetgggeat tggtgaatee ttgateatga aggeaattgg egaaagtaet ggeegtaget 1440 tggetgetga teaaageaga eeageatgaa ateeggagate tgggeetggt tgeegeaaa 1499

<210> 2285 <211> 2252 <212> DNA

<213> Aspergillus nidulans

<400> 2285

coccaccttg toccattaac cactgtcaga catgtccatt tocacgtcct tttacgtcta 60 gaacaacccc aagcccgagg cccgaattgt gtacaagcta ggaacaggcg atcatcggcg cccgcccccg cgcccccgcg ccggatctgg aaggtaccgt cggcttgcaa tccggcttgc 180 tgtcctggcc cactctgagg tgtggttgac aaggaggagg ccaatctttc ggctgcattg 240 ggatgttttt taacaccgat accettgcct ccactcgtgg aaagagtcgc tcggagaccg 300 tegeegeeca tggaaceagg gtetaggaeg egtggetgaa ateggeagae aaateggttg 360 tggcttcggc attagtacaa ttctttgacc gttcttttgt tcttcatgga accatggttg 420 tagccaactt tgcctttgcc agacccaggc ttctcgcgtg gatggacgac ggaatgcgac 480 gcacaaagac tgagcatagg tggctttctc cacgagcatc caggtactcc cgggtctttc 540 cactatcage teatteetat egecaeggee gaettagaat etecageegg agaaaggeeg 600 aggccccgat tcgacagtct ccgctaccat acatcgacat agtggggtcg tgccctcctc 660 cctatgtatc attgtggcgt caaacgtcag gtacctgcca ggggctctac gcaagactca cgtcggtttg gtcagggtct ggatccatgt ggagttcttt tcctcttcct tttgcagccc 780 agtttgccat cgaaatgccg cacatctcag cggaacggtg gagaaagacc ctatgtcagg ctgggttctc aggtataaat agggctgagg atccggccta gtttcattcc ttctgcatca 900 acattctctt gatcaatttg gtctatcagt cagtcttttg acagtcattc tcttgtcttc 960 ggacacatta cattetettg agtacatact caacceacca cgatetetta tttcaagact 1020 tcgttattgt acttgtcagt cttttttcaa gatgatgttc accaaggctc tcgttgctgc 1080 tactctggcc acceteaceg eggeeeteec ecageeeace gttgteegte gtgagggegg 1140 cgatgccggc gtcaccatcg tcaacaacat ggactccgac gtctacgcgt ggtccgttac 1200 ggacggtgtt agcaaaatgc acaccctcag ctctggaggc ggctcgtaca ccgagaactt 1260 ccaggcgaac cccaacggcg gcggtgtctc gatcaagctg tccacccacc aggaccagac 1320 cgatgtcctg cagttcgagt acaccaagtc cggagagact atcttctggg acatgtcttg 1380 cattgacatg gaccgtgccg cttccacctt caccaagaac ggcttcgatg tctctcccag 1440 ccagacetee ggtgactgee eegetgteaa etgteaegee ggggacaeet ettgegetga 1500 ggcctacctc cagcccaagg acgaccacgc tacccacggc tgccccattg acaccagctt 1560 caccetqact eteggegegt aagettaace catgaegggg ggetgegett tttacttett 1620 acqctctttt gcgcaacttt ttcatgacac acgctcgttt ttattttggc tttcttcatg 1680 atactccgcc acggtttacg ctttacgctt cgacgggttt aggatggggt taaggataac 1740 ggcatggttt gggtctggtt ttgggtaacg gcaaaagtct tgcgcgtgac gcagcttgaa 1800 atagattgtt catgttcata gatcatttgt ctctctttgc ttcgcgggtt gggtatttac 1860 tcctcgctgc aattaaaaat acatgtatct acttcacatg atggagacca cgagttatgt 1920 atagacttct atagacttta tagacattat agaccttcgg aatttctttt cgcagtactc 1980 atccaagaat attcctatat cttccccatc agtgtcacaa tctgtcctca atcgtctccc 2040 ttccttqcca cttacctccc acttttcaaa tcagcctaat tttcttccct cgttccctca 2100 ctaactttag ttctctccta cttttctccc gtacatacgt ccaatttgtg gactttctaa 2160 ctcatcttcc cattccgcat tcatacatca tccttacttc cacactaaaa atcgccttgc 2220 2252 caccataccc caatttttta accgagtcga tc

<210> 2286 <211> 1378 <212> DNA <213> Aspergillus nidulans

<400> 2286

60 ctcattccga gcaatcttcc gcagaccatc taaggtagac gtaaaggtcc tgcgttgggt ttcctccacc gcacactcgg caactgactg ggaggtggcc cccagagcac tcccgctcgg 120 tccaaccata catatttccg agttttgacc tccccagaaa acttctcggc agcaagcagt 180 240 gactccaagg ttgggagggg cattttttag ggtaggcgtc gtgtgtgacg taaatggtga 300 agtgtttttg ataggtgact gagattgtaa tcgaacgcga acgacatcta ggggagtcac 360 tagaaaacgg ttagctcttc tcaaaaaggc atttatcaaa gctgcaggtc aaaaccaagc qtqqttqcct acctaaqagq ccggttagga cactgccaca ggttgcagag accattttct 420 gagtgataga gacttcgcct gccgggctag cctctactgt agaaaccgac cctgtcccag 480 aagtagccgc catgtctgta tcttctgcgg cccaattcca tgtctctgcc gagtggccgt 600 ccaattcaat gctggtcaaa ttgttggagc gatatcggtc ccaggaagta ccttgagtgc 660 ccggagagga cattcattca acgaggtcgt tcagagccgc cgagaatcca aaaggccgag 720 tagaggtact aattcctatc ttaattcatc cagegcattg ggtagttgag gaagtagagg acaatcaqtq agtaaqagac gtagtgatga tgccgcaaga aaagaatgtt ccggctcggt cggtggcggt cgctagccgg agataagcat caacctcgtc gagtcatacc tccatgcttt tagtcactcc tcatacttgc atgttgatcg tctttgcagt tgctgatgat atgatgacat tectgaeete aaeetgatta ettetgetgt etetateatt attiteetet tegaeettet tgctggcgct ggtgctcgcc cacgccccac tgaagctcgc ttatcgaccg gtggacctct 1020 atctagactg cttgccagag cctctatcga gcaaatcaat ggaggacaac gcggaacttg 1080 agtcttttcg tcgccagtgg cgtgaggaag tctcacgaaa aactcaaact actattgcac 1140 ccggtccgtc acggacgact ccgagcagag ctgccatttc tcaaccccga caatttcccc 1200 ctactcgcca tgaagcatca gcgcgcaaag atgacgaaga cgaggaagga ccggcatcat 1260 atagtcagaa cgagataacc caggggcttg atcggttatc actggcaaaa cggagaagaa 1320 gacgtgttcc acgcgcgcaa gccccgggca gaaccttggt cggcttctga gcatttcg 1378 <210> 2287 <211> 2108 <212> DNA <213> Aspergillus nidulans

2287

<400>

tatttcgagt atgtttacta tgtttatgct ttggactctt cgttatatta tatacgttgc 60 cctatcactt aggctgtccc cagcaaagat aggcttgact gaatttcacc cttggcccgt gaataagtga attggtctcg ccgcggccag ttactgtaca gctacacctg cagaatagat 180 catttcaaqc ttcgagactc aaaataactc atctattggt ataataaaat agaataaagt 240 accacattgc ccgctagccc tgagaatttc gattcgtgaa attatggcca tctttacttc 300 tgctcttcgt attgatatac ctggtacgcc atctcagtgg cgtccccctt cgcagcaaca 360 420 gccctgcacg ttaagaacgt actaccgtca atcttctcga cagcccagac ctacactcca tgtcaatcac tgttgccgac aaaacccagc cgcaggcata acgcatgctg ttttggagat agacctactt gctcagccgt ccacccgcca gactcgcaaa caatgtaatc ctgcacgaac 600 ggettetech tegeetette geegeeaghe tean vinangaaa. 660 tat cagettteen of a good getactgacg tetetacttg go ggc ttcaccttac tecegteree etectcaatg eccegtacat aceggetgeg gactgluata gcggctccgg agacagcgtc gacatgctcg tgtgtgctcc aatccactga tcgtgtttgc 840 tcaacaccgg gaaagatccc gcgaagcccc tgttgcatca tgagacgtgt a 900 attat gagettetgt ggtgtgegeg gttttaaggg ttattgtgee syas getttgegte ggageeagee aatecettge tgtgttaage tegteaggat tecaaggeet acttcaataq qtqctggcga ggaagacata ccagtttcag agcaccgtct atattggtgg 1020 atttagattt gtcctgcagt tgcattcatg tcaggtacag agcgacccag aggcctagag 1080 gatcgagaat gcactcacga tggcccagtc accggtcaag ctccggatgc tcacttctgc 1140 tgcggacata tcttgtgcgt ttctatggct caatgacttt gaatatcgaa atgagttgga 1200 caggtctggt cggatcacgt cgcgatttta taacctgatc cacggcatat gctgtgactg 1260 ccgaggcgtc gtctgaaaca atcggcgatc tgccgaaatt ttggacccat tctgagtgtt 1320 tcgagagttt taaaattgct atgaatctgg ttgtcagcgt cgaactccca aatgtttcag 1380 gatttgaact tagtctacaa ttagatcacg cggctggaaa ttagggctgc ttgattgtcg 1440
atccttgatt tttggaactt ggagatgaca tagtaaattc tctagaatct atctaagaaa 1500
gtcagaacca tagcaatgaa aactaagaaa taagaataaa aatgaatcat aaatgtattt 1560
gactcagact tagaaccata cgtcctatct tgcctgtttc agccaagctg tagcgtatag 1620
cctcaggtca ccacctcggt atactcgcat caaacttcgg ctcaaaccgc ctcatatagg 1680
aggtatcatc tcgttcccga atgccacact ccagatactg ccgatgcaat ctccacaact 1740
gccctcgatc aagctcaatg cccaaccccg gtgcccgcgg cacttcaatg cccccgttca 1800
cccacctcag cgcctttcc ggatcgacga tgacgtcgtc ggccaagtgt gtcattgctg 1920
ccagactgat ccctagatgg ctgttgctg gcatggacag tctcatcccc caaatcgtgc 1980
agatagatgc cagggtttgc gacttgcgca gcccacccca gaaatggtgg tcagacagga 2040
tcacttgtac agctttttgc agtatcgatg gggggaggtg gtcaaaggca acgacagca 2100
tgttagtc

<210> 2288 <211> 950 <212> DNA

<213> Aspergillus nidulans

<400> 2288

cgtgcttatg caactccttt gccttgcgct tcgtcggcac taggaaatcg ggtagctttt 60 120 gcagcaatgg aaaaaagtcc aagaaggccg ccgcaccggc ctggttgatc tccgcaaact cggagaagcc gtcgaagagc tgcttcatct ttggatcttc ataggtagga gtacgccacc 180 cgaagaccat ggttgttgtc agcgcattgg agtaccgtcg gatatgcttg agaaagtcat ctggctcggt gaggaattgg tagagcatct gtttattctc gagcatttga taaggaatgt 300 360 agttgcggct tgttgacaca ttaaggagcc cgtgaaccat tttgcgcatg attcgccagg ttggtccata accctgaaat caccttgtta gcaggcccta attgtaaagt gaccaattga 420 gacaatacca tcataagcat ccgcagccct ccgctgcaca gctgctgccc agtatacatc 540 tcctgtctgt gcgagtagat tccactccgt cggtcgagga gctctttgac tgcctcatcg 600 ctggagagga tgatcaggca ttgtgtgccc agcataagac tgtatatcgg cccgtactcc

ttagccatt ttgcgaattg tagatggcg tcgcgggagg gcatctgttc gcagtgcttg 660
ttagccagca agcctatatg atttgaccgg catgctatgc ctgccgtgtt gctgaaatga 720
ggctatccga cctgatggat gttgcccagc agagggagcg ttggagggcc cggtgggtag 780
tttttgggcc gacggccgat gagggagagc cggaagatga gagccaggag gccggcgata 840
gccaggattg gtgtcaatgg gagcatcgtg agagccgcat gtatcgggca aaggagtata 900
gaaaagagag atgaatatat gaactcgtga gggaggagta gagtgggtga 950

<210> 2289 <211> 2599

<212> DNA

<213> Aspergillus nidulans

<400> 2289

ggtggagttt tcttaccttg ggatcttatc gataagatta ggtatttacc ttccccacca 60 agctgaggcg cacgcgcgat tttgatcttt tagcactcaa ctcgcatcac ttgtttgctc 120 ttcatctctt gagctcttag ttaagataca ttccatgata ctgaaatatg cagggtaaca 180 acagatccaa aaaaaatata ctcggatagg cactgcctac agctgcagat gcaagatcgg 240 300 cagaacgttc attqctctcg catccaccaa ttccccggga tattctcagt gcacctgccg atactttgct tcatgagacc gcttggatta ctccctggtc taggaggact tccattattg 360 aagacgcaca tggcgaccgt ggattacctg gttgtttcct ggcgggaagc taaccgaccc 480 gcaaagctaa ccggatgtaa ccgcagtgtc aaaaaaggag aacgaatgca gttacaatcg 540 agcagacatc gagggctttc tactatgact taaagcgaaa ggaaacacct tgctgaccac acagetgget geeetgtget atggacettg atgetagtge egetattgee gteeetegta 600 ttcccgcagc cacataatgc tcgtcgacat ccgcatttag aagcttcatc tgtcgaaaaa 660 ataatgagta agaggaccct ggccttgaca gaggcttcaa ggaacatggc aaagggcatt 720 tattgtgata tgctgcgcgg gattttgggt ttggccctgc tgctacccag cgtaggagtc 780 840 aatatagggc catggggtaa gtcccttcgc gatatctctt tcacaaaatg ggctgaattt cccaattgcc ttcaaaagaa tcattgacca attcaaggca aaagcactga atggttcatt 900 gatcacacga ccagaagttg caagtcaata tgcgcaccag agagtaatga atactgttga gcccaggaaa atattgggca catgaaaaag agcggtgagt gcagcccagg tctagtgttc 1020 cctcgaaaat gcttaggtta gggccgttag gatagggttg gcaaagttaa caaaatggag 1080 aggatacgtt gcagttattc tttacaacta ttctgctacg cacgatcttt gatagtcaac 1140 cttcatttag gtttattctt gatagtgttg cctcattatc ggtgacctgg cagttaggtg 1200 atgcatgaaa ctaatagcca gatataatgg cacatgctcg gcgacagctt actcactcgt 1260 tgaatgttac gtcgactaca tctttgattc taatgatttt cttacaacgt tgagaataaa 1320 aacaaattgt aagttgatgg catatctcat ttcaagtctc gcttttaggt agacggatca 1380 acatgggtag actacaccga cagacatgga ccaaaactcc gcaactccaa actctaagga 1440 acgatcaaac gccagtgtgc taagtttcag accctaaagt gggacaatgt ggagcgggaa 1500 acaaaaaaaa aaacagatca cgccgcatcc gctgtgggaa tgggttctgg gatcttggtt 1560 ggctgctcgc cggcacggat gacgcgctgg ccagagccat cacgcacgta ctccacgttc 1620 teettetggg caegetteca gatttegaet teacageege egeggataae accaacaege 1680 atggtagaga ggaggttgtg tgcggcgttg gagtggtagt agacaccacc gttgaacatg 1740 gcggtggcgt ccttcccaat accggagctg atcatggcct tgccaccggg gtggtctttg 1800 atgaagtccg tgacatcgtg gacaacaccg gcaatagcca cgagaccgcg gccgttctta 1860 gcctgctcga cgtagtcgtc ccactccatg acggggagct ggtcaagagg agtaccccaa 1920 tcgagagtgg cacgcttacg gtcaagcttc ttctggagct gctggacacg acccttctca 1980 atctcgttgg cacggaactt cttcaggtcg taggcaagac caagctgcct tccaggccca 2040 gatggaccac ttggtgggat catactggtg ccattcgatg gcgttacggt agtccgaggg 2100 gaactcgtgg tggaagttgt ggtagccctc tccaagggtg acgagagcgg tgataacgtg 2160 gtcacgaggt gagttgcggt catcgaaggg ctggtcaccg agccagtggg ccaaagagtt 2220 gacgcagaaa gtcgcctgct ggacgaagaa gatacgcaga atgccggcat acacgaagcc 2280 gcccaaccag tcaccccatc caagaccagc aacaagcata gcacagccaa tcccatcgtg 2340 aaaacgacct tgaggtagtt gcggtgctgc cagacaacga cggggtcctc gttcaggtcg 2400 gaaatatcgg tacggccaat acgcttaggg ttctgcttca tcaccatcca gccaaggtga 2460 gagtagagca gaccettgcg aacggagtac gggtetttgt eggtateggt gtageggtgg 2520 tgagcgcggt ggtcacgagc ccaccagcgg atagaacctt cgacggcacc accaccaacg 2580 2599 gcagcgagcc agatacgca

<210> 2290 <211> 1310 <212> DNA <213> Aspergillus nidulans

<400> 2290

60 ctgggcgttc gtgtacccat gtcgttgagg acggccacgg tgaaggaccg cttgtcgccg 120 tgqqcqcqcq ccqtcqtgaa qctgaggatg tcggattcag tcgtcccgtt ggcagcggga 180 atcoggtaat aataggtggt ctcgggcttc aaatggggaa ggctgacttc gtgaaagaac 240 tggctgcatt gggtcacggc tttgacttgg gcgcaggagg gggtgcggtc gtagctttcc aaccaacgtt agttcacctg tccagtaagg gcacacagat agacggagaa tcgaaacata 300 cgtatgtgac cagccatggg ccaccttgtt caaattcgct ggactggttc cccagcgaac 360 420 qqacqqqqcc tcgcccagcc caaaaggcgt ctggtagtgg atgtgcatgc cgtcggggag qtaqqaqaqc qaaatgacat tgacattgtt ttttggatgc gcagatctcg gcttcacggc 480 tggagcttct accagacgag ggaatccttt gccattgcca ttgatggttg gattgaccca gtcgccaatt gggacatcag ggccgttgta ggggtaggtc gtgtcgaccg ttggacgagc 600 660 ctcgaccgta gcgaggcga ggagcacggc tacgagcttc atcttggctg ccagccatgc attcatgatc atcgcgcatg cacggtacct ggcagggcgt ggagaagggc tttatggccc 720 780 tcqccccagg cttatcgccg atcgtcccgc gaagagatag tgaggttgta tcggctgctg 840 aacgaagcaa tgctgattgg ctgtgtggtg gatccagggg gagactgtta aaattgttta tttagcccgt cgaattagga cctgcctaac tcgccttaaa gcagtctata aagagtctaa 900 gagggttacg agtcggaggt ctccgtatgt acagacacca gtctctccat ccactctcgc cacqcctqat cccqtccaat ctcattctcc ccaggcagct ctatggtctc ttgcgggatc 1020 tcatagaatt catggctctg gcacgctctg gcggggcctt ctccttgcaa agaacggtct 1080 ctacagetee ageacagetg egécetagea caegetagge atacaaacea agaceegece 1140 tegacaegat ettgacaece egtacaaace ggtttegeat geteetegat ttgegtteec 1200 atctcaccat catacgcgta caaaagacgc gctgcgtctc cttctcctag gtagaccagt 1260 1310 qctctqqcqa cqatacacqa qtcaaacccg tggctgtggc gcggccgttc

<210> 2291

<211> 2598
<212> DNA
<213> Aspergillus nidulans

<223> unsure at all n locations
<400> 2291

tgtgagtaag ttgacctagg agaagaatta aaataaaggt cgttgaaagt ttatttcaaa 60 ttcgatacct cggaaaaata agggaggaaa gttaattaaa acatatccat gaattacttt 120 gagaagggtg gggcgatctt cacaaaagac tttccgtaca agttattctc gtgtcacgca 180 240 gaacttatcc aaaatgtttg gaaaccgggg gcttgattgc tacggactca aagcacaaca 300 tttttcggtc tagccttcat ctagttaagc tcaagcggtc ctcgctaccg gtcttctcaa 360 gttggaccct ctctgggggg atatggccag ttgtaccggg ttgaggcgaa ccgttgccgc 420 aggctgtcgt ttagcttttc gtgtcgggca tctttgttcg ctcgaatgac tttgcgctaa 480 qcctqqtttc qqqccagggc tgtccggcgt acgactttct gcattctgag gatggcccgg 540 tctqqcaatq qcqaqcqtgt ggtgcggatt gcggaccctt cgagtgtttg cgtcggggag 600 660 ggaaatttgc ggacgtaggt cacgtgccaa tttagtgagt gactcgactt caaagagagc 720 agtcggtcca tgcctatacg gcggattacc gctactttaa tagtataaaa aatatccttc 780 tctctataat caattatgct attctaagcg atgctgataa gcgtattgca gaagctgcga cacgggtttc tggcaaaaga acataattga tttgggatcg aacagcccag taacagtaaa 840 tagttccatg cattctcttt aaccaagaat aattaaggca aaggaaaaag gcgaatagac 900 tttggcgggg aatccgaaag gcacaggaat cttctatcag atcacgaaat tccaacttgc 960 ttgatcaaac cctccagctc gaactgctga agcgaagaca ccgtcggtct acactatccc 1020 tactaggtag tggtgcagac ctgctgtcag tgaacagagc gtctctttgc cggagggaat 1080 cqaqctqcct cqqqqqcqct atggagaacg gttcaagaga aaacgaaaag cccacaaggt 1140 tatgacaacg cctccctaga aaaagaagtc tgcaaaagaa gaaagtcgac caactgcaca 1200 gccagataat tccatgaagc tcatgtgccc agtgcttgaa tattaaccac actcgcatca 1260 ggcaccctcc ggcactttca ccaaaccaaa tccatctccc cttgtaagat aagaaaaaca 1320 taaacageca aatattegag aegettatee gttegtataa teteegeatg aaaagaeett 1380 ttgcgaaggc gaggggaata gactaattta caggatgctg cacttcttct tgctcttgtg 1440 ggtcttggtc aagagggcag cacgcgtggc agcctcaaag acctcacgga caccctcgtt 1500 ggttcgagca gagcactcga ggtacttgta ggcgccaatc ttcttgcgga cttcctcacc 1560 ctacagaata tgtcagttgt gttccaaaca atcacatttt ccctcgagat cttacctgtt 1620 cgggggtgac aggcttctga gaggtcttgt tcagctcctc gatcgtcttg gggtcatggc 1680 gaagateett ettgeateeg acgaggatga tgggggagaee etggeagaag tgtaggaett 1740 cagagatcca cttgttcaag ggtcagcata gtgtccgcga gtattatttt atttataaga 1800 taaaaaaagc tcaccttctc ttgaacgttg tcaagggaat ccggtgagtc gacagcgaac 1860 gaaatcagga tgacatgcga gtcagggtag gagagagggc ggagacggtc gtaatcttct 1920 tgaccagccg tatcccagag agcgagctcg acgtgcttgc catcaacctc aacatcggca 1980 acgtagttct caaagacggt ggggacgtag acctgagagg atcgccgtta gtttgcgtaa 2040 aagagaacac ccaggtcata gacagagttc gacggcgctg ggcggcacga actgaatgtg 2100 gaagctaacc tcagggaaag tgccctttga gaagacgctg cacgggaaga atagagtaag 2160 taaatgatgc tgaaaggata cttcagatga cctggaggaa gacttacatc aacagacagg 2220 tettacegea ggeaceatea ceaacgataa caagettgeg geggatetea geeatettgg 2280 tagaaaaatc agctagccga tcgaaatgaa aattgtttga gacccaaaga gaatgaagtc 2340 aaaagcaaaa gggaagaaat aacaatctcg tgtgcagtgg aagggcggtt gttgaaagtg 2400 gatggttgag aaaggaaagg gacaagtcag acgcccgagg gaaaagggtc accacgtacg 2460 gtgtagaaac tgggcgcaca gccangatta aaatagaaga gttggggaga cagacggttc 2520 agagagtgaa ataaaagtct agcgagtaga cagggtcaaa agcgaagtta agcaggtgga 2580 2598 agcccagggg aaggaaga

<210> 2292 <211> 2329

<212> DNA <213> Aspergillus nidulans

<400> 2292

acacccagac tggcatgttt atggccaatg cgcgagactg cagtagcaag agcctcgggg 60
tgatcaatgt tactagcata ggcccagaca gcatgagcaa gagcggcagg ctgcacgccg 120
gtcgcttggt gcgaggagtt gaagatatta ttcagctcag ggtgcctctc cagcatctct 180

ttgtagaaga gagtcgttat cgtgacgccg tgctgttcga gcgctgggat tgttgccttg acaatctgct tttgctgggg ggtgagagca ctggtcgcat acgatgcgcg ttgacgcacc 300 agacgcagtg caccgcgtcg caacacattc ttcagcattt tgaactgtct aattatgaag 360 aagtgcaaaa aaccgtattg tctcaagaga caaggagcag cgggtgaggc gtcttatgaa 420 gtcatagctg cgtcttgcgt aatcccccag agctgtaact gattccgcca gtcacctggc 480 540 caggcaagcg atttaccgat attatagttt tctactagta atgaaggctt ccaaaatccg 600 ctaaatgtta ttttctattc gctttacttg tgcgatccgg cgccagcaaa acagcctaac 660 atatctactc ctcctactat aggtagttca gaaaatagta tagaataggc actctagtac tacctttact tctttcagga taaccctcat cagtattaag tgtcgcgaat ggaatggccg 720 ggcaccaata ttgcgtagag acctttgatc ctggcaaaat aagtagggtg gttctcgtgc 780 caactatqtc tcctcccact catgctcagc agatgcatgc gtcctgtgta gctgcaagtc 840 gacgattaat cagcggaget gggetgteta ceetteagte tetactacag actegteagg 900 caqqttqaqt cctaaaatgc tccgattgtt aatgtgacca atcatctccc ggatgcactg actatatttg ctgcctggtt ttcaatactc taaagatagt cactttgtct tttaatgctt 1020 ccccgaactc tttctatttc gttgatcagc agcacagaac gcgcttgtag tcaaaggaat 1080 atttctccaa atccaccata atatttggta gtctatttaa ctgggcagcg atatcaggtg 1140 agccctgtta gctgcgtcta taatgtcaag acagcagcaa acgcccgaaa ctgcataatc 1200 tcttgggctg tcctatactc tcgcttgcca ctgattaaga cgtgatctgt tcctgtcaat 1260 cgcttttctg aagtcacagt ctgaagaatt cttctaagat gtttaggaag tttactgtaa 1320 atgatcgacc ttgtcatttg tacactgtga atgattctgc tggttctgtg caagcaccaa 1380 aatggcatta cttatcgtca gttctgtaag gctcatgcct atgcttttgt agacaataag 1440 ccttgttaga taaaccactg tgtctgctta atctgccggt cattgacaaa tccaatcttc 1500 cagttcatca gggcaagtat ctggtcgagc tcaaccatgt tttcggcctt gagcttgctc 1560 tgaaccgcct ctcctgaatt ttgaagagcg tagtggcggt cgtcaaccag caccacccc 1620 gtgtcctcgc cgctgatcgg gttgtagcca ccatcggcag cgataatatg atgcagtatt 1680 ttgggatcca gctcgatcat gttcgattgc caggagccga aggcctagat gaaaggtaga 1740 cggccgttat tcctccgctc agtcaagtag ctggcgggga aaagtggttc tcgggaaggg 1800 gtggtgcaga agacgcaatc agttgcgctg aggagggttt taatctgttc ctggtaatct 1860
aacgcaggtg tcgataaagc gaaaagagca gtcagatttc cagcgggcta cgtttctctg 1920
gacaccgttc caatgagtgc atccacccgg tcccgagaag gattcgcaaa ggtaatggtt 1980
ctgacctcag agcctcttaa ggtcaggata aggcggtgt gcctcagggc ctgcatgcca 2040
gcaccaaaaa tgacaatatt ttcaacattg actctccaag tgaaaggcac catggcattc 2100
atggaagttc ggtagccagt cacttcttcg gaatctaata tgcccgtgag atggccctat 2160
ccgatcatca ggattaggat tccaagcaat ggatccttct tgccgtcggg tctaaggaa 2220
ggctcgacaa ggagcttgac accgacgctc gagtctaaag taaagggcct gaaaagagtg 2280
cgttgtccag ttgggcgagt aatggcacta ggatcgagct ggtacagac 2329

<210> 2293 <211> 2935 <212> DNA

ZIZ> DNA

<213> Aspergillus nidulans

<400> 2293

60 cagacccacc ggacaatatg tgtcgttgat agacagaatt aacgtacggt caccgatgtt atcggtggcc aacaacacaa acagtatcat ggccctgaac atcagacagg tcaggtcgat 120 gggtgataat acgtacttca gctctcagag tctgggacta cgagctagag cgacaggtta 180 240 agtggccgat ggaaaggtgg cggaatgttc gacaacgtca aggtaccgac atatcgtcca 300 qqctccaqcq catttagtac ttgcagggtg gagcaatgat ggcacggcaa tgcaagtagc 360 aataaggatg cgcgtataca catatattat tgtcaagata agatccggcg atccctgttc qacatcaaqq taaccatcac aaatctgcta ccttcaaacg acatcggcag tttaggaagg 420 gcgcaaggta ggttgaccgt ttggcaggct gctgctattg ccgagctgtc ccttgagatg 480 540 acaccgcaag accgtttatc agtgtctacc accgcccagt cttcacagcc tcaaaagtgg 600 acqctcttcq ttgttcgaac ctccgtgcgt ttctcctagt acagctgtca taaatcaaag ctcagcttag atacgtgcca gggttggagc atctggtgcc aagcttgggc catgggcacc 660 720 ctaaacggta gggcagacgg gctgtcagat tgcgttcttg cctactccag atttcgttgg 780 tcatcaacat ccaagcatca ccgagagtcc gacatcgtca gtttgacggt gagaacgtcg attccgcagc cgcttgaccg ctccttttct tgaagttccc atgacattca gaaggataga 840

ttcccgacga cattctgagc atttgttatt ggatctgagc gcaactcgag cgacagtgac agtcatgtgt gaggagataa gaaattattg atgaaaatcg gcccacgatc taccagttag tgttcagatc agagtttcag attccttacc gctccggttt ggtcacttgt catggacaat 1020 tggccccgtt tctcgctgtc ctgtcggccg ctccgcgcgc accgcctcag ctgcgaatcc 1080 actgccacag cccagtactg ccacagtctt gaaacaacac ggtgtccgcc ttgctggata 1140 ccttctccac tgtgcgttgt gggctcgtaa ctcgtaaggc tgtttgctgt aaggagaagt 1200 cggagattta ggaaaccgtg gcccatggaa agggggtccc ggaactgctg gatatcttta 1260 ctggtggctt tttatcactt ctctctttgt actctaatat agaatcagtc gacaagttcg 1320 aagttcgaca agctcagtaa tacgtgccgc ttgagccaat tgaccgctaa ggaatgcaga 1380 tatggagaaa ggttaccgct ggcctttgga tcgccaaact ccccttttgc ccggctcagc 1440 tttgttctcc tgatgatttc agataaccca gaccaatagc tgacaaaatg tgtgaggggc 1500 tatttcctgc tccgtcctga atggtctata tccttagcca accgtcgaca agacagcgca 1560 tcatcgatgt caggtgacgt atttctaaga attcatccga catcatcctg gatccatgcc 1620 acctccggca atgtggtttg agaatgtcct tcactggtcg cagcacctcg gtatttaaaa 1680 gcatttgggt tgccatggcc gatggctttg tgagtcacta ttgaccaaat aacggaactg 1740 aaatcagaca atacaacctt gctgcatccc gtaagatagc cccatagcga atccacatag 1800 ttaaactaac cccagagaac catgatgttg gtgcgtagaa gattctgtaa catgaataaa 1860 ttcttgtcac agaaaaactt gtcattattc gctacagtgt gcatccttca ttcttaccat 1920 atgtcatgca ttttctcctt tagcagacaa agatgcgcat ccatatgttc ccattagata 1980 qcttqtcatt qqaaqaatqq aaqqagtqag ttttggcttt cgggttgatt atgatgaaca 2040 aaaqattttc tgtggggtat tttccttgtg tcccttgact ctaccgtgtg gagtaggtag 2100 ctcagggact cgggatgcga aatgtaaatc ttatcaacaa aaggtaaaga gtgctgatat 2160 cqtccctcct aacaacctqa aacqcattcc acagtgttga ttcagcgtat tgctggcgga 2220 ataqtcaqcc ctqtacqata tacatqtttc atgacqaacq atgcqattat caggqaatag 2280 acacattega gegaatgttt gettetetag tgagegtgge aeggteaate tttaegtaga 2340 gttgggtcag tcgtggccag tcacaatgca taggcattga aacggtgagc aagaaactcc 2400 catgaagtgt ctgattagtc cgtcttgctt ttgggccgcc atttctggca cagtaaaatg 2460

tgctgctact tgctatcgcc ctcgtaagcc tcactacgaa gacaccttgt gataatgacc 2520 cggtttagta tttaactaga ccgtaattca atggataaag gcagacccca tacatgccga 2580 cctaaaccat catcccttc tcagcctaac atcgcgaagt acggggtata taggcgccta 2640 ccacccttca ctctccggcc tttcccctcg ctaccatatt tcccatcact cctctccttt 2700 cagactttct ctgtaaacca aagaaagacc cggacaaagg cccactcggt gtgatcgaat 2760 ctactctcga gtctggcact tcttctgacg ccactaccgc tgagcgacca tccctaaggt 2820 cttgagacta tatcacaatt gcttaagact cggcacactc tggagtatat ccggagacag 2880 tataactaac ttcgcagcag ctgtttttt ccttttgctt ttttcctttt gatgg 2935

<210> 2294 <211> 2328

<212> DNA

<213> Aspergillus nidulans

<400> 2294

gaaagtgaag agattgtaat agtaggacaa aaagggaaga gaaaaggtaa aatagcaatt 60 120 aaaactagaa agtgttagag aggaaggagt aaacgcatat aacagagaaa tcggtgtaga 180 acaaqataaq qtaqqqtaca aaattqtgaa taccccaaag aacttggacc aagagccgtg 240 300 qaataaaqaa ccctctaatt aaagggggtt aacgccccaa aagttaatag gcttgataga aataacattt tgtccaagaa aaacgaggtt ttcacccatt gtcttcacaa tgctcctccc 360 cgagtaatca cccaccgtgg acaaagtcaa ggcgcaaata aagaattgct aacgtgactt 420 tccctcccag gcgttaaaaa ggccctggac tgaccaacaa gttagtttct gggcacgttg 480 ttttattaaa aattgcgaaa aattacaaag gccggccgaa gaagtcgcaa aatgatggaa 540 600 acaatgetee tacateeteg gacegeeete cetecaaacg cetatttgtt ggtaacetea gtttcgacac gactaaagag tttcttgagg agcacttttc gcaatgtgga accgtgacca 660 720 acgtecatgt cgctactttt caagattccg ggaaatgcaa aggttatgct tgggtggagt 780 ttgaggactt ggaagcggct aaaacggcag agagagggta taaatatatc actgaagaca acgaggatga agacgattcg gctcaaaaac cgcagcggag aaaaatatgg ctgaaccaag 840 900 ttctgggccg gcgcatgaga ctcgagttcg ctgaagacgc aacgactcgc tataacaaac

ggttcggtaa gaacggggag gggaaaaagg gagctacagg caacgacggg gatgcagagc 960 ccggtgattt cgaggaggtc gcggctgaaa agcctcaaca gaagaaggcc aagaacgcaa 1020 agccggatta tacccgctac gacgagtcca ccgtgcagaa gctgagcggc gctattgttg 1080 agggtcaggg caggaagaca acgtttgact gaagtcggaa caataaagag tcccctttca 1140 atgatatgag aagatatata ctgggtctac tcctgttcca atgtcgctgt ttggaaatgg 1200 atcgtgtaag gacgagagcg atatttgcta tctaatcctg caggagaagg gcagcgtctg 1260 gtaatttgac gtggcacgag atagacgtga gatcactgat acccaaggaa tggatttact 1320 caacgcagtg ttaatcatct tacccgttat aatctcggat catccccaat cacgccactt 1380 tttgttccgt agaaatatag agtaaccagg catatcagaa acgccccgcg gcctgaataa 1440 gcagcagtct ggacgctcga cagccgtcag ttcgtggcat ggaatcgagg aacaagtagg 1500 ctccggtggt tccagggaaa caatcataga tacccggcag ctttggggga tggaatgatg 1560 ccgtcgaccc ctcaacaaca acagtccata cttttacctt tctttctaaa atctgtaacc 1620 cgggctctta cagagttgtg ctcggtgtgg ttctagaatc gctgagtggt tcaggcggcg 1680 ctaaccctgg ttgggatgat tgacatctcc ttcgatgtca tgtctcaacg tcgaaaccat 1740 caaatcttct cgactgtccc tttagagggt tgatttctct tttcttctcc gctcttcttc 1800 ttatagggtg cattatacca ttcagttttg ttttatatac tcccctttcc tttcttggtg 1860 tegeogette etttetgeg tggagtetgt catecegeet tgetetttea accegeetgt 1920 ctctccgctg ctggtcggtg cacccattcc tgcattctcc tttgcaacgc cctgccgtac 1980 ttatttatcg acgaacaata tcgcttatat aataacgaca ctcattaagt tcattccgaa 2040 atggcacctc atcgtcgcaa tataggtgcg agtcgccgaa aaagacggga ggacgaaggc 2100 gaggatgaag gctcgttgga tggtgagatg gaggacgact ctctaagcga aggctcaatc 2160 atcagccaac aggacgaaga cgacgccgac ggagagggga gcgacgagag cgacgacgaa 2220 aatataccgg tcgaccgtcc ggccaggcac gagatcaatg gtcgtgtgcc tgaaggtcca 2280 caacgtcgtc actcaatgtc acccaacaag atcttagaga acatgccc 2328

<210> 2295

<211> 1272

<212> DNA

<213> Aspergillus nidulans

aaccccggcc atcgttctca agccgcaaag tacacggtca tcgctctaaa cttttccgtg 60 gtcagtacaa caactgggaa gatctctgtt gcattttcct tctccggctg atgggaaggt ccgcaacccc ctagcaatgt tggtatttat acatccttac cgctgtttct atcatctgga 180 240 atgtcttcgc catcattgcc atcatcggct tctgtcggcc cccgaagaaa tctggctgcc tgagacgccg gggtcttgct tttcactgaa tttcaatttg tggtggggat ttaacaagca 300 ggtaagcagc cagggccatg tgaaaagcgt gatcgtgagc gtcacgcggc gttgacattg 360 420 cccttagcct tcaacgcttt cgcagacctt tcgttggcgg tctttccagt ttggatcttc cggaaggtcc agctgactag atacaagaag atcggaataa tcatgatcct aggcgccggt 480 atctcgtagg tcatccttac cgggagttga gatacgcaga ttgatcataa gtccgcacag 540 tgcggcggca gcgacgatgg taaaatgtat cctgctgaga aatctaccgg agcacgcaga 600 tataacatgt cagctcaccc ggagtcgacc cttgagaacc aagtgctaac taaatacagg 660 720 gtcctgggct cccatcacaa catggtattc gtaagtagac ccttcttagt agctccatca ttcccatcaa gtcagatgtc cagttgctga cgaactcaga atcgaggtag actttcccca 780 840 gaacttcatc cctctcagca cacttctgtc acatttggat gtacgtgatc atagtctgtg 900 cgaccctacc gacccttccg caagcttacg ctgccatctt gcacaagcgc ccatcctact acgactcctc gaactaccgc agcggcaagt cggagccaaa gcacccattg atccgcctcc agcgactgcc agttgcctcg ctattcgaaa ctgtcgctgc agaggaacgg gtatcgagcc 1020 aagagaatat catcgacaaa gttgggaaag acgggatgag gatttagaag acaacagagg 1080 tcagtatcgt tcaggagagc aagggctcag ctgaggtgga gggccatgac ccgaagtatt 1140 tgcctagaca gaatcctttt gaaagctcca ggggggtgcc attgtctagg aactgaagga 1200 tgtgagttgc aaaatggaag acccgccatt ccgcatggat atgatattct cctagttgcc 1260 1272 acgtcggagc aa

<210> 2296 <211> 1386 <212> DNA <213> Aspergillus nidulans

2296

<400>

2295

<400>

attagtccca gtctctgata tatccactaa ctgtcccgct tcgtgacgga ctccgcctgg 60 agactggagg ctgcctcgaa atgcagcccg tccctattcc gaaagcactt gtaggtctcc 120 180 gcggagtact tgactaatta tggtcccgct atgccgtgct gatcgaaatc ccggcatcat tgggtgtcgt atcccgcaac atcatttgca gcgccgcaac aaatactagg tcctcttggg 240 300 gctgtgaccc aatggaccgg cttgccgtgg taaaagagtc agtgcgctgt gcttataggc tgccgtaaat gcctccgtaa atgcctagtc tactgtcatg atgcccctgt tggcatactc 360 gtatataggt aggtcaaggt tgcaatagaa gccgttaact cagcttcttg ttgcactggc 420 tgcctgcaca aatgagcagt gctgttatat cagccatcat tcccagactg gataagaatc 480 caggicatic tagitcagga catgatcact ccaagigggc aagicaaatg cagigggcg 540 aagcattatg tcgaacagca gtgatggctg gtctaggaga aacaattctg aacgcgggca 600 gtggcaccac caatgaaata aatgggcaaa ctgaagaatc ccaatcttag tatcagcggc 660 agacaagtcg cctaaacttt atagactgta tactctttcg gacgtggttt atccgggttt 720 taatatgcct teteceegea etgecaatee tgeeeegtee ggacaateae agteegeeeg gtcggacttc ccccgatacc acattgacgg tatatcaaca tctgcatcca caaacacttc 900 attettetqq gaccgtttac ctactgagte aaaatgeegg aaatettega egacaagtee caacactgca ttccctttct ccttcagcgt ctgaaagccc accaggcgcg gcacagcaac gaccccgcca ataccccgcc cttctttctt ggactgaacg gcgtccaggg cgccgggaag 1020 acagtectgg tatggccctg gccagateag taatggaett gctgagagea aggtaetaag 1080 gaatcgctag gtgtccaccc tcaattcaat cctccgctct ccgccctact ccctcgccgt 1140 ggtaacactc tccctcgacg acctttacct cacacacgaa gaccaagtat ccctcgcaaa 1200 aagcaacccg acgaacccgc ttctccagca ccgcggccag ccaggaacac atgatctccc 1260 gcttgcgcaa tccgtctttt cagctctacg cgctggccgt cctacggcga tcccgcagta 1320 cgataagtcc gcgtttagcg ggcaaggtga tcgtgtccct atggaacagt gggagactgt 1380 1386 gaatgt

<210> 2297

<211> 2640

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations <400> 2297

ggcaattgta tacgccgcct tgtctcctga cggatctcat tattatgtct accgcctaga 60 ggtacatatt tctatattga gtagctctcc cggcaatgcg aggggtaagg atgtctcagc 120 tcaggtaaat agctgcgatc taagcgcaca ccggccaatt atcgctctag gctacgataa 180 actttgacca gcggcaggaa atcgataagc cagggctctt gagcgcgaac cacatgcgcg 240 gcgtgtgcca atggttcgtg gctttagctg aatctcgatt gaatcgacgg atgaggtcgt 300 360 caattagttc agaaccgaag atgaaccacg gcgacgggat ataagcgagg caattggcta 420 cagagggtca gagcgaaata gtgactgact cgcggcagat gatttcttga aagcgcgatg ctgccttgga ctgagttcga tgaacatcga ccggggtttc aggtgtactt cggccaacgg 480 agtagcttgt cagagagaca taatagggac ggaaagcaga taagctggct gcgtgtctta 540 tagggttggc gaaatcaaga tggaccgtcc ctgataaaac gaccgttgct gacggggcgt 600 tgtcatacgc ttataccctg gtccctcaat ggtccagacg agctgagcgt cggatgctag 660 720 ttgtaggtcg gcagccttgt cgttgtgttg tatctgctct gtgacccagt gacccagtga cccagtgctg gatggtgccg ccgatgatgt gccggcggat ggcagcagat tgagattgcc 780 agaccgcatt ccagttcttg tcctcctgaa aattggtcat gccagtcact cattccaggg 840 acgagggacg attatggaca tcaggtctcg gatgcgaatt ttttggagtc cagccagttc 900 gattccgacc gcacaaaagc aaatatgcac cgtatcttaa acggtgagat gtcaggtcgc tttctccaga cttcgggcca aagcagcccc tttccgaccg tcgaaggttc tctgcgcatt 1020 cctttgcctg cctgaagtag tatagtgtat tataaaagcc ccaattgcaa cgaatgggct 1080 gtgggcccag gagggtcggc gatcagtcgg ggggtcgatt ccttctgtca attcgataca 1140 gcgtccaccg ttcagtgccc acgggtctgc cagtccccgc agacgggcgg aaataatcca 1200 tgcgcagaaa ccaaacagca tgggaggaca accagactat tggattcgac attaccagaa 1260 ccgtggataa gagcgcgact atgcttgctt gcccgctaat cttcggcagc tcgaatcggc 1320 gggcgatggc ttggctggcc acgacgatcg cagcaaatgc tccgcgtcct cgtgctggca 1380 gttggcccga tgctcgtggc gaaggcttgg acgggcgtct tcacgagtca ctagaatcag 1440 ggacaacatg gtgggcctcg cagcaggtct tatttgctga cggtccggct ggataccagg 1500 atacgccatc gcctgctcca ccgtctcctg attctgcaag actactgtta gtgtgggcga 1560 caggcgggta ccttaatggt cccaaagtag gccgctggga gaaattcagt tggcaatggt 1620 ttgacaatgc ttgaccactc ctgaatctct gccgtcttct caggtctctc tctttcacac 1680 actetytete aateaeteee tteateeatt ageeateeat tetttettt cateateate 1740 tactactctc cttactctcc cacaaccctc cgacactcct cggacgaaat gaaagacggt 1800 cgctgctgat tgcttcatct gtcacacagg gtatgttctg aaagcagccc aactccgcat 1860 cttacgcttg tcctgcatct cgtctttgtc tcccttttct ttcccatctg cctggaagtc 1920 ggaccgaaaa agaaaaaata tcataaagtc agggctgcag gcgaaggacg tggaaaagtg 1980 teeggeeece atetgtetta eagteagaea atecatgtge agegtgaaag aeggeteace 2040 ccagaggaga gataagccct gttgggcaaa ataacagaag aagcgcaggc tgacgggcat 2100 ttcttacatt ctacgtggtc tgtttgtaac tgaccttttc tctgtagaga atcaccattc 2160 ctaggtatcc ctatttgtta ctctttaatt catttattct tgtttctatt tttttgttct 2220 ttattctttt atttatcatt aaatttggct gtgttttgag ctccgattat tatgattatt 2280 ttattatgag gatttagtag agaaggaggn agggagggg ggggnnngng gnnnnaggcc 2340 ccggnnnngc cccccctgt aaactccctg tccttcacgt ttttattttc tgtattattt 2400 attctctctt actctcgtac acattcccct ccattctttt acccagtgta gtagtcctct 2460 actttgcctc cactctttct tgtatcccac atccttctta ctctcttatt ttatcttacc 2520 tacctccttt atcgttgttc ttacattata ttctatcata atcatattat atctacattc 2580 tctttcgtct cccccttttt ccctcctttt taactcttat ttattgtttt ttatacccct 2640

<210> 2298

<211> 899

<212> DNA

<213> Aspergillus nidulans

<400> 2298

tetegggete ggtgteataa tettaceeta aatateeea aegetttatt ettgeetage 60
tetegagtae tgegteegaa eggacaaaat gaacgaetat tetgagaaag acagaggee 120
gatateteag gggaateace aagggeaagg geaagggeaa ggacagggt atgggtatgg 180
gtacgaetat tgeeeteate aatateata teeacaacat ggacetgeat ataaetatge 240

tectggtact caageteaac cageacetgg ceetgeatac aattacaace gtecatataa 300 catcccatta ccgagctatg agagtcacaa ccagaccggc tatggcaaca ggccctcgcc 360 tccacacagc tacggccatc aattccaaag ctacagtggc tccgggccac actaccaaaa 420 tacctacage cettegetae atggaggeag tggteetatg ceaggettat aegeaaacae 480 cagegeagee gegteeecta tgaaccaace aaacceggte agtaggeeeg ggeeecaaac 540 ccttctcttc cgcaaatctc cctcagcgga gaaggtgatt tttattcacc cagccggcgc 600 gcccctcacc tctccaccgg tgtactgtct aagttcctcg cccgacgcag agtacgtcct 660 tgcgcgcgga tcggacccaa acaaccccac agcactcgtg ggaaaagaga aatcgcatac 720 gttcagcagc agattcgaca tgactgtgcg cggaaggaca tgtgccctga aggggtcgac 780 cctggggtcg acatacaagg tcgacattcc tgggacgggt agctacaaat ggcacacaga 840 899 cgatttctcg agtaagatgt ggctgaagga tgagagcaaa tgtgtccttg cgacctact

<210> 2299 <211> 2645

<211> 2645 <212> DNA

<213> Aspergillus nidulans

<400> 2299

tctggcaagt aagtacccat aacatacgca taccactcac agagcgcctc tcggatcttc 60 tcattcttag tgggattctg cgtgtggata tttactcccc gcacgacatc cggatgctca 120 gccaggagct tttctcgcaa agagaggcgg gagaggtatg ttttgtccat agggatcagg 180 tctgagaggt cgagatgggt tattgctgtt atcttgttag ttattatgcc ttcaccgatt 240 tgtagctgga ggctattaag ggactagaga gacagctcac ccatagttaa gtgaaacttt 300 ggcttgaatg gtctgaaaac aaggggctcg gtcgtttccc agttgaagct ggggagaggg 360 gtgacaggag gatagccaaa gcggctttgt tttgcttcct ttcctggata tgggcttggt 420 gactcgacgc catgattacg gctggcgttt ggtttacgct ataggtgcgt tagctggatc 480 tggacatact ggcgagtagc gtcgtactcg gatgtagatc acaaaaaagc atatgaaaat 540 tgtgaggaac gcgaccagcg gagtccttgc gagaacgaag tccaaggttg gcattgtacc 600 cacgttgagt tattcttgta ccctttgttg cgatgggggg ttccagaggg tccagatata 660 aggtggtaat cagttggaga agtcgtatac tgcaggtgac ctggtgatat cgctaagctt 720 ccqattggcc gttaagaccg tctcaacgcc gattgatcca cgctccgaca gatgaagggc 840 accaaacaga taagttcgct ataagcagtg gtataatgta cacagcccaa cacggggaag 900 aaggacagcg ggcggcgcaa cgccccgcaa aaggacagcc atgtcatggc aaaagaaacc cacctcgccc gttgtcacat tacccaggag gaagaaaaac tcattactcc ttaaataaac actgtcaata tgattcggac tgcccgctcc ttctcttcag cttttcccct gcgtcaggat 1020 ccgctctcat catcacattc tctttgtcgt ccatctccga tgtagcgctt agaccgaatc 1080 gatccggaag ctcattcaga ctcggcgctc ttggacgctg catacccctt gcccggcccc 1140 caaccgccgg agtgtaatac accgccaggc gccaagtgta cagagccata tcgagtatga 1200 tgagggtcac ccaggggagg attgtcacga cgccgaggaa gaactaagat agaagaccat 1260 tagcgtttga tcacagacgt gcatcaaaag tatataggaa tattgtggtg ccatacaaag 1320 aaccgcacga cccagctctc gaggtagatg aactctgcgg ggaggatgga gtaccaagcc 1380 atattcgctc gtataggtat cctccgtaac aaaccgtacg attgcgccgt ttgataataa 1440 ggttgtgcta tcgaatagat tattaccagc aaagtgcagt aaataatcac ttcactcagc 1500 cggggtttgt gggatcagaa accattgatt aactacgcag cgttgcggat atgtcggagg 1560 ctcgaactcg gtggcgtggc ccgatcagtt gaggtgttgc accaggcagc gacgaatagg 1620 ctgctgattc aacttgcaga gagctggctt gtataagcat cgactgttcg aaatggcaac 1680 cgcatcgtac agctcaggac gtgcaacggt ggccgatggg ctgcctaggc tgcgactatc 1740 tgtqqtccqa qtqttqtcqq qaaagaqcqa tcqgcccaat ccqgtaattg gtaagcatgc 1800 tectggtgee tgaggetget gtegeaegge caaagtgtag titteaggta caatagacae 1860 aactagacac tttgtcaatt ataaatgata tttatataca ggggtatccc agtgtgtatg 1920 tccaaaaaca gcccaaatcc aagggttgaa gtatacacgg ctagatgtaa tgcaagtaaa 1980 ctggaaaaag ttctatcaac gctaaacgca aaaatcacct cgccatacga tactgttcat 2040 atgatgtaaa tgcatggtca teetgateaa eaggaeeata eeeteeteee ggeegaeaeg 2100 gttgcatgct gactcccgct ggctgctgca cctgtccgag gagctccgtt tcactctcat 2160 tetggtgetg gtagageeet etgeteatee egetaeeegt tetgaatgge ggeggaegga 2220 acacaggatg cataccetgg tttaategeg gategtatge ttegggetge ageattggea 2280 aacttgggac ggatggtgeg ggagaaggtg cccgagagga ggtgggggac cagtcgccca 2340 gegegeteeg tggegtgga gagegeteag teateaaate etetggtege ceatagatge 2400 eteegeegaa etetteetgg aagteggege gateettgta gtaagegaaa tegaggtgat 2460 geteegggae cacetegaae ggageegaeg tgteeggeat ggtettgeea ggetgagatt 2520 teateattgg teeatgaeaa tgtetgaata ateteeetee getteattae eteecageeg 2580 teeaeggtaa attttgetga gegegttgge ageettggeg tgeacaatag gegtgateaa 2640 tgget

<210> 2300 <211> 2056

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2300

60 acctggtttc tgaagctgtc acagtcatcg cagtctcctg cggctaccga agaaccagaa acacagatcg agatcctccg ctatctcacg tcacgcagga ttatttcggt actgagagag 120 caagaccgaa tggcacatcc gatctggcaa acaatccatc ccaaaccgcc tcggagatca 180 240 gcctqcaaqa ctctttaqca gattcaggct ccacagaagg gtctccacgc accctagcac 300 ggcctgcaag gttcgttaac aagcctggat tacctgttct tgaacaatgg tcagccaggt tatacagege egegagteee gaggagaace eegageteea acaggetete gaattegaaa 360 caaggaagaa agctgccatt caagaacgtc gaatgcagct tcagaacccc aaacctacaa 420 cttcaaaaaa ctctccccat cagagcaggt accttgccgc tcgggctgcc ttgagctctc 480 agcctagacc tagttctgtc acgcagcagt cgcgatcaga attgggcgag atttcatcac 540 acggcaccgg ggtgtcaaag acgtttctaa gcccgcaaga tccaagggca tacctcatac 600 agctccagaa cagtgatgtt cccggtggtc caaaactcaa gcggatatcg tctgccaaat 660 tgccttttga gaaaatcccc gaggaacatg acttacattc tatgggcctt acattacctg 720 cagggetgee gttgatetat teatetttea agaaettatg gattaatgat etatataege 780 agtctggtga gcaggtcgag gggtttgttt ctcctgatat aaagacggct tttgaaagct 840 900 gggacgccca cttatcgagt ttaattagag ctcgttatag attggcgaag aactctgata tcccgaatct tcaattcgat ttctccgaat tgtctcgggt atctcagggc agtggttaac 960 gacaateggt ceagtaacee agtettttat etgeetttae aactgegata teetgeagtt 1020 catcctatct tatatttcgg atctattagt tacaagaacc aagattaatt atatttcttc 1080 catagogtat tocattgaat ogagaatatg gatatattot coogggotga gtggtogaca 1140 tagagttttt gtagagtcgc tcgtaagctt gtaaattcct tcttacagtt acagtaggag 1200 egeactitet iggeteteaa geeteteegi teigetgetg eteigteati ataccaacti 1260 accgtgtctt aagggcaaaa gggaggcagt atgacattcg gtcgactcaa taccctctac 1320 ecegtttata tteattgate aaagggagee catettteae eetttegaga tteeeetgae 1380 aatatcaaac gaacgcacga aatactcttg cccaagggag ctgacatgcg ggctaatctg 1440 cacatteggt gtateceaca acteatgtte tteeggeaga gtteeaggtt eggtaecate 1500 cagegeggea ceactgagtt egeetgaett eagagaegea ateaaaageg teetggteaa 1560 ttgaccette cegegeaaga tattggteag gtaegggttg eggtgettag ggttettatt 1620 tgccgcaagg atggcaaatt cttgcgcacc aagcaggtgt gttgttgatg gcgtgagcgg 1680 gagggagacg acgatgtggt cgagacccaa tgagagaaac tcgtgcagag aggctttaaa 1740 agtgccatgg tgccaggaat actggaagcg tcccgtcggc ttcgccggtg cccgggatga 1800 tggtaggtcc cgggtcacgg gcgggatttc ggaagttggt ttttgggagg ctgtgtatgc 1860 gtagacgcta aaaacagaga tacggcaacc cgggcaacta taacagaagg attcacgagg 1920 actttcacta aaaagtgcnc gtgagtcaac ggctatatag aattaaaaga atattggtaa 1980 aagtaaaagg aatgaagaga aatagaaaga attaataaga aataagttat caatataaat 2040 2056 gatattagta gggagg

<210> 2301 <211> 1154 <212> DNA

<213> Aspergillus nidulans

<400> 2301

tecaggeggg teagaageag tetggeaagt ecceaaagat acttgteate ggtgetgtaa 60 gtaettegte tgeaetteat gaegttetg acettateat tgtagetggg aegttgtggt 120 aagggtgetg tgeaattgge gaaggaegte ggeatteeeg agtetgatat eatteagtgg 180 gatatggagg aaaceaagaa gggtttgege tatetaeeat gtgtgaette atgegetaac 240 agtgeetagg tggeeettte aaggagattg ttgaggatge tgaeatette gtgaactgea 300

tttacctqtc ttccaaqatc cctcactqta aqtcqacctt qqaqaqqatt tctqtcaaac gaccagaaag tgcatgaata ttgacaccta cctcacagtc gttaatgttg agagcctttc 420 caccectage eqteqtttqt etqteatttq egacqtgage getgataegt aaggeaaate 480 ttcccaaqtc ttctgccgta tccactaata ttgccaacag taccaacccc aacaacccaa 540 ttcctgtcta caacatcacc accacctttg acaagcccac agtacccgtt actctgccca 600 atggcactca aggcacgcct ctcagtgtga tcagcattga ccacctcccg tcgcttctcc 660 cgcgtgaaag ctccgagatg tttagtgaag cgctgatgcc cagcttgctt cagctcaagg 720 accgtgagaa cgctcgggtc tggaagcagg ccgaggatct gttcaaccag aaggttgcca 780 ctctgcctca aacggcgtaa actcaaacgc aatgcatgtc aatacccggg gatagtgttg 840 900 catgaagttt tgtaaaaaat aggctcatga tagaattggt taaacaaatc ccaagataat gaacatacgg atgcacctcg gtgtgattgt gtctgataca gtagctatta aacattctgc ctaccgtcta cccgtaagag ccctgtctca ccgatacttt cgtgaccgtt cagttacctc 1020 aacccatcgc caatgtttca tecteatitg aagteacgce gagatettea aaccccactt 1080 gcatcattca tttatcagcg gccctcttta gaaagggcat caaggcaagc actcggagcc 1140 1154 atgacccagt caca

<210> 2302 <211> 1770 <212> DNA

<213> Aspergillus nidulans

<400> 2302

60 ataccaattt tccaattcca agttaacatg gtaataatat tccaatataa cacaggggaa gcqcctttac aagacattga aattccatca gagcttccat ggtttgctag aacctaactc 120 gggacaaccg gcactccgtt cctgatacgg agccctcata ctagaaacac agaggagatg 180 cttatctcga gcgctcccag tatactagag tagtttaata tgagtggtct atcatgagta 240 ttttttgtga gctgtctatc atgagttgtc tccatgagca gtttcatgag tatttttcgt 300 360 gagtggtctt cgtgagtggt tcttcgtgag tagtctggaa gcttactcag agtacggact cgtgtcgggt gttcgagcgc cttaccctgc ggttcttttc tcctggttta accgagcaca 420 cctaacggac gacggagagg ctcagacact agattcgatg atcagcagcc tgctatctgg 480

cctactacga cttcgtagac tacggtattc aagtcgttgt gatttacccc attttaagcc 600 qccaqatcga agaattctaa cgtcttttca cgattagtgt tatgactata tttattaaca 660 ttattttatt ataattgtca tggttttatc ttgatttata tttatttttg atttttcttt 720 aggtgcattc gactactcat cctcccagtc gagtttcatg caggtccgat gtggagttgg qcctctaatq cqqqctcctc tqtccaaaaa cqccqgtqgq cccctqcagt gccqttgaac 780 gcctcccgaa cggtctcggt ccaatgtccg ttctggtcag actcccaagt ttcccagcgc 840 900 cttgctcqqq ataaqaatct acqattqtac gaaccaaggg ctgccgccga gtcatcgacc cqtatctact cqcatctaqc cqtqctctqt accaattqaa catctttctt qtcqtattcq ctctaaagtc ctcttacaat agtattgccg caccctgtgc tgactagaca acagtcccac 1020 qctataccqt attcqqcaaq qagqtcacag tccqcctccg ccggttggtg gaaaatggtc 1080 aattetette egteteeeag eeetggaget gtteeacegt eeaggeeget ggateaggte 1140 aagaccaaag ttggtcaacg atcettcaag cactecaggt teatecagee etggetecag 1200 ctgttcctga atcctctcat caaacagccg gcacgcaaga ggtgtctttg gtgtccaatt 1260 cctggtgtct tgagagcggc tagcctcact ctcgttcagt gaggcccgaa tatgatcctc 1320 gettgacteg etegegeaag ttegeaceat eetgtgagga egteacettg ggeeggetee 1380 tettggetgg etgatgeegt agaaacegge gegetaaceg agettetgeg ttagggeett 1440 cetaggeteg eeegacgeet titigagteet gtetegatit eggactetgt gtitiggtigga 1500 tgcccggcca aagcgccact tagtcccgga aggtcttcca catggtgtgc cacggtctcc 1560 atoggagoaa otgacaattg acatgacago tttogatoag occaactooc gtggtocago 1620 acgagteggg tgeagaceag acaeeeagge gtteaaatta teaggagaag ggetetggat 1680 aaccqqqcaa gcqcttcqtt tctcctcctc tgacgacttt tgattagtac actgccggat 1740 1770 agtggggatg agcctaggat tgtgccccgg

<210> 2303 <211> 1957 <212> DNA <213> Aspergillus nidulans <223> unsure at all n locations

2303

<400>

4060

tgaaatcgtt ctgaaagggt ggggataacg catgtgtgct gtcatagagg gaacaacgta 60 ttgaactggg agctcctctg gccaagaaat cagatggctg agtcagacat cgacgagatt 120 180 ctagatgagg aagaagagct tattgcaaat cttgaaaagg aaatgcttcc gttgacccac 240 aagacacttg agtgtttgag gtctgaatgg atccgtatgc taaaagaaaa acacgacgaa cgacttgagg cgaagcgcaa aagagagcac aataactcca agggccctac gggtgtaagt 300 tcctcatatc catgttcgtg ataggcgtct gacaaggata ggaaccgtat caggttgact 360 ataagaatga tacgttttgc caaatattca atacagaagt tgatttcgac gttgtccctt 420 480 tggcaaattc catggctgag tacgtcatct ggctagagca tcagtacatt cgatctaaag acacatggga taccgcttgc gagggagaag cctggtataa aagacggatg agttggtttg 540 tggaactcat gcaagtcatg gaagttgctc ccaaaacact catcaagact atcaacaata 600 660 agatcgaaac gataccatgt gaaagcgatg gccttgataa ggaaggtcta gtcagccact tcatggcttc tatacaggag acacgagagg ctaaaccaga tgtatagtac agttcaatac 720 agctttgata tatttatcta gtcaggaaga tcttcgccat tccgagattc gcactcggac 780 ggatgcacct gagtaccatt atcagactag gcagctctat aaacctccaa gatgagcctt 840 ggaagtctat gaggccgagt tatacgtcaa tgatatctag caacggcggc ggccactctg 900 ccctggctaa tcacatcttc tcagtgttag gaaactggtc agaagagttc gacgactgtg aaaacatata catgaactta catcttggct cctcgataag aatcaacaca atcgcagtga 1020 accccaagga gatttccatc tcgttgaagg caaggtacga agcagagttg gcctggctta 1080 cccctaatct cctcgctaat gggtatgcca cggacaatcc ccctcgcaga tctcgaactg 1140 gtcaaccaac ttcacaagtc ggtccatctg gtcactctca agagccactg agacacaggc 1200 cagatggtca tcttcaaatc ctccccagac ccaaaacccc ggttgctcta ccacgaactc 1260 cgtctcctgc ttataactcc tccgcacccc aacatcatta atcgcccgct ctacctcgac 1320 acaaaaagag teteetttgg eggtaagegg egtgttgetg gaettttget ggagtatate 1380 ccgctggaac gttagccgct tgtctcaaga gcaccagaga tatccctttg gagacaaagg 1440 tcaaatggac gtgccaacta acctccgcac cggaatatgt cgtctcttca ccggtgggac 1500 actatccaga cctaaagctc gataatatcc tactcaagca ttctcctatg ggggaggggg 1560 gatgggatac cgtcttgatc gacttcgagc agcgaggatc atgggtgtgc tggaacccac 1620 cggagatcaa tcacgtcact ctcttctca tctcgctacg cgaaaatcac ggtatatccc 1680
acgccacgta gccgccgaat accaggctct attggataaa cattgccttc gtggcacaac 1740
agcagcggcg gcagtagtgg tggcatcaac actagccttc tctcctcggg gtataacaag 1800
acctggcgtt cactgagtgt ggatgagcgt gaaagtgcaa tggttttcat gcttggccgt 1860
gtgttatggt gtatatttga aggtgtggc agtagcaccg gaggtaactc tcggacttc 1920
ctgtaagntc tatcgactgc catcggccct ttttttt 1957

<210> 2304

<211> 2427

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2304

60 tecgcateae taggeegaat attgtggege getgaeaggt tactatagee gaacateatg 120 tacgatgttg agcacccggc gtataaggaa ctgggtaaaa taggcaagga aattacaacc aaggtcaagc cgcgtgccgt tgtagtgttc tcggcgcact ggcaaggtgg tgatgatacg 180 240 gttcaagtca atacggctga gatgacggag ttgatctacg agtacgtata cccgcccttc 300 tctatgcgcg tcaactgaga ccagttgata ctcgtagttt ctatggattc cccagccact actacaagga gaagtacccc aatgttggta gcaaggagat tgccaacaag gtgctcgacg 360 cgcttcagca ggctgggatc aaggccgagg gtgtcaagag gggattggac catggggttt 420 gggcaagctt caagtqcgqt aggtqccaqa tccaqcaqqa qccatqcqcq aatcqacaaa 480 gctaatacga gcaaagcgtt tgagcctgaa tcaaaccncc ttaaatgttc ccatcgtgca 540 agtgtcaatg ttcgatacag aagaccctat gcagcactac cggctcggag aagcggtgtc 600 taagctccgc gaggaaaaca tcctqatcat tgtqtctqqa atqqcaqtcc acaatctqcq 660 cgatttccgg ttcactttta atgatgctcg gcccttgccg tataccgtta gctttgacga 720 780 ggcgctcaaa gacgcagcta ccaagccccc ggccgagagg cctcaggcgt tggttgatct gctgaaacgg ggggatgcgc gacaggcgca cccgtatttt gaccaccttc ttcccattca 840 cgtgggcgct ggagctgcgg gggaggatcg gggcgagagg ttatggacct tgaaggaagg 900 gagCatgagt tgggCacagt atagatttgg tgaagtggcg aatgccagcg cgctgtagcg 960 attagccgat agtaatgaat caagcaagtt caaccgagta aagttcttgt gagccaacgt 1020

ttatttggat ataggtacag tgttgacagc cgggatgcgg tacatgacat aaaacgacgc 1080 qccaqaqtct atqaqqattc cttcaccaat tgcttgacct tttcttcgat ctgctggtca 1140 gagagacctg atttcgatta gcgatgtccg tacctcggat ggaggggtaa cataccgttc 1200 agtgattcaa ettteteett teegageget gaaatgeaaa eeacagatta gaaatttgee 1260 ctccaaaagt gaagtaatat atgtattata tttaaacgta ccgtatcggg cgtagactcg 1320 cggcagagtg ccggcagcct cacggatgag gatgggagtg tgcgggttgt gcttcttcat 1380 ggtgggataq gcgcggttga taaacaacct ggggaataca gtcagtccta tttcttcttc 1440 eggtgatece geaategaag attgaeteae ettgtegeeg egetttgete ggaggtetgg 1500 cacaaaagga accgcagctc cttgagacct tttgtgaaga cgtacttgga ggacattgtg 1560 acgagcgatc tgtgtaaacg gcgattggag aatcacagta gttcaacggc tagacgatca 1620 atqccaatca tgcactgcaa ttgagaagct gtcgacgtcg ggctagagat gaggtcgccg 1680 gcgttgtcgt tttgcactgg accaatctgg tcaagcggga tgtcacaccg cttaccttag 1740 ceggaagtag etgeattget etgegeeaac gtgactagge egacgtegge tetgaetgat 1800 aaagactcat tcaggtgttg ttgtccatcc tcctctccac tttttataca cgatgtcgtc 1860 gtctcgcgtt ggatttcgct ttttccagaa ctcccgcgcg gccttgcgca cggccttccg 1920 ccggcctggt gcccagggac gccgctttca gacttccgat gctgcgtcag agcaacaaag 1980 cactttccag cgtctatgga acagccccgt cggtgtaaag accgttcact tctggtatgt 2040 ctagcatctg aggaattgga tctttcaagg ggtgttttgt gctaatgtag ccgccgcagg 2100 gctcctgtta tgaaagtacc ataaacccgc cggttgtccc agttttcaca attgagagcc 2160 attggacttt gedeeggagt atteeecet tttaaagegg gattetaeeg atggaateag 2220 acattetace aatttetgat atgggetete geattgegtt tittgaetit actaeegee 2280 naanntnntn annaaaaggg ctttatggcc cccgccccc ttttttgggg ttgtattagc 2340 ctaaaatacc tgtgtgttcc ccccgtgtt aataccggta ataaaccccc ctcttaaaat 2400 tcttgggatg ggccctttcc ccctccc 2427

<210> 2305 <211> 2471 <212> DNA

<213> Aspergillus nidulans

gacagettea acatgetteg agetecaaga gaatageaca gtteggaega tggegtegtt 60 120 tggcgtacgg cgcccgaatt aggcgtattt attctcgact gttgcggcgg gggccggaga 180 gggctcgtta gggtcgcgta cgcaggatcg tgatgctggt gagacgattg aacgaccgat 240 taggatccag aaggacgttg ttgttgagca gagcttcgag tatgtaaaat aactgatggg 300 agtctcattt gtgtgttcac tgtatttgta ctagttcaag gtaagacggt aatgctagat 360 gtctcactca tagttgtgtt caagggccca gtgtgctggt cataaacgta ataaacagct aataggccgg tatacgacca aggacttctg tagagaaatg taagagaatg aggtgcgagt 420 480 gtattgcagc tcccacgcct ctctcgctgg gaacctaatg cccgtactat ctgcacaagt aaatatgtcc atgtctgcag cctcgttgct aagacgcgaa agaacacagc tcaggctgcg 540 gctgatagta tcaactcaca tgactaatct taactctctt tccctagagc tactgcttgg 600 cagaaaagtt aatagagatt ctcaggttag cgaggttaca ggccgtcgat ctattgagat 660 720 gcgtcgtgtc aagaagtgcc agtctcaaga acctttgcga acaaaatgaq acttttgtgc aggcatgctg ttcatagacc ttgtgattgc caatccgttc ttcacgatcg ttgactggca 780 cagtcaggcc gttgcacctg ccaagtatac atactagcgt ctaaaagccg cttcgttcca 840 gactgcaaag cgcattggag gaaactcagg ctttaggcca gccagatgag aggttaggcc 900 atggcattgg gggtgaatcg gatgtgtcgt caaagccgct tgcaagctat tacataccac 960 tggatattta cacaaatgtg tttcaccatc tcaaattcgc caggctcaag ctaatctgct 1020 tgtctggact gtgcaggaaa taggttttca ttgggcagcc ctaaaggatg gaaggtttta 1080 tacagacgtg gtacttcgca gctaacctca tgcacactga tcgcttctcc agttccgcta 1140 gccgcagatg actctggcac cgctgattgg cgttatccca aaattgatct gaatcataac 1200 agagacgcgg acgaggatgg ttacattttg ttcctagagt tcaggtgtgt ctatctctcg 1260 geggattgtg gaataatatt gegtagtaea ttatggttae catacattee tgggagaett 1320 atctcatctg ctcggtgcgg aggtgtcttg aacacctaag gcaatgtttg tctgcgttgc 1380 ttgtttgact gcttgtcgta tatgctccct tcatcacggt tccttgtcca agatcaatcc 1440 taggagetet geegtattgg eetggteaae ttattaeeeg ttgataataa tetgteeeae 1500 acceptected gtttagacca tettaggege atgagtedee teatgeatea atteceptite 1560

ctctcctgca agcgaggatc caatctactc aacctatgct tctgtgcagg ggatatcgtc 1620 ttcctatatt ttccagatgt cttttgcggc gcggttggct tggcactgaa aatatttatg 1680 tcggcacctg ggcagttgac tggcactcta cggtgtccga gtagataaac ccaaatacga 1740 tcggaggaag cgaggatacc cgtgtaaggc cagaattctc tagtagacag acctcagtct 1800 gaaacccgcc aaagcagaca ctagcatgct ggttccccgt aaaagctgcg aaaccagcgt 1860 ctgcgtatgt tgggatgcct ttggcccgca ggcgggcgtc aaggtgcttg taaccagcag 1920 gctgtctata taggtgcgat ccaggcagat caggccacct ggactgatta tagtgacctc 1980 ttggtctaat ttgggagtta ttcttgccta gacatataat ctctcacact ggcttcctaa 2040 ccagcaatat tactaatete atcaaggtee ttateageet eettggetae tateteetge 2100 tcctgttttg cctgcctgga gattattcag gaactagcta tataggtgcc aaaataaaag 2160 gatttttgga gcaatacccc gatgattaga agttttagta atgcgggcat gtatgccagt 2220 atcgctatcc tattcttaaa accttttata gctgcttgtt ggaccgctcc tgaccaatat 2280 agatactatg tccttattaa aacaggacat ggtgtgccag caccttttta gagataggtg 2340 ttagggatct actttgtcag ggcagatcat cttgttaact tgataaggat accgctacca 2400 agaaaagccg ataatgggga actaattgtt gaatcttggg gaaatacgaa tagagcccag 2460 2471 aaacagagtc a

<210> 2306 <211> 879

<212> DNA

<213> Aspergillus nidulans

<400> 2306

caaggtattc cagtaagtag gcaaataaat agacgctgca atcgcatgcc cgacaattca 60
tacaccaacc atgggaaggg agccgcagct tggtgatgtt ggcaagtgaa atcattcaat 120
catcagtctt cgagatttaa ggaacggctg tagcaggtgc atcgtgaggg gcgttgccag 180
tgcccgtggc gccatggccg tgcttctcta caacgggatt ggcgtgctcc tgacggtagg 240
accagaggga gtagagttcg aggagcatgc caaagaaggt gaagatgctg cggcattatt 300
agttatgaga gaacgaaaag ggtgcaaagg aacatacaat gcgaggaaga tgaaggactc 360
gtttgctttc ttcctgctgc agttcatgta gggaggagcg ttcaagtaac agttgtgcca 420

480 qttqtaqtct tqcqcqqcqa agatgaatgc cqtgagccag cttttgaaac gttagttagc 540 atgeacgttg teaaggacga atgacageta aggacgtaca gataagagaa gacgacatca 600 atqaaqaaqa caaatcggct cagcatgttg ggcatgaacg gggagaggaa agccgggagg 660 aaqaaqacaa ccqagaqaac agactgtatt gcattagctt tgaaatcctt caccagatag 720 cqqqqqqacq cacaatgact tcctggtaaa tgatatgctg cccacggggc cctttgctaa 780 tgaagtagga tgttattccc atcacaatca cagcactagc ccattggaga gctcggatca 840 agagcatgac cggcctagcg agagcttgac gaggcatgtt gactgcttga tatgaaatag 879 tatggactgg aagtatagat tgggagtatg gctaagtat

<210> 2307 <211> 1267

<212> DNA

<213> Aspergillus nidulans

<400> 2307

60 tttgtccaac cagacaacgt atcggggacc gattcaatct ctctggccgc atctttcggt cataacgaat aagcgtactc cacagggctc atctcggcgg accgtcttat tgtccgtccc 120 180 agtataatgc caaccccgca ctacaggagc aataagcgga tgctgccact ccggtgagcc ggtagagaag ccgtcaaacg ctcaatttgc gagcgataga tttcactctg ggagtttgac 240 accaaaggtg ccgagggcga tcacccggat gacaataaat ctgatatttc tctcaagaat 300 atgeteacea gettgatate gatgaaegaa egatagegat aaettettet geetgttgta 360 coggagttat gogagtatog caacoggtot cotagoggot toggtgogat otgoggaatg 420 gctgtggaat tttgttcaac gagcgtggtt ttccatccga tagttttctt tctagatttt 480 cgatccaaag cgaaagtata tatcccagga catccctcga tagaatatct attcgaacga 540 ttgggteteg agacageget teetgttaga aggtggeggg tgttaacagg egagggetea 600 aggcacagcc ttcaggggca tggccggacg tctcaaggag gtttcaaaaa acgatagaaa 660 720 ggaacgacga gtttacggat agagaagtga gggaaatttg agaagaagaa aagaaggtgg gcacagaaga agacaaaaaa gccaccgagg aggctttgaa gtgtaaaagg gtttgaactt 780 tgcggagaaa gtaagatagc gatcaacgat cggcgatgga gcaggcatgc caactgcgcg 840 tcccaataat aagcgcccga ggcaggggta ttttatcttt ttcgtatcat tacatgtaga 900 atatatggaa ctgcactcga gatattetta geggtatett gtattacega teegagatae 960
tegaaggtee agtttgaacg ggacageagt teactacgta teteetgteg ateaacggtg 1020
gaaattttat ggtaagaata gettegagtg etgageetgt caaacttgte aggagatata 1080
gataacttga agaactagtt tgggetttgt tatggtggtg etttgegeag geategeetg 1140
gacagtaate acagggagag categeaact teagegtege aagtgeatea caaagegett 1200
gaatggeagg tgeettggea taacaceate atgaetetaa ecatgtacta aaggaggeae 1260
gtttetg

<210> 2308 <211> 1323 <212> DNA

<213> Aspergillus nidulans

<400> 2308

ttcaaactcg gtgttccatg cagcatcgtc tggccatcct tctcgctggt gactccacga 60 agaacatgga agccgagaat ttttcgctag acgaatagat accaagcaac catggggccc 120 taacggtttc ttgggttggt cccttgagtt aaccgatact tttggataat ttcaaggaac 180 tcttctattc tggagatgat aagatccact attaccacaa aaggaaaatc ttcaggctca 240 300 gtcgcccgac aaataggaga ctatagccag acttattaag caggcggtga agaagagggc ttttgggaag tgctcacttg ttgagtccga ccgtggccga actccgattt tagggaccat 360 tttttctgct tctattggaa tccccacaca ccggtgtctt atcggccctg aattcagggc 420 gtctttcctg ggaggaacgt ttgtcgacct gttggcgcta ttccagtttc tctcccgctg 480 attgactcat cgccgccttt acgtacctcc ataaattttt ttgtgtccct ccgcctctgg 540 ctgctttcac cgtcctcctc tccttgactc acccaccatc tcaagccaat ttttcaattc 600 cctccatcct acccctccc tcagtcttgg gcgtgcggca gaaggcggga cgtcggtagg 660 720 gatttgtcta ggccgagcga gaaggaaaca gtgcccttgg agctatagcg gtgcgagtgt ccaggccttc gtcgccgagt ctcacccgag ggctgagcgt atgacagttc aatggactgc 780 atcetetteg etttaetete ttteaectae etgteaaata gtgegegeeg eaatggttet 840 tgctgctcgg tgcgggcagg ctacgtcctc cctcctgcgt caacgatgtc tcgctgagac 900 ccgtcgctct gcactggcat tgcggtcttt cacgtccccg agcaccaccc gttccacagc 960

ateggeact egattgeac agaagactee treggeatge eggtegeag agttgegea 1020 etteteeage gegetetgee gtetagetge egagtegtee tetggegg acagtetat 1080 etetagegga attgteaace etggtgetaa ettggetgae gteaagaagg tgetggttat 1140 eggtagtggt ggtetgagea treggeeagge tggagagtee gattaetetg gtaggteaat 1200 ecagttgeaa gegtgaaggg gtetgeeaac atggeeage tggtgetgt tgtgtegate aggaggagga 1260 ecagttgeaa gegtgaaggg gtetgeeaac atggtetatg gaegtggttg etgataettg 1320 tgc

<210> 2309
<211> 3044
<212> DNA
<213> Aspergillus nidulans
<223> unsure at all n locations

<400> 2309

60 ctcttccatt ccagctgaca cgaccctccg cgtcatcaaa gctcaagtgc cagccgcttt cccaggcaga gcttgtaatc aacgcaccat atcaaccctt ccacactgac cagagagtta gtctgtttac ttactctgaa acgggtgagg cggatggctc aaccactgcg acgccaggag gccagtgggt atttggcgga agtatgggca tgtccaagct acatgttcgc cgtgtcagca tcagtagcga ggatgaaggt gacgttgcta tgcatgaact tcaacagggg ccaggtggag gtatcgtgaa tacgatcagc atgggaaaca gcactgggaa cgtggaggaa gtggtaatca 360 ccacacgacg gaagaagaaa cattcgtcac cgttccaggc tggcggcgag gatggattct 420 480 tcgaagacga ctgtgaggtt ttggactttg ccgttgaccg ggtctgatcc ttaaccacag 540 tgtatgcata tatcactcgc tgaggtggca ttggttctac gcaattttag acacttatat tggttggcgt tggggttggt tttttattat ggtctccttt ttatctaaac gtcatccatc 600 gctgttcaca tggaatttca tactctaatc tgcacgacag cgctgtttcg ttcaacactg 660 gcctgacgag ctctacattc attttgtttt ctttggtgcg catgttatct acatacctgt gagaatagac gagaatagtc cacgcaatct cagttagaag aaatatcccc aatctcctcc 780 toccaccace ttegaaatte caccageete teegteetgg acetageeat ettetteeet 840 gtctccgtct tcatcattcc ctccaatctt tccaatttct cgccaaaatg ccttatcgaa 900 ttctccattt cccactcctc accctccttt aacatatccc ttcctttcgc acccaagaac 960 gtaaagcacc gtccgatccc aatagcgccc agcgcatcca gccgatctgc atcctgcaca 1020 atcgccagct caaccagccc ttcatcctta atcaaccgcc ttatagctga cgggtcttta 1080 cactccgtcg tatacgagac atgcgaaaca atcgtttgta cgcgctgggc cagggtcgca 1140 tcagcgccat gcttgaggag gatatactcg actagtttgt gcggggggat tgtatttgcg 1200 tectgetetg aatettgggg aagataette etgtegetga tategtgeag tagggeegea 1260 aggtggacgg tgagtttgtc tatgggcttg ggcgttttgg cctcttcaga ctggaggatt 1320 ggcattgcaa gattcacaac gcgattgata tgcgctggat tatggcttgg atcgtaatct 1380 ttcatgcatt tcgttacaaa agctgaaatt ggtgcgatga gcggatcctc agacatggtt 1440 ctaattcttg aatgtcagct tccttgcccg cacagatggc tacttaagtg tagatggtta 1500 tttaccttga ttttctctgt atctatgtac tgaatcatgc ataagcatgc ggttgtcaaa 1560 agacgcgttg cggcttcaat ttgacgcgtc gggagttgga ccgggccagt cacgactgga 1620 cctccacagc aacaggctcc aaagagccag gcctaggtta cagcacagcg ggtggttccg 1680 ctgctggatg actggttcaa ggttcaagtt ctaagcaccc tttaaagcta gaaattcagc 1740 aatcaatata ttgtactata tgtgctaagc acgcgaattc taagctactg tacacgaata 1800 acagtaaata actgttggtc aagacatttt agagaaagaa atgacagcct gatgttcatt 1860 ccagtctcca cactccacag atctcgtacc cgggcgtcag gtggtgatta tttatgggcc 1920 caccggccca cagaaacaag tcgaagagca gcgatcggca tcccagtcta ttctcgagta 1980 cgaagtatgc gaaatatcca ggggattcta tctgattctg cgacgttgta acttgtaaat 2040 agacttggaa gtttgcgaaa aacagaaagg gagaagcaag gagtacaggg ttaattaact 2100 caattattat ggtatcgatc agtgattagt agaatagaga gtagaagtaa agactatgta 2160 gataaccatc agacaacgtt ccaatccatc caaaccatta atgccttgca tggcccgtga 2220 atcgtgcaat cagcaccgca cttcatacca gactgaattg cttcggcaag gcccttacag 2280 agcccaagcg gccatgagga gacctgccag accagcagca gagacaccga gcctggcggc 2340 agegttagtg ccagagggct cgtcgccccg agecggtcgc ggttgccctc gtcgccgttg 2400 gtgctggtgg cgctcgaatc taaaaatagg tcaggacttg tggcgggaag agacacggtg 2460 ccaaaagaga gcttaccatc cgagtcggag tcatcagtgc tgtcagcgtc gacacccgag 2520 <210> 2310 <211> 1914 <212> DNA

<213> Aspergillus nidulans

<400> 2310

ctcttcctct tcagcactat cttgcacctg cggcgtgcaa tcgagttctt gtcggccgat 60 aaaggcaggt gtccatgtgg cactgtttgg cacggaaagg ttatgctctt gatctggcag 120 agaatctccc ccagtgcagg cagggcagca ctcgaccgca tcttactcta cgtatgaacg ccaatacctc gagccatgct cattgttcat gccgcaaagc tgggccgttg ggtgagaatt 240 tgaattageg ttecaaatge tegagettge teggeegeet egeegtetgg getgaaagag 300 ttgcccctcc aaagggaatc gtttcgagta atagtcttca atgacgccta gatcgattcg 360 tagecattae getgatetga cetetgttet tettgagett ggeetettet taaceteate 420 catggcqaaq caaggcctq aaccttaqta tgatggtgct cgtctcggga aaagactttt 480 540 gcagctgggt taacacctga tatgcccatc acgagagact atggatcaaa gatagttgat gatactgttt cggcgcgct tcctgtccag agtcttatgc gttggcaaca ctccggaatc 600 660 tagggctgat ctctttgcgg tatttctgta caatagcttt agtccgatca gtaagatggc 720 tgagcagggg acttettteg egeceettga gtegaceate ategtageae agettttegt gcttcatggt gcagtggccc aggttgggca atgtcaggtt gaatgggaag gagctgcaga 780 840 gaagggcgcg cgttagttga aattccctca atgacacaaa accttggtga agccgaaatg

ctccgctggt tagttcttgc tttcgctagg tagttgcgcg ctgtaagagt ctgagttttc 900 ggcgttgttc ttcagcatat ccgctggggt atccttgtta taaggaagat tttaacgtcc 960 ttggagtggc ggaactctct tccagaccgc cgtcaacgtt agattgagat ggaagatggg 1020 cagaaacacg cacgacgagg accataatac tcatttagaa acttttcata aaggtcatga 1080 tcatcttgct atttgtctaa acccagagtg cacttcgtcc ttgacaaata gatgggatca 1140 acaatgaaag gcatatgcga ataacggcac ttggcggttc gtctatatcg tggcatctgg 1200 tetteegate accatecaag tegettaaae aaaggtaaag tetgagtgea aageagettt 1260 tgaggattgg acgatggtca aaacaccatt gctcatctaa tactctaagt ctcgtattct 1320 gcatcaacgc gcacaggcag caacgtgaca agcaatagcc aagaaagaag agaagatggc 1380 caagcccaca cccctcacag ctaagaggca tgcgccaaat tatctttgag gttggtctga 1440 ccgatatttg tccgtggaga taaatgccat tcgggcagag acaccaagaa catcgagacg 1500 tgactggtgg cagcctcatt tattagagag atttgatgtg agaaacagtc agatgactgt 1560 tgtcagatct acgaagtgta ctacgaagtg aagaacatag atggcaatga gtttggcctt 1620 aaagcttggc tccgatctaa ttttccgctt tcgcctgacc tctttcacga aaggctttcc 1680 atagettete gaaattgatg ageeectaaa tgaaccaatg aactacacaa egaatttteg 1740 cgtaggagtg cagggtttgg gagccggtgg gggctcggtc tgtttgatac aggtaaggtc 1800 agactgaatc tcagtttgag cgtaacgacg gtggaaacaa cgtgactttt cagtcttata 1860 1914 agggettega atteagette aaggetgggg tttegattaa egeacegetg gtat

<210> 2311 <211> 2298

<212> DNA

<213> Aspergillus nidulans

<400> 2311

ggcatttacg gatacataag caaccaaaca ggccaggccg ataatgctta cgaagggaat 60
acgtacaagg gactgcgatt ggtctcagat gactacagcc tgtactatgc tgtgtggtgc 120
aacaacgaaa aggagttcta taatcttaag gtataatacc ccgactgctc tgattgtttg 180
gagctgctca cacacgcaca ggatgatcct taccaaacag tcaatctggc tgcagatatt 240
tcaaaacatg agtcctaccg catcgccaac agacctctac ctcagatatt ccagcgagca 300

aatgeeetea tgatggtget aaagteetgt actggggatt catgeegtea teettgggte 420 cagetgeate ecaaeggega egtgeacagt etegeegatg etetegacaa gteetaegae acgttctatg caaatcagcc cagggtttcc ttctctgaat gcagcctcgg ataccatctc 480 540 tgggctgaag gaccgcaaaa gttcaacgtt tacaagaagg gcagccgcga tgttaacgat 600 ggccaagttg gtgatgagga ctcgtcaacc tccgctttga acctttcgga catgtaggtg 660 ccccagcaaa caagctaccc gagatgtaat aaactgatag gtcatcaagt ggcactacgg 720 ttgcggccac ggcctcaaca gtcatgtaca tactcttcat gagcctgtaa ataagtacga 780 aaggcactcc tgccacctta atatcaaagt cggtcacttg tagattgaca atcttcccaa 840 ctaatagaca aagtggaacc atttcctcaa ttcactaatg ttgaggcaca ataaagactg 900 ttattcattg attgtatcct cgcgtacatt ccagccttga acgggacatc cgatcgacgg 960 actactcccg aaccccgacc acggatgctc cgtcactcca tgacacgctt caatctagag gcataaaagc ttcgtctatt tcatcgagaa aatacggtta aatttccctt tgctaaaaag 1020 caagatacaa acgcatcatc cagttactct aagatatcaa gctattgtca agtcacgctc 1080 cttgcacgtc cacaatgtcc gagccaaccg ccacacagaa aatccaccac atcaacccct 1140 cagatctaga gagcttcgtc caccaaatct taactgccaa taatgtaccc ccagcacacg 1200 ccaccategt egeogettge ettgtgeaag eegatetteg eggegtegae acceaegget 1260 caaaccgcat teeetcatat atgeaacgca teegeeagaa egteetegae eeageggeat 1320 cacctgaaat cacccaaatc acacccattg cagccctggt cgatggtaaa aacacatttg 1380 gctttgtgtc agcgcacatg ggtatgaagc gcgctattga aatggcgaac gagttcggac 1440 teggtettgt eteggteaaa cactecaate attteggeat gtetgettgg ettgtteaac 1500 aggetattga tgcgggaatg atgtccctcg tettcaccaa etettcgccc getttacccg 1560 tctggggcgg caaggaaaag cttatgggcg tgtccccaat tgcatgcggc gctccagcaq 1620 gcaaagaacg ccccttcatc cttgacatgg ctccatccgt tgcagcgcgg ggcaaaatct 1680 acaaggcgct ccgcagaggc gagaatatcc caacagactg ggctctggac cgtgatggaa 1740 atatcaccga cgatccggcg cgcgcactgg aaggcgtaat gcttcccatg gtcgggccga 1800 cagggtctgc ccttgcggta atgatggacg ctttgtaggc gcgcttttgg tcctagtatt 1860 ctgcgtgtca cttttccctg ggctttccga ccaggtaaac cggcgtgtct cttctcactc 1920

tetteggact teacaceegg aactetteeg gegeetgeaa ttettateeg gecetteeee 1980 ettettetat teaceeettt etetteete tattetteet eeceetett eatetteatt 2040 etetettee eetteteaa tettetatet etetteetgt eetteette attetteae 2100 ettettette teeeteete ettgeeteee teteettaea ateateetea eeceetetaat 2160 tetatacete geatetteet teetteeee tettetagtt eacteateee tgetatteae 2220 aetteettet acacettee eetteetee teettette teetteeee 2280 etetteete eteactat

<210> 2312 <211> 2389 <212> DNA

<213> Aspergillus nidulans

<400> 2312

60 ccgataatac gacgacttat tagtgatect cetttegace teetgaggaa caectegget gettggeget geeactitta tigeeetget etitgagtat egtaetiegt attitateae 120 tgactccaac cggtaatttc tagatccttt ggaccatcca ttatatcagc cgcgtcgcca 180 acctaaccgc acttggtagg tcagcacagg agcgtacgct gaacgctaga agtacagagt 240 acagtaacct gctcgtccag ctccgccagc cgtcgtctgt tccctcgtct gttctgcgcc 300 gtcccgagct gtaatttagg caccaactgc aaatggccag tcaatgcctt gcaggaaaca 360 gtcgttcgaa cgaaggaaaa acgcaaaaaa agcctctctc aagaaagact tcttaacggg 420 agtttcgaat gaatccagct gtcagttcgg tcggttggat tacatgcttt caaaacccgt 480 aaccgcgact gatctatgct catttcccgc ataccatgaa atcgaactgc gattcgacga 540 ccaccttaca acttacaccc actttgcaag tactatcatt cttagctgac gttcgcactt 600 ggctcgcaat ttgcattcgt gaatcgtcga atttatagaa actggtgata tacctagatc 660 acagaggtat gggcttctgg cgaatgcttc gtccatggca ctctgcaatg ctgcctcagt 720 gcatatatat tacgtttacg agtaccetge actegeatte attgteetaa geacegetga 780 agcetteaga taccaggata tettgacaae atetgegaae tttggaaega ategeagtte 840 ggtegeagat ggtttaatat ggaatatgat gaetgeeetg geeattaatt eeegaaegta 900 taactgtatc gcgcccagat acatagacga cttacagttt atacctttga ccagacgatg 960

aacgcggtcg ttcacaatat ccaaccagga tctcgacagc tgaagctggt tggagctatt 1020 ttgccctttc tggacaccac gcgacacgtt cacgtccacg gttccgcggt ttacgaaaca 1080 agatacaacc ttgttgcgga acatccccct tagcggacaa taaatcaaga tcagttagat 1140 categitetg etteagteaa aetteagaag aggetaaegt ggetgaeegg tiaeetgtet 1200 cgctgatctc aagaatccca ctgtaccact gacttcacga ccaacctcca tacataatac 1260 tgtagcgaca gtagtccaga ccatcgttat tgaacttaaa tgctattcca cccttgttag 1320 cccactattg caaataattc atgtgcttta ttcttaccgg gaggttgtcg aactcttggc 1380 ctteettget ttgttgatet caaccecage ageageteaa eeetgaatee acteegeggg 1440 aaattgctag ctttactacc atgtctgata gtgaagttct cggccccaga agaaccggca 1500 cggcaactgc tagtcatgac ttcaacggca ttgcctgatt ccgctcgctg aggataccgc 1560 ggaatatece eeggeteaac eteetgegta aagggggget taeteateac ataetaetga 1620 actaagggcg caggggcaac aatcaaacat tcgaaaggga caaggatgtc ccaagcctcc 1680 aagattaatt teeagttetg gegegttagt gaetegtatt tgtggatgat gtgagaetgg 1740 gacatgtcag gctagttagc acgaaccgaa cgacgaacgc gacgccagcc attccagcca 1800 ttattgcatg atcgcaagcc ttctgctgca ggggttggat atcaaacgaa ggtcgccttg 1860 cgatgtcgcg actgtccctg cagtgcgcgg caatggccca accctagcca tactattgct 1920 cctagtcttc cagtgatcca ttgcaaccgc tcttacgctg tgcttgtgta ctttgcagtt 1980 tgtactgcgt acggagtacc ccattctcgc ggtttaattg acttgagaat aggccgatgt 2040 ctattctata ttctatattt gggttgagaa accaatgcct gtgctacttg tccttgttcc 2100 gttggtacct aaatacttgc aaggatagcg gacgttcgtt ttgtgaatcc tcatttgcga 2160 attegaaact caaatacccc gtccgatatc gatactgtat ctactgtata tacgtatgac 2220 eggetacace gegtteggge ttggttgtta agtacataca accaacecae tqeggateet 2280 gaagatacta ccattcgaac tccgccaaga tcctctgcga aatttcaatg caattttgac 2340 gtagacgaaa ctgcgttctc aattgccgat atctccgtat acgaacgcc 2389

<210> 2313 <211> 9032 <212> DNA

<213> Aspergillus nidulans

agcatcctta caatcacgtt agaccattgc atgaactgtt ttctgaatta tcgcatcgag 60 cgcagcgcgt agcgtctggg attgcgacgg caccccaagg ctccggtcgg ggcttcaacc 120 cqcacactcc actqcgggcg tatgtactcg gctacgccag tgtgccttgc cagtccatgc 180 240 cgataataac ctgatcccga taacgaacgg tataatgatg cggtacgcgt ttaaacccta taaagtaaga atatctcaag atcggtccat ggatcgtata ttttaattcg gttggcgggg 300 tttcgaggtc atgatgatgg ttcccaacac cgaccagtag tggccgcgca ccgccgcgac 360 cttggaagcc agcgctgggc gggcgtgcaa gccagggccc tagttcgcct agtagttcgg 420 tgtgtgcgag acgactgcga ggccagccca gggatcggcc atgggtagcg gcagtgctca 480 ctgcggcctt cgccgtagta gtaggccttg caggtgctga aagctgagga agtgggtggt 540 ctgcgcttct cgggcacgaa ggcacagtgt ccaggttttg tgcagcttca gcctttgagg 600 tatttagtgg acaccttgcc cccttttagc gcgcaaccct gcgaaaaaat tcttctccct 660 totogocco coettoacco caaaccogco agaaccogco aaaaggotoc cottoggttt 720 780 tgtttttggg cttgcttccc ttccctccct tagctaccct cttctccctc caactagcat acccattcct cgcgccacaa ccggcacctc ggttcaatat gcctaaaaac gattcaaaga 840 ccgtcacaat cgatgtggag gagttcacta agactcgtga cagtgtaaqt cttqtcttat 900 ctgccttttc ggtttgattt gcgttttcga ggcgctcgcg cgccgcgtct gtaaacaatg 960 aagctgtcgc ggcatccggt cggcgactcc cccgttccag ctgggcaacg ctattgttct 1020 ctttgtgttt attttcattg ccccataaca tcatctggtg aatttggccc caacatcaac 1080 ttgcaacaat atacaccaat aatcgcgaat ctatttcgca tcttttgtct cgctcttgtt 1140 tcgcgcaatt acaaaagtgc atcatccact tcagcgccgt tgctacagcc agctcaaatc 1200 gettgtegea egtegetett ttgtettgte acetettege tttegeatgg etttgegege 1260 eggaetgtgg actegtgeta atatgegaac agtttetege taaaettgeg eageteeagt 1320 ctctcacttt tgagctgtcg cgcgcataca tcaaccacac cagtgcggtg cttggtcagg 1380 ataacgcaaa tgtagatatc tcggcgatca ccaacaccct cgccgccagt cttcgggaca 1440 ctggcgtact cgctgcagcc ggcactggtt ccggcgccga gtctggcgag aagaagaagc 1500 gtaagegteg egetgateet aaegeteega agegeaeett gaeeeeatte tteetgtaca 1560

tqcatcacaa ccgggcacgc attgctgaag agctgggccc cgatgcgaag ccaaaggatg 1620 tctcaaacga aggtaccaga cgctgggccg aaatgcccga ctcgcaaaag gaggtatgtg 1680 tttgccctct gaactgtgtc tctagatgac tgttgcttac gtgtggttag gtctggaaga 1740 aactctatgc ggacaatctt gcggcgtacc gcgagaaggt tgctgcttat aaggcgggtc 1800 ttccttttga tcgggatgac aatgataagg cagccgacca actacaccta gacgtcgccg 1860 ccgccgaagc atcggatgag gaggaggaag aagaagagga tgagcatgga gaggaagaag 1920 aggaagagga ggaggagteg eetgageetg etaaggaaee eacteeeet eeteeeaage 1980 gtcgccgtag cgagggtaag ccatccaagg atgtctcctc tcctgtcgtt gagaagaagg 2040 gccgaaacga gtcgccggag aagaagaggc gcggggcggc taagaaggac aaggaggagc 2100 cgcgcaagtc tcttggaggg gagtcgaagc gctcgaagaa gaagcgcaag agcgacgtcg 2160 gtggcgatga cgagtaaatt ggttttcagc gcagaggata gtagttacca ggggctattt 2220 gtatagcaat attacggagt tggacttggt ttttgtttcg ctgctgattc ctgtacttag 2280 ctttactctt tgtttgtagt acattcctat tcgcgaagag aactggtttg cgtcgcaact 2340 cacaateett geaaggegae cattetaett caagtatate eeggatataa tgtttgteaa 2400 tgggatgaag catccgctgt cttcataggc cggaatgggt ccttatcagt tgaagcgtga 2460 cettatetee ggcaaceeca ceatacaage accaacttee eeggeettee aateecaeta 2520 gagetteqtt tttaaacett egeegaagte egaeggggag gggegtteet etetttttta 2580 attectqqat qeecceqaqq qaaqetttqa qqaqaqqaaq qtacceqaac qqattateqa 2640 egacacttet caeegeageg tactaceaga atataeteea aettegeeat tgaetgeeat 2700 tgattggcca atctcgtctc caatccgggt atcggcggtt tggatttgca ggctgagggg 2760 gtaaaaaaaa aaaaaaaaga aaaggcagga tacataggca agcgtggcaa tatgcacctt 2820 attecgaagg aagtatgtag tgeagtgegg aatetggatt etgggtgtet teeateatea 2880 aategettgg cegetettta etgaetgtte gttgeatgag tagetegata agetegeeat 2940 ctcacaatta ggctttttgg cccagcggcg tcttgcacgt ggtgtgcgac tcaatcatgc 3000 cgaagctgcg gtacgttgtg ctactagaaa attggagagg agagctagaa gctcggagaa 3060 ttcattctgg aacgaatgtg tgctgatagc cgaactaggc attgatttct tcgaacctgc 3120 acgaggtacg aagttcaaac ttactcttga cttcgctgta ctaatttccg agatagttga 3180

ttcgtgatgg gcaatactcg gtagctgacc tgatgtccat cggcaagacc atgcttggtc 3240 gccggcatgt actcccatca gtcccttcga ccctggtgga gctgcaggtg gaaggcactt 3300 tcaccacggg cagctattta gtgactgtcc accaccccat cagttcagac gatggagacc 3360 tegaaaagge tetetaeggg agttteetae egataeegee ggetgataea ttteeggaee 3420 ccgatccgga ggattatcta cctgaaaagg tgcctggagc ggttattcct gtgaagaacg 3480 cgcgcatcac attgagcgag ggaaggaagc ggattaagct caaggtgatg agcaagggtg 3540 atcgaccgat tcaggttggc tcgcattatc attttatcga ggctaaccct caactgcatt 3600 tegategatt tegegettat ggatatagge ttgatattee tgeaggeaeg tetgtteggt 3660 tcgagcctgg tgacacgaag actgttactc tggttgagat tgggggccat aggatcatca 3720 agggaggcaa ttcccttgca tccgggccgg tggaccttcg tcgggcggac gacatcatac 3780 agegettgea aactgetggt tttgegeatg tteetgaace egetgeggat aacgegeteg 3840 ttgctccttt cacgattgat cgcgaagcgt atgctcggct atttgggccc actactgggg 3900 atttgattcg cttgggactg acaaacctct gggtcaagat tgagaaggat tatactcact 3960 atggagacga gtgttcattt ggcggtggca agagtatccg cgaaggcatg ggccaggcat 4020 cagggaagtc ccacaaggac tgtctggata cggtcatcac aaacgctgtc atcatagact 4080 ggtccggtat ctacaaggca gacatttgta tacaacacgg caccagggtc gggatttgca 4140 agtcaggaaa tccagacgtt atggatggcg tccatccgga catgatcatc gqctcqtcaa 4200 cggatgtcat tgcgggagaa aacaagatcg tgactgcagg aggcttcgac acgcacatcc 4260 attitating contraacaa gracaggagg cartropetto tiggaatrac carettitti 4320 ggaggaggaa ctggtccatc aaccggcaca aacgcaacca catgcacgcc cggcccaaca 4380 cacatgegec aaatgateea ageatgtgae cagateeeca teaatgtegg cateaetggg 4440 aaggggaatg acagtggcgg aattggcatc gaagagcaga ttatcgccgg aqcagccqqa 4500 ctcaagetee atgaagactg gggatetaca eeegcageea tegacacetg eetggacatt 4560 tgtgagaagt acgacgtaca gtgtatgatt cacaccgaca ctctaaacga atctggcttc 4620 gtcgaacaaa ctattcaagc cttcaagaac cgcacaattc acacctacca caccgaaggc 4680 gccggcggcg gccatgcacc cgatatcata tctgtcgttg agcaccccaa tgttctcccc 4740 agcagcacga accccacccg gcccttcaca atgaacactt tggacgaaca tctcqatatq 4800

cttatggtct gccaccacct gtcaaagaac attccggaag acgtcgcatt cgcagaaagc 4860 cgcattcgcg ccgagactat cgctgcggaa gacgtcctcc acgacctcgg cgccatcagc 4920 atgatgtcct cagactctca ggccatggga cgctgtggtg aggtcatcct ccgcacatgg 4980 aacacagcgc acaagaacaa ggaacagcgt ggtcaattgc cagaggacga aaacacaggg 5040 gctgataatt tccgtgtcaa acgctacatc agcaagtata ccatcaaccc ggccattgcg 5100 cagggcatgt ctcatttgat tgggagcgtg gaggtcggca agctcgcgga tctggtgatc 5160 tggtcgccta gctactttgg cacgaagccg agccaggtat tgaagagcgg catgattgtt 5220 geetegatga tggtatggeg cactatttta acceteegte eggeteatte atgettacee 5280 agactgacca acctcgcagg gtgaccccaa tggttcaatc cccacaatcc aacccgtgat 5340 catgcgtcca caattcggcg tacgtcccta ccccattgat tttctccttt ccatttactt 5400 acatatgaaa aaaaaggcct accttcccag cacatctgta atgttcgtct cgcaagcttc 5460 actcgacaca aacaccgtcc aatcctacgg gcttaagaag cgcgttgaag ccgtcaaaaa 5520 ctgccgcaat atcggcaagg ccgatatgaa gttcaatgac acgatgccaa agatgaaggt 5580 tgatccggag agttatcgcg ttgaagcgga tggaaggctc tgtgatgcgc agcctgcgga 5640 gacgctgcca ttgacgcagg attattttgt ttattaagca gggtacaggt atgtaatgct 5700 tgtatagtgg gttggcgata ttgataattg tttgggtcta aggtgtatat gaagggtctt 5760 atatataatg attggatgat tttcttatga acgggctcta aaatagtgca actcaagccg 5820 aacataagta gaacagccgc agtgcctacc ttctggatag gcacaaatct aagcacgcat 5880 tttatccagt tcgaaatttt ttcttttcca tcgtgcaagt aatgaggtat acagctgaag 5940 acggcttgcc aagttgtatc aaggatgtag tcacccctga agtagctgcc aaagtcttca 6000 cagaattgag gaatactgac cacaatgact ctcgcttggt tcttgaatgc tgagtgtctt 6060 gatcgcttgc cagatggatt cctgtggccc tctggttccc ataagagtca atggtgtctg 6120 gattettget gegtaetaeg getggtgtee ttetteeggt ceateteeat gtacatatgt 6180 aggtctttcc tcttaaatgg gcaagggttg agaaaaaaat actgaagcga cgatatgcat 6240 aatgaagctg catgaaatgc ttttgcgcag cgtgatcgac aggctaggta cctacgttga 6300 gggggtacta caacagtcta gttctatata cacctgcgta tccctgcgat accgttgtgc 6360 cacttgaaat tcatgcgctt cggctgcacg ccagtctgat cgagtgacgt cgtttcttgt 6420 tagttcttgc agtagtgtca gtgtcataaa cctcttacaa acatataaac tgacaagata 6480 aggcaagtgc cgggaacatg gcatactttg ttcacccgta aatggcacca gtatctaagg 6540 ccaggaatat tagactctat tttggcgtcc atagaaagcc caccetcata tetetgggcc 6600 gtttgctgct tcctggggtc actatatttc ctcaaccccg gccacctgaa cgaatgcctc 6660 tttacggcaa gtctgcaggt ggcagatcag gaaacattag taattatgcc catgccgaac 6720 atactgccat gtctgcttca gtttctatat ccggtattat tcgtagcttc agtgctagtg 6780 aagtcgcacc aagcaattcc aggcccatcg ctcaacagct cggctgtcca tcggataagg 6840 atgaagagct cagttgcttg tagaccaaga gattgaagac gccgttaacc agtataataa 6900 tgcgtagacc gatggagatt tctgagcttt aggccaaatg gccgacggcc agaacatcgt 6960 cgcgctccct tgttgtgatc agcgcgagta ttggctatat tggagtgtgc tgaaacctgg 7020 gatataattg gcctccagtc tcgcagttag tcgcaattag tctcaatttg aggtacggct 7080 gagctaggaa ccaggtgttc taccttaggc aaccactttt gctgcgggat gattagccgt 7140 gctgccaggt gtaagtggcg ttcattcttc cagacatgaa gtaggatctt gatatatgca 7200 aaaacaatct atactcctta atatgaaaga cacgataatt agtcgacact ggagacacga 7260 agaacggtag ttgggcacgg gagtagccgc tgtaatattc cgtacttgta ggtacctgta 7320 actcaccgct tcggcgcctg gtcacttccc ttgtgacgtc ggtagccggc atataaattc 7380 ccagattect acaeeegtta etecteacag teegatatgg atgeteeteg agegteacee 7440 cttgtattcc accetcacgg ctgaggaate ttttggteet tgatatgteg aageteettt 7500 ctttgttgcg ggctgtacct ggcggactgg aggttcgggg ttaatttgag gctgtacgat 7560 tgcctactgt ctcttttgac catccacaaa cttacgatgc ctacggtctg ttcattatcc 7620 ccgtgcagta aagtttgtac ggtcaatcat gtcatcgaca gcgtctggcg cacaggccgc 7680 atctcccacc acaaatcgcg aaaccacaag agcctcagtc aacgctgcgg agaacccatc 7740 aaccaagcct cacggagctg aactgccgcc ccgccgtggc caccaaaaga tcgtttttac 7800 agacccggtc gctctgcggt acctcgaaga agatccgtcg actgtcgtgc tgcatcgtcg 7860 tttggccttg gagggctatg agatatacat tgttgagcaa tgggcgtgtt caaggattca 7920 ccccaccttt gttatcacaa cattcacggg agactcgtcg cataaagtgg tcgctggagt 7980 gttaggggtt cctacggacg agtcgacatg gtcgccccgg ttgaaactct acttcaatgc 8040

agttaagagg tttcagctac gagagaaaga gacgcccctg ggcacagtca tggtgacaga 8100 tttgaactcg ttcccatcgg gattatccgt catagctgtg ccagatggcg acatccttaa 8160 gcaccgtgaa gactttgttg tgaatgagaa cctgaaacgg ttaggctgtg ctggtcgagc 8220 cggtttgaag ctccaagaac cagcacctgc taccgtcgct aaatttcacc aattataccg 8280 gacaagcgaa agaatccccc tttacagcgc cgtggtggag cttgtcaaac aatgtcaaat 8340 cgctttgatg atgtttggta agctggcacc ggagtatgtg gatggcttac tttgcgatgt 8400 cactgaagat gctgtgggag actggtggac cgatttcgga atggacctgt ataacatcga 8460 accaagcgat gggaagctcg gtcctaccac agtagcagcc ttgctaggta ctctgatggg 8520 ggctcgcaac cggcttcatg cgagcggtgc ccctgtcggc aaggatgcct ttgacatcgt 8580 taacctcaaa cgcggaatcg ggagttttca aaaatctcag aaaattgaac ggacgcggcg 8640 gctggatcgc cacactttgg acagattaca ccgagttact gcaaaggcag ccaatgctga 8700 gggctggact gacgcggtca aatcaaccat ggctgagctc agcgggcacg ggggcgagat 8760 ggttatgggc atggttcgcg gcaaagagaa agggggcatt gccgatattg aaacaattga 8820 cattgacaac ttcgcccaac tgatcagcgg cgaaagagca aagtggttat ggcgagggaa 8880 gccacgaaag agcactgttg agtccaatgg acccccagct gcggatatga tgttcaccac 8940 cgacgagcaa ggcgggtacg tctggactag ccgcaagcgt cattcccatg aggaccttgg 9000 9032 catggagcct ctttccagcg atctgaacgc tc

<210> 2314 <211> 1889 <212> DNA

<213> Aspergillus nidulans

<400> 2314

tattcccgcc tctagctgga agatctcatc tcaatctttc cgttctgctg tgtatttctt 60 ttacttcact cgagatgtgg tgctagcagc cttagaagat actttgtcat tatccaatca 120 cttctatcta catagtctgc caaacgctgc aatggtgtcc actgttccg cgcttcaagc 180 ccgcctgaaa gagctgtcta cttctgtcgc tcaaatacat ccgctcgtct ctcgactgca 240 caatttcacc acggccgttg gtcagggga cgatgccgc ctagagctgg gagcagtaat 300 acactctcga ttaaaggacg ctgaggatga gctggaatta ataaaggacg acgttgatga 360

tctggaatcc actacagata gcagaaggag aggtgcgggc ttagagaaag agacggagaa 420 ggagcgggtt atcgcgttgg ctcgacggtt ggcgaatgat ttgaaaaggt tgggtaacct 480 ccgcgataat gcgattctac tctgagcatt tgttgatact ctgcttagga cgcgaggcga ctttcgcaat gcccaattac aagccaagcg aaatgctgag cttgctaagc gtaaggagcg 600 660 agaactactc ttcgcaaggt cagcgggagg gactgagaaa cgaaatccgg caaaggagaa attaactcag gaggatattg tcaagaatgc ttccaaagat gtcacggcag cgttaaggcg 720 gacacaccag cttatgcagg cagagettte ecgaagteaa ttegeccagg aaactetggg 780 tatgctgttt catctagctt cacaagtctc agactaacca tcttgcagaa caatctggcg 840 ctgccttatc ctctctttcg gaatcatata ctaatcttaa tacgctgctt tcatcgtcgc 900 gcaaccttgt cgggtctctt ctccgttcac agaagtcaga tacctggtat ttggaaacgg cattctacat cttggttggc actatttcat ggctcgtgtt tcggagactt ctatacggac 1020 ctctctggtg gatcgtgtgg atgcctttta aactcatttt gcggtctgtt ttcggtgttg 1080 caggggcaat aggtgttacg agcaaggctg tccaatcttc cgtggccatt gggacggatg 1140 gagtggctca agaaacactg geactgaatc atataccgga agccaaggcc catgttgttg 1200 gtgatactgt tcccgatgat gttccgggca cggatgcggc agacctggac tgggtaatgg 1260 ataagattgg cgaaatagtt gaagaaaaca ccgaccagga aggagcgaat cttgacgact 1320 tctcgctaga ggagttgcaa agacaggagg atatgccgtc taatacaaag aataggatgt 1380 atgatgcgac ggaagtacta cagaaccggc gggatgaatt atagaaagca ccacggcatt 1440 gtaaatgaaa ctcaccagac ttgtaacatg atgacatgca tcttaagctt ttaaaaatta 1500 ccccataacg ttcccttaat tttccagggt agaacacctc ccagttttaa gggtggaagg 1560 cttgtcccgt cgggttaact aacttttggc aaaccgaagg gggaaccctt tttttgtttt 1620 gggaacttgt tttaagtttc aaaattccgt tttccttata tagacccatt tataggccct 1680 cccttatcct tttgggccac tcttttaaag ctgcccccc ttttattcaa caaatcctaa 1740 aaagggccct cttgaccccg ttaaaaattt cattatactt tgggaataaa tttttcccca 1800 acttaattct acacccatgg tttgaacatt tttttttctt taactaataa gtctgtctct 1860 1889 ttttttcctc gtaataaaat cactctttt

<210> 2315

<211> 2627 <212> DNA

<213> Aspergillus nidulans

<400> 2315

ttgggggttt ggttgagtgc cgcccgccct ggtaaaattg gttctaggca ccgtggttcc 60 120 ccttcacatg aggaattata ggagcctatt gttccacttg acaaggttgc gttcctggca cctgcttctg cttaatccta tgagacctca cacagcatga aagtgatttg agttgccaaa ggtgtccgtg agttatcaac aattggttat ctccatgctt gagagacagt tgccatgtac 240 ttggaggtgc ctggcagagc actgcatcac caaccgccat cgaaaattgg tgatcctgag 300 agccaatgga agggcggtgg tgggcgtcgt atgatcgcgg gaatctgccc ttccggcaca 360 accgccggct ggtgacagcg ggcagtgcag cgaccagtta tatttaccgc ctggcagaat 420 480 ttgtactgta tacatgacta agctttatta taacttcttg aaatatttgc ataaaatctt ctaaagagtc gcttcaagct tcgctatcgc gcccattacc tcccggacca ttttatttgc 540 cccctgcgag gctactagta cggcgtccga ggtttgaact tctactcggc gtactgaatt 600 accgccagct tggctgagta aatcgcagtg gcatattttg acatcgcgat gccactctta 660 catgggctct ccgccagcgc ggccttctga tgcaagttca ttttctcagt caccttccca 720 780 gacacataga gctcatacac cttcgacgcc gtgcgcggga agacattcgc gaaagctgcg atacatcctg ctgagccaac gctgagcccc ccgattagga agtctgcttg gccgccgtac acagcaaact ccgacgcagg aaatgttgcc gcgagacggg tgatctttcc cacagaagcg caagtcaatt tcacgccgac cacattcgag acaccgttgg ggcttgactt tgcagattcg tgaacgatat ctgtaatggt ctcggaatcg atgtcgacac cgttgcagac gccggggaag 1020 ttgtagatca cgacggggag cgggcttcga cgggctatat cggcgaagaa gcgcttcacg 1080 acgttcatcg ttgtagcctt gccgaagtat gcgggtggga ggacaaggag atagtttgcg 1140 cctgcgctgg cggcatccgc cgctaattcg agcacctgct ttgtcgagtg ggctcctacg 1200 ccggccatca gagggaagtc tgggccgacg gcctcacggg ctgcggagat tagttgtgca 1260 cgttcttcgc gggtaagcaa gaaggcttct gagttcgttc ctagtatgac gagaccggtg 1320 agaccagttt tggataggta ggcgtaatat ttcttctgcg cttccagatc gattgtatcc 1380 gtcgcatggt cgaagtatgt cactgctggg caccataccc ctgcttttgg gacatgggga 1440 tgtgtgttga ctgcaqtgga ttgcgaaccc atagccgctg tatcctactt tccggtggct 1500 gaggtatcag gttattgagg attgttttgt ttgcgcagca gaaagcgagt agttgaagca 1560 cttcaaagct atctccaatc catatatatg tgtacaacat cgcagagtgg ggtaatagat 1620 caggataaat atccgactgg tgtgggtggc cgtagatttg gggtaagctg gccgtgcggg 1680 cttatcactc tagcagggga aatattcaga ttgtcggcga acttttatag ttcactgtat 1740 aaaaagetta atetatgaaq gacatatett ttattetttt gatattetta egagttatga 1800 actaggaaca tgcaagagat gaataaaggc catttgccca aagctatata atcccagcga 1860 acagatagee ggettgegat gateagtget gtecaegatg ttageaaaag gtecategee 1920 aaagacaagc ggcttaccgt gatatcttcc cacttctccc agccccgccc gcgcacttgg 1980 qcaaqttcct ccataqtata tqctttqccq qtqqtaaaat atccaqcatt gatctttgca 2040 tegatetega etetegagte ateagggate atateetegg ggatgggtat aegetegaeg 2100 atcttgatac ctgactcgac gatggcatca tgcttcatgt tggacatcga tagcatccgg 2160 tegatettet tgatteetaa eeaatgeaga atgtegggea tgagggettg gaategeate 2220 tagatcgaga tcagaatgta tggtatattt gcagttggta tgttgacact tacatctcgt 2280 actectgeta tatteteegt eegagtaaag taettategg eagtategee geeaegettg 2340 cgtgcgttgt ataccaaata tttggtcact tctcccaagg cacggccctc ctttcggaag 2400 tagattacaa caccactgcc accattctgt gcctctcgga tggcctcgcg aatcccgaac 2460 gccaggtagg gccggcacgt gcagatatcc gattggaaca catcgctgcc gttacactca 2520 tcatggattc gtagagccag tttgacgttc tcatccgata ccctctctgg gggtccgaag 2580 2627 atatagacag tcaatccgcc aattggggga agcaatactt tcacgtc

<210> 2316 <211> 866 <212> DNA

<213> Aspergillus nidulans

<400> 2316

acageettga agteagegat tgttgttaag gttatgggtg egtteteege geeetegaeg 60
aggatagege ggeggtggaa aaagteaatt ggeattteta agagagagat atggggegtt 120
gtettgtagg gegeggegag gtagtttgta aatagaeegg gttggaaaag agtgtaeteg 180

aggatttgct tctctcggtt gacctcggac aggtacgttc ttatcgacga tttgtaggtg taccaaggga ggtggtcgaa tgttgaactg attgtattag taacataaag aacttggctt gagcaaaatg ataagagaaa gggcagggta ggatgagtag gcaagataga ggaagactta 360 cgaagcccac tcgctcggcg caaacctctt cactccagcc gcgatcgagg cgtcaataag 420 ccgtctctgg acaggactcg tttcgctgtc ttgttcaatc acaaaggaca acacagtgtg 480 tacgcccttt aagatatcgg cgagttgttc agtctcggcg tagtctgttt tgatccaggt gatggaatcg gggagaatga tggacggggc gtcctggtac cgatgagtca gtggccacga 600 gcagtccgag tgacaggata aaaggtacct ttctggaaag aaggagaacc tcgtgtcttt 660 ttgtttcgac cagggcgtca atgacttctt ggccgacgcc tagagaatat taagtgcaga 720 780 tcagttaccc ggcatcatga agtgcacata tgagcatagg ttttcgcagt accactagtg 840 ccgcccgcaa ttgcgatttt gaccatgtca gttatagagc tgccggcctt tagatggtat 866 caggtcacgg gagtgaatag atgact

<210> 2317 <211> 1235

<212> DNA

<213> Aspergillus nidulans

<400> 2317

tgtgtggtac ttgtaagact tcaataattt caggctaaac tcaaagtttc agccacgggc 60 catagaatat aaggatgcag taaactcaat acagcggtgg tgccgaagcg ttggtccgtc 180 gctaccccct cgtactcagt actccagagc ggtgcacgga ccgcagacct aggatagccc 240 taatcttggc tcgagtctgg gcccagctca cgggccacgg cgcacggccc gcgagccgtt 300 ttaagttcaa cccgccctgg aacacactcc accggctttt ccactgttta gtttctaggg cacagaacgc tgtagtgacg aattctcagg acaaatatat caacaatggg tcaaggcagt 360 gatgggtatg gtggaccgtt agcttgatga agcagatcat ctaggaaaga gcgggcgaag 420 caattgaatt gtaatcttca gacggccgca taggaccact gtggattgcg agcttgataa 480 tggtaaattt gatgtagata gtattgtaag tatgcgaggc tacagcctgg actcctcctc 540 600 ttcttattct aagaagtcga ctaccgtgct gctcgtaagc caaggaatcg atctggcctc gtcagacttc gttaaacgac gatggagacg ataggtagga tctcagaatg gttggctctt 660 gagaggttge tatacatcat teteggtett ecaggettte agetgtacat tettgatata 720 gtteeegaaa teecattgae acetaatatg taacegtage tgeacteeta aegeaagett 780 aageecagae teggegtggt ageggtagtg aaatgetatt ateeagetet ecaggeaget 840 gateeaacaa ataceegaaa tatatgtaga gagtaaegag aagtgtaeeg eacetaaget 900 cagtttaaet tagateaace egaacagaaa taagtgatge eacegaggeg tteeetagae 960 catateatte gaettgtaca aaacagacae tteegtagte aaattgatt gattettat 1020 ateeacagta eteggettgg geegegteae eggtagaate ategtttgge tgetgttate 1080 gegaggatee gteacttete gateacegate eacettgegtt gegtatatag aggtgtegaa 1140 gegaagtee eggtgggaat attttgtta gaaga 1235

<210> 2318 <211> 1665 <212> DNA

<213> Aspergillus nidulans

<400> 2318

tacagccacg aggttgtgcg agctccacgc actggatacg cgcgattttg ctcgcgcgca 60 ggccaagatt ctgcttccgg tccgcttgcg tcagggtctg catggaagct gggtagatgc gaacgatgac gatcatcgtg tgtcgacagt gggatcttaa tgaatcagtc agcttccagc 180 tcatactcag cacttactgc atcggctcaa acggagtcct gaagcgcata ctccccttta 240 gccgtccata cttattggct agaacatact gaggattggg gggggaatgt gtactacatg 300 taaggtccaa ttacttaaca gtactctcag tttaacctag aaaattcact ctgagaagaa 360 atcgatgcgg ttgattataa tagcccaagt tgtccacgac cttactgggc tctcattcta 420 480 cactgcqttq agccatctta tagcctgaca aaaagaagtg ttgctggtga agactcgaat atctcttccc cctgcttgca tatattaaaa cacgcgatga atatggaaga ctaagatagc 540 600 taggccgccc tttcaattgt aatccgaata taccagattt ccgtcatgag taaaaaggca ccgatgtaca tacataaata gccaatgctg tatggacaac agtgttcaac aaacagttga 660 tecgtgeate atceteatet eteateaaat etttgetgta eeagataetg eeteteaetg 720 ttccatattc ctgactttcc tggtgaaagg atgccgctcg gatcgaacaa gtcctttagc 780 gcgccagtaa ccttcgagaa gacatggcca ttgaagtcca atttccctgc tagattatcc atatgactca catgagtacg atacacgata tatccctgct tcactccatc tcgcgccaga gttttgtaca gctcgtggac gcgcggttct tcagcaaggg tatagacaac taattcaatg 960 gctaccacat agcgcgggta aacatggaaa tccgcgaaaa agtcaaagtt ggcgtcgatg 1020 gtgtgctgct ttgccgtgag gtaccagttg tacaactcac ggccggaggg gggaagaatg 1080 ggtgagtagt cgatgtgccc gccgccgggc tctgcacgac tattgacaag gttcagaggt 1140 gacagggttg ggattccact gtgagggatt tcttcgctgc caatctcagc ggcggtgata 1200 gcgcgtccgg gagtgccagg gaactctcgc cactggatct ggacgccagg gatgacgctg 1260 aatgagcgct ggacggtgct cagcagggcg ggcagcatct ccacggatcc ataaagcgag 1320 aagtacgcct tccagaagcc ccagccttgc tgcttgcgga tctcctccag aaccgggtac 1380 ggaacgtggg agttgggctt cgtgtgctgt gccagcttgg cctgcacttc cggcgcttgg 1440 gagaatagcg caatgcggaa gatattggcg atggacggcg agtttaggat gacagagcgc 1500 cgcatgaggt cagagaggac gcccaccaag gggatgagat tctcttcctg cggaacactg 1560 accgtgaccg ttgcgtaagc ttctggggct ggggtaatat ggatgccgat tttggtgacg 1620 1665 actcctgttc caattagcaa tctttgatcc cgatacctcc agttc

<210> 2319 <211> 4245 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2319

60 aaaaaacttg tgaaattaaa tcagaagcat ggcaattcaa gtataccgga cctcgcctgc 120 ctagagcaat caagccaatg accactgata tcctccacaa atgccacatg tagctgccaa catgtcccac atggtcagcc agtatacccg aagtcgagta gtatcttgga aacggccatg 180 atccaqcqcq cqaqattgaa agatcgacat cagcggccac tccctatcag actactccat 240 300 ataatctgca tgatcatatc cagtgatctg attggctcac cccctgaacc ccctcccctg 360 ccaattcctc agaccgctga tcagggccat gtgaaccatt gctcgcctac tcagagtaca cccacacgcc tgccaaggcc tcctttgata cgaaacactg aataagtgga tgcgatgtaa 420 480 cctcggggtt ggtcagcctt gttgttgttt agcttagatg gatcggagga ggccgattgg

gtatgatagc tagagagttc acggatacag atcctggtat aaatagggtc cgtctatcca ttctgtgtag gtaaagacca agcgcacttc tataccataa ggcagattta gcaggttttc 600 660 accacatgga cgcagacgag atgttccaag tcaaggtact atctgctagt tcccttttat 720 attocactty attaaacaga gtatactcac gaaaatgtcc agaccctcct cacccttctc 780 ctctccacct ctctcaccgt cgccttccca gcggtcgaga ctcgcgactg cgcctacacc tgcggcagtg tgtgctactc ctcatccgcc gtctccgccg ctgcaaatga gggctacagc 840 900 ctegagcagt ccggcgacga cgtcaacgac tacccgcacg tctacaacaa ctacgagggc ttcgacttca gcgtcgatcc tacctactat gagtttccca tcctaagetc tggacagatc 960 tacageggtg gttegeeegg tgeggaeegt gtgattttea aegaggatgg agagattgeg 1020 ggcgtgatta cccacacggg ggccagcgga aacaactttg tttcctgcta gggggcttac 1080 ttctagctta ttctcgagga aaagaatgga tttaatacac ctgctcatga gttccgccca 1140 atggtttagg cggtccattg gagtagctgc tgcagccatg aagccctgga tacctactac 1200 agcatgatcc atacactacc gactgtagat gaagcggggg ttccccgggtg cgctgaatgt 1260 atcagatatg tecaateetg atetggeaat aaattgegta tttegeagga tgegegeate 1320 gagcatagtt gaggttgttg gatccctctt gagggacggt aactaaggac tagagccaac 1380 gttgaagggg gtttcaaggc actgtttcgt taccagtcag actgaactgt tgaatgtagc 1440 agccctgctg ggcgcttttt gtattcgcgt atatatgtac atctagtcgg attaagagca 1500 agaacacacc atatccccta tgcaaaacgc caccgtttac caaaacaatg taatacaagc 1560 tgagaagaga aattaaatcc atcattcttc agtcaaacaa ccgggcttga gggactggta 1620 gggctctggt taatagtttt cccgggagaa acctcctcat agtatacgta atcatcgtcg 1680 tegtetteaa teggetggee aaagatgeet eeccagacae egteecaaag geeettette 1740 gtgacgagag ctccaacaag gaggattggc aattgccaga tactggccca gaacaagcct 1800 ctagcagtac cattggcacc ctggtgcttc cagaatccgt aagcctcttt cgtcaaccag 1860 ccgttggcaa cagtgctgct aactaagaag ccatgtccta caatccctgc ccaccagaga 1920 ccaatggaga gaggaaacat gaggactgag tagcgcaggg cgacgcgagc gttgcgcgct 1980 gggtttgtcc aacaaagcat cttgtatccg gctcccttgt attcctcgcg gatggtgtgc 2040 gataaagcgt tgaaatgagg aaattgccag gcaaagagga tccccccaag aagccagccg 2100 ccqaqactqt tttcgccgaa aagcatgtcc cttcaggtgt catgtcccgt tgtgcttctt 2160 qccctgctgc tgcaacccaa cccatcattg gaggaatacc acccacgata gcaccaatcc 2220 aagtatttat cacatgcatt cgctttagtg gcgtatatac aaacgcgtag agcgcgatat 2280 tageggegga cagtecagtt accgtggggt ttgttccgaa gtatagcaga cccaacccca 2340 eggeggeegt tgeaatggea aagaataegg eegeaegteg ggtgaegaga eeaeggaeea 2400 gaggcctgtt gcgcgtccgt gacatttggg cgtcatattt cggttcgaaa atcatgttca 2460 aagtgttggc gctacaggcc gagaggaatg tcccggtcgt caagtaaagg aatgtcaagg 2520 tggaggtaga aagggtagga agcggcgcga ttgtaggatc gagagcaagg atagaggata 2580 ccgggtatat cccatatgcc gaagttgtcg agagcaggac caagaaggag agacggggtt 2640 tagtgagege gaagaaggeg gecaacttge ggegeagtga egttttgggg agegttgaag 2700 agaaattega eagttgegeg gaggeatetg gtggaateae tggtteggeg ceattgtttt 2760 gtgctgccgc ttcctttaac cgctttcttc ggcgatgagg caactccgac agctccggtg 2820 atgtgctggg cgttgaatgt ccccgattca gctggctggg agaattgcta ggagaaagcg 2880 acqtqaaaaq agatqqttqt qgagtcagat gactgtcacc cttatgcgag gaaaaatacg 2940 tettgtteae agaagaagae ggtgattgee eageaeeagt agattgtaae egegagateg 3000 aagcgagctt gttgactgcg gggaaagaag gccggctgcg gttgaggcat tgtaaacata 3060 agggcgactc tcgagccact cctaacctcc cgagagaaga ccggaggatc atgacggcag 3120 atgagcgcct gcgaattgac agcagagcac actgttgagg tcaattgccg atatgaagcc 3180 taagacggcg cgggagaaaa tcgtaggtca gacgataaag accaaaagcg cagtcatttt 3240 ttggaaagag ccactaagag ccctgggatg gtcatcgtac cactctttct cttgcccgtc 3300 agetteeeet eagtteetee agaettetaa ggetagetee aggeetggaa cacetegtet 3360 gtgctctagc tccatcttac accactatgg acgtcattca gaagacgctc gtcgagcctc 3420 tecageetta eeteeggeee gtegtegegt eagtacegea acetgteeae gatgegattg 3480 tctccttgat cggctcaagc tgccacaaca cgctcgtcgt caaccttgac cttgcccagg 3540 atccqqaatg cacatctctt gcgatctcta aagctctggn gattggtatt gatggcgcta 3600 gtggaatcgt caaggttece cagattetea ageteateet gttetgetea tetgegggtg 3660 tgtcttttgt gtcgtatgcg cttgagaccg ccagcttgct catcacgctt tcctacggag 3720 tgcgcaacca atttccttc agtacctacg gcgagtccgc attcatcgct gcgcaggatg 3780

ttttggtagg ggtattggtc ttgacatatt gccggccgat ctgcatgagc ggctgcgttt 3840

gttgcagttg tgggagcgag catttattcc ttgcttgttg acacttctat tggtgatgct 3900

taaaacatgg gcttaccttt aaggcggcgc caggaccttt gggtgttggc cagaagggtg 3960

ccccaaatcc tgactttttg gcaagaaagg tggaaccgta ccagttattg ttttgctgtt 4020

ttgacatttt aagacttccg gtttggggaa atttgctaat gtaatcaggg tgtaaaacac 4080

cctcaaaggc tcttttgtcc cttttttaa cccccttttg gggggtaacc acaagttcta 4140

ttttacgggt ttctctcttg ggttttcta aaactataat tcttgcgccc aaattgttga 4200

cctcctgaaa ccccctccc aacccctaaa ggataacggt gtctt 4245

<210> 2320 <211> 6832 <212> DNA

<213> Aspergillus nidulans

<400> 2320

ctgaatggac ctagcttcqt cgtccctctt atatacctcc ccacatacct taccactttt 60 totogototo aagacaagat gatagotoca cocacgotoc attitottoa totoaatott 120 ttggagcctt aaaaaggttc agggacacac tgacctcatc catcaatggc tgaaagccac 180 aaaaaagcca cccagcgcgt tatgcgtttc atcccggata gctcgcgctc gatcattggt 240 300 gcaccagtca ctctctggct aatcgagcag tgtgattcgg gagatttcgg tggttaagtg taacatatga cgttaagctg cagggtggct gcgggcggtg atgcgggctg gtgccaatga 360 420 tegaceggge ggtggagegt gagaageteg ttaaetteaa ttgagtetag eteaggeeeg gcggacttgg cccgccgtat agaattgcgg ctagactgga agaagtctag agcagtggag 480 cttagctatt cgcgatttcg tctgctttga acaccactct tctctgcagt agaggcttaa 540 tagtgtacct gcaaaacctc aattcaaaca gctattcaca tcatattgcg ttaaatattt 600 ttttatcatg tctatcgtat cgctcgtaat caacatctag gtatctaggt gtagaaatat 660 acatactata ctgaagctga cactetteet teggagtaet gteetgegag egaatacete 720 aactegecae etegettace tegagtgeae gaegtgeget agetegetge actecaetee 780 ccttttttct tttttggtgc gcgcaaatgg cgcgacaagc tctgcattta ggtctagaga

agtcaaagct cgtatgcagt attgttgtcc cagcccagct cgaacccact tcgatatttt agogtgtaat ctgccccgcg ttctcctcac tttcggatgc atgtgctggt gctggagaat ctcgcgcggt ggccacatag aaggcactgg agaggatcaa cgcggatccg atccaactga 1020 cagccgacaa cgtactcccc cagacagcag catcataaaa cagcgcaaac agcatctggg 1080 tgtagagcat ggtqgtagct tttgttccag atqaaqagcq gqcqqgtttt attgtttctg 1140 actttgaagc attatccgct tcgttgaaat gctgatgaag cgcagacgta tttcgaactc 1200 gcggtggggg tggtacatat gatagcccgg cagttagaag aaactgtagc agaaatccgc 1260 agacaccgag cagaatgagc agagtccatt ccaacggcgt cccgggcagt tctaaggata 1320 ttgaaggaag gaacacgatt gcaatggcag aaacaactgt cgtgaccagt gaaaagtatg 1380 tgaccgaaac cagcgggtgg caccgctgtc cgatcattcg gattgatgca tatgcggacg 1440 aggcaccaag gacccctatc attcccatag tcactgccat tacgcggtgg ccttggtctg 1500 cttcgccagg atgttccatc tttgtttcga tagactccgc attatcgtca gcggcaggct 1560 gcaagaaagc aaagggccgt gcaatcaaaa cgacgcctat caacgagatg aatccagcta 1620 actgctgctt acgggtgaaa atctcgccgg ggatgaaatg ggagcaagca tagcagctta 1680 gaattggcgc gagaaaggtc aacacagtcg cctcggaaag tggcagatac tggacagaat 1740 aatagagccc gtacacgccg atgaagccac tgatcgcgcg gcagagaagg agagggaaag 1800 tggagtggtt accaaacggc tgcggcactt tcgcatacca catgtacagg tagctcgctg 1860 taacagtgat tgacatacgg gcgaaaagaa tctacaggag tcagtttcct gcgcgctcaa 1920 gacaaccgcc caacaatctg cattccgcgc caccaagacg tacctgaaac ggcttgaatc 1980 cctcgccatt cctcccattc agctccagct ccttggtcat gcagttcatg gaagctccaa 2040 agaactgcga catcagtacc aagatcatcc ccttgccctg gagccagata ttcgtggcgg 2100 tategtgeat ceteteegte catggeaacg aaggegtegg tggetgtggt gaageeagag 2160 gcaaaggtga cggcgacctt actccatttc cagcttgcag caacggcgtt cgttccccag 2220 tttcaggatg gggcgaccca agtgtcgatg ctgtcattac tgtcggaatc gaqaaaqtac 2280 gagttegaga gaaaaagett gatgagagta aaatttgttg ttgetttgat agegetaeta 2340 taggcagatt gcagcaaaag aagcaagtcg tgactcgtta tttcgtagac tcatcagttt 2400 tgaacaaaaa agtgattegt agaaagetga tggteaaaat eagataacaa teacacagat 2460

ccccttggtc cttgtcgtat ggattaggta taataaacaa gggagatgaa aaaaaatttg 2520 gagagegett ttactgegge tggaaaatat tegagggagt teggteaaae teeggttege 2580 ggaggcgaag atggcttatg caatgactcc gtgctcctag gtcgcgtgaa cccgattatc 2640 acttggtatt ggacacagca ataagcacag atttctcggt cggtccctat gttgattcat 2700 attgcattaa acgggcatgt gccttgcagc ttgcgacttt ttagacatgg gattcctagg 2760 ctgtgaagtg gacagcaaag agatccttga aagactttag gatttgatag aggttaaata 2820 ctaaggctaa gataagcaag atcactgatc accatgcagg cgatcagcta gggaagtagc 2880 gctattgtag ttggttgcac ccgaagactc ttctatactt atatgtgtgc aaaatcttct 2940 acatgaaagt aaatgtatca ccaccettet egegeaacat atteceeace etettegtee 3000 caacaatgcg ctccagcttc aacgcatcgt acttggagaa caacgcgcga actcctccct 3060 cagcageete aacaaegeeg geegggteea ggeetaggaa acceacaate tegeeceaga 3120 agategggtt ategggeata eegtacataa tgateegett gaeeecacga ateeggaaac 3180 gtcggaaatg atgcagtcgt tcggtgtaga gcaacaccga ctgccggcca gtcatgaaat 3240 aagaccgtgc gcggctgatt tcccggggtt cggtgtattc ggatatcgct ccaaaggaga 3300 cqttqqtcqt ttqctqqqat qtgqcaaagt agttgcgcag gcggacgaaa tcgaggtagg 3360 acggaataaa gataagagtg ccccctgcgc tggctctgtt gcggctggta gtgatgttgc 3420 gtactaaagt ggatagaatg gtggtggtga agtgcttgaa tcgagcatct gggtctttgg 3480 ttggtgagag gcagtcgaag cgggtgaagg tctgcttcac gggaacaggg agcggcagct 3540 ctgcaatggc tccgttatag atagggttca atttaacctt tccaaagaca ttgtgcatgt 3600 gtgtcgagaa gacggagttg atctcggggg taatgaagga ggagagtagg atcagctgtc 3660 ggacatatcg agcattgttg tccaagtacc atgttcgaac gcgactgaag tcgcagccgt 3720 gagetteett eggetgaaga ttgaggtget teaaaatgta ggaaacatgg teecagtttt 3780 gcataagtag tgcatcagta tggtcaacga taaccacttc gacggaggat aagaagtcgt 3840 ggtctcgttt tttgacactg caaatgtcag taaccagctg aatacctgta ctaggagacg 3900 tactctgcct gatccatgat ggttcgcagg cccagcggac tggcaagaat caagtccgag 3960 gtatagaatt gagtaaagaa cttgagcgtc ttccgtgtaa acttgagacc gattcggaac 4020 atategteat egiteeegee aaaaagetea eggaaateet geggtitate eteceaggae 4080

gggtcatctg atgcagaaaa ggcgtcaatg aaccgtttct tgttctcttg ctgttctggc 4140 tggaagaacc gcgtaataga ttcgactacc cgaacacagg cctgcctcgt cggcaggagg 4200 tacagaactt teggeetggt gaageettga tegegtagtt egaggtegee atettgttee 4260 ttcgccacac gagcattgtt cttgagcaca cgatcccgcg tcttgagtac atggttcgta 4320 gcgtgcaccg ctagcatgtc tctcatgtcg gcagattctg acgttgttcg agcgccgtat 4380 aagacateet ggtagtegaa gatgtaggga gatacetgtt ggacatttee getgaggett 4440 ggaatacgtt cggtcacagc tgacttgagc ttcctcttga cctgacttgt gtcagctaag 4500 acgaacagac aatggttgaa atactcacct tcacacttga catgcttttc atcgctgcga 4560 gcaaaggcac gtcatcttgc ccgcagtctg gaattgcacg ccagattttc aatcccccag 4620 gaageteett etttgeattt tteeaettat tetetgatge ageettgate ttetgagaea 4680 gttcgctctc atctgggcta gagaagtgcg actcgaaagg ttcatttcct gccaagttag 4740 aagttggtcc actagacaca agagtttcac ttaccactct cctcgtcgtc actgtcttct 4800 tgtgcatcca catcgccgtc ttccaagtca ccttcttcgt ccggttcctg ctgctgcagc 4860 teggegteca gggttteete geettettea acegeggtea ttteageaac atttteagec 4920 tecteggtac cetetttatt ttgatggett gtttteeget tettgegege egggeetttg 4980 ctgtccgttt tcgcttgcag caattgaagc aattcattgt acggctgtcc ggactgttga 5040 tegetttegt egetategga gageacatea tegtetaace etteageetg cactecatet 5100 tcaaattgtt cttcaggctg gtcttccgcg cctgaagagc tctcggtcct gagtgaagct 5160 gtcagatagt gtatactgga caatcgttga actcaacata ctctacttcg tcgacacgag 5220 ctgcggtgaa gccagggcct tttcgcttca cagagcctct gccacgtcct ttttgaccgc 5280 cacccctaaa aggcatctct gtaattttag attctgcagc gcgattcacg tagcttgttc 5340 aacaagaaaa aaccgtgctg gattttcggg gttacttttg cttgcttatc ttatcttagc 5400 gcgaaatccg gagcgcgcac aacaatttga gcctcgcaga agaacctccg ccgccgaagt 5460 ccagcgggcc ggaagatttg ggttaaagag aaaactccac tcccagcatc ggcgacagca 5520 gaggacaaca atatecagag ggettgtteg tttatttetg etteettttg teetacaate 5580 atggctgaga cagattettt cetgeacett teeegteete taggeeetgt eetggegggg 5640 tetgeaceca caactgetee ettgaaegtt gteatecage etcaggtaca acteetttgt 5700

ttgaggaaaa tcaagaatta cgtcgctaat ttgctgttca ggcccttttc tcaatcctcg 5760 accactetet tegeogtaac getgateagg aacgegteat tggaactett etgggaacce 5820 ggtctgagga tggcaccgag gtggaaattc gtagcacgtt cgctgttgga cacacagaga 5880 cgacagacca ggttgaggtg gacatggaat accagaagca gatgcttgcc ctgcatctca 5940 aggcgaatcc tagggaggtt cttgtgggtt ggtacgctac ctcgtccgag ctgaacacct 6000 tctccgcctt gatccaaaat ttctacagcg gccagggcga cggcacatgg cctcacccag 6060 ctgttcactt gactgtctct accgaacccg gaaaagatat cgaaacccgc gcctatatct 6120 ctgcgccagt tggtgtgacc gccgagaggg ctgccgacag tgctgccttt attcccgtgc 6180 cccacgagat teggtaegge gaacaggtaa gageggtttg gaggeeattg etgeggeteg 6240 ggattcagag gagcgttcca cctccctctt caccgatatt gaggccctgg agcgtgcgat 6300 cgaggaggtt cttggtatga ttgacagggt ttctcgatac gtcgagtcgg tcatcgatga 6360 ggaggetece geetetaeag cattgggeea gtteetgete aatgetettg cettggetee 6420 caaggttgag cctgctgata ttgagcgtga cttgtatgag ccacactttc ctatgatatt 6480 gtatcagttt actaaccata ttctagtaac aaccacatcc aggacgtcct ggtggtttcg 6540 tacctggcaa acaccattcg tacacagatg gagctttcta accggcttgc aactgctcaa 6600 ctcaccettq qeqqeqaqte tqqtaacqca qaqcaaqqtg gtgcccageg taatcagega 6660 ggcaagggag gccgtggtgg gcaacagcgc aaccaagagc ggggtgctga ggaaggtcgc 6720 gcataggatq attagatttc actatgaaga tacctttgca tttctctttc agctgttctc 6780 gggcatttct tttccctcat gcaaccactc catttcaatt ccttgccgtt at 6832

<210> 2321 <211> 3809

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2321

tatetgtega ggttteaact geceattgag agagettete aggateagae agtgtegaee 60 getegteeag cagagagaeg egeeaatgge etattgaggt gaaategatg egegtgatgt 120 tgacetetee atgtgtegge tgacaaaget ggtgatatee eggaactatt teegetagee 180

240 gcctgatatc ttcttcgaat cctcgtcttt gacttgcaaa tgaggcgcct tgagccatat 300 cctgcttcgc gtttgaaggt ttgaatgagt gaacacgaat accccacttt tgtatcggtt tctgccagcg ctggaggcca gtcggaccgg acaaactcgg gaagccgctc tgcagaagta 360 420 ctttcgtcgc agaacaaggc acattgtgta tagaggatgt acctgagaag gaacaaattg 480 gaagaaaaaa tactacccgg tatagcaatt atcggacgga gaaccatctc ggagccagaa 540 gtaagcacaa ettecagaaa gagaacaege aegggaetat ageegeegte agteeteete 600 gtcagtaatg agacgtaatt ctccacgact caatttctgt atcgcgatcc caaatgtcac 660 taataaaact gcgccgatcg caccccagcc taggcccatc gctacggcac ccacatcccc 720 ctttatggca ccaccaaatg cagcctccgc cgtcgcagca tgcgctacga ctgccacgtg 780 ctgccagagg actgcaacaa tcagaaccaa actcgctaac acgtcgaagc tcagtacaag 840 gtagaccact teegtggegg gtaaaagett gatttegaat tegtegeeae tggegteeae 900 atcagtgtac cggccaggaa atgtactcag cgcggagaag ctaaggaatt tgaggacgat ggccattatg cctatttgtg cgagtcgggg gggatcagtc agtggtttgg ccacctactt acgcgagtat ccaatgaata atacattgga agctaggtcg gtcggtcggt gggaaggtgg 1020 acctacatga tcacggacag aataatctcg tctcggaagt tgtctgcaat cgctaagata 1080 ttgagagggt cgctgatggt gctgatttgt gctcccagat ctctagccgt tgagcgacaa 1140 gcccagttcg tggttcctga agagtttgcc gctgcacata gcccaaaata tcccactcgg 1200 atagtgaggt cgccagctga actgagattt gaaaccatcg catagaaaga aggattcagt 1260 gccgagagtc tatactcacc accgggttcc cggtggtcat gttgatagga cagttccagg 1320 agatatatgg cacgcatecg gtttgaggag cagceggeaa ceagaagtge tgaateagaa 1380 tatgttaget aatattteae eectagtgta tteegeetea aagtgetgag aacgeeggga 1440 tgcactgaca tagaaataaa atagccacca gacaaaagac catcaataaa tggtggaacg 1500 aatagcgaga gaaaaatcgg gaccagaaaa ctcggaccgt ttcccaggag ggccaacgtc 1560 gaggcctgga gtagtcgttg ctgtgtatat agtcaaatgg tgatggactc ctcggcctgc 1620 gagacctgga tetgtgetga etcaaaagge tggaatgatt actetettee tettetteet 1680 cttctctccc gttgttatcc tcatgctcct ctttttcttc ggtttgcccg tgttcagtct 1740 cttctgcagt ctcggccccg ccctccagct gctcgctctc agttcggctg ccacccctag 1800

tccatctctq cctccattcg gaatgaaagc gcaacttctg caatagtgga tgcgatggcg 1860 ttggcagaat tctatgcatg ggtgtctgga gagcgtgcat attctgaaat cgtagcgggg 1920 gaatetgage gecaagtgeg gteettteag teteaggetg agagetgtet teeatettet 1980 teqtitiqet tigicieqiq tetetaagea aatgaaagta etegiegegi tiaategiga 2040 ggttgataat cgtaacgatq aaattgttgc agccttaacc gcaggctatt cgcttcgttt 2100 egtttegttt tegtttegtt tegttteget tegetttatt atttaaegte aeteggegga 2160 tcacggggcc cacgtgatct gctgcctccc agggggcatc tggacgtgct acctaaacag 2220 aactgeetag gaactageta gatacaggtt tgaagcagea aetatggaca atatatatta 2280 gaaataagca gaagaagtac ccagcgctgc cctggtcagg tettcaaggg cagatgcctg 2340 ttttgactac ctatagattg gggggagggg ctggaccctt tatccaggta gatgtgtaga 2400 ctgacacact atcaagcact ccagcaggcc cagttcaggc atatatcctt aaagaaggat 2460 gattettgta caatacaget gaattettea geeetggeag etataetgaa gageeagtet 2520 attattttta ataggetgte cettatatat etetatetat ettteeagta etttetggga 2580 tatgggcaga agaagaagta tactagggtc ttggtcctac tgcaagagca gctttctagg 2640 tattctaagt agttgaagta ctagtagtat gctgtaaagt ctctgtgccc tgtataggca 2700 gtaacaagtc agccaagtac ccaacaggga agcttgtact cgcgggtgcg gctttccttt 2760 gtatagggtc taatatccag ggtcttatag gcttggggtg tcttactagt atatatagta 2820 tatatctctq tacaaaqcta ttattttatc tcctattata qqtatqcaqq aqataqqqqq 2880 atgttagggc tgtatataga ggacctaagc tttgcaagct tgtctgccaq cttgttccca 2940 gcaatcccag aatagcctgg gatctagtag acttgaagag gcttctatag cctggttagg 3000 attaagggag cttctaacta ctggatagta agctggctaa aggactctga cagtctgtgc 3060 ctatgcagag taggcctata gcttgctagc agggaggctg ctgctaggtt atctaggagg 3120 ataactagct atatagagta gtagattaaa caagctacag cacctataga tatattcaga 3180 cttgctaagt agattagata tccagaccag cttgctgccc ttcttctaaa tatacaaggg 3240 qcttaqqtta ctaccctaca qqqtaaaqta aatacctttc tcaqttacct cctaqaqaaq 3300 agggccctgc ttctaaatta gatagaagag ggacccccta ataaqcccct ggqcccccta 3360 tacctgctaa taaaagagta ctactgggct geeetetatg ceetaceee etetgeeeet 3420

ggggaggaca ggcttgctac tactacttag agggagctet ggcctgtcct aggagatata 3480 attatataac tatactatag gtatatagag gaaggctgct ttctactaag cctgaagtca 3540 gcanagataa taatattact aaaactagga aagagggact atacctaact taatgcctgg 3600 cagctaatta ccctcctct tatcctaggc aaaggcctag agtaccttct agcacagcag 3660 atagctggaa gagtatttag gatatatatt agncccctgt actttagggg cctgccagat 3720 actctgcttt aacctattnc aggtcttgtt attgggtgag aaggccttaa caaggaaaga 3780 gcttactacc ccccaaatta aaagggttt 3809

<210> 2322 <211> 2509 <212> DNA

<213> Aspergillus nidulans

<400> 2322

gacaccgcgg acctctcaga tagcgaggag catacgcagg atgtcaatgt gtatggtctt 60 gagcaacgat ggagcgcttc tctgcctaaa tggctatggc tgctgcaatt cctcctcgcg 120 gctcctatcg ttctcattct ggtcgggcct atagccttgc tgctaactgg ttccctccat 180 cagacgggac aggatgggag ctcttcgctg ttcatttaca ttgccattgt ggcacttaca 240 acacttetet tgteteegat getaeegttt gtteategtt geaectatea tatteegete 300 ttcatgctag ccgtattcgc cgggacgttg atctacaacc ttgttgcttt tccgttctcc 360 gattecaaca gacteaaget attetttate caagaggteg atetegatae tggtetaaat 420 actgetteat tgaegggagt teaacegttt gtgeaegatg tegeggttgg ettaeetagt 480 gcggcaggcc aaaatgtcac ttgtggccct tttggcgaca ggttcaagtg ctcctggact 540 ggaattcctc cacacgtcct cacagaagac aaacctgtag aggaatggct ctcattcgag 600 gtttcccggt ctattgataa accccgccac gctcaactcc agatctccgg ccaaaacacc 660 cgtgcgtgca aggtcgtctt tgactctcct atcaagaact ttcatgttgc cggctctgcg 720 tacgatecte gettecegea tacttatgee aagggaatea aggagatteg cetttggage 780 cgtgtatggg ataatacttg gacggtggac gtggagtggt ttaacccaga cagctcgtca 840 gatcacagta aaacttctgg ttccctcacc gggcaagttg tctgcctctg qaqcqattat aaccaacccg gtaccattcc agctctcgac gaggtgcgac agtatggtcc tgcttggata

ggtgttagta aattggccga cgggctcgtg gagggtcgca agtctttcga aatcgcctag 1020 cttgccctgg tgcttattta ttctaacgtc gacaacggta ccatcggacg gattgaattt 1080 ttttaggcgt ttaggatgcg agctacgatt tatgtttcta cctttccttg tctgttagtc 1140 cqactcettq ctqqqaqtat cttaacaata tagcqqctcc attacatttc atqtttqcat 1200 teggegegga tggaegeega aacatttgee gteeaactag gteetgegae agtagtaaat 1260 acceagatge ettacagetg gtttgtgtta ggtcaettca atgeaaggta ttgateacte 1320 tgtggtacct tggtagagtg accactctaa attcattctc ccaaacctgg tttaccgtac 1380 tacagtttga atgtggagac ctgtgagcgc gacgtcgaaa ttggccttct gaagctataa 1440 acggccgcct tgtcacctat gaatcccatc agtaacccgt tgattcggtc ttctattact 1500 tgctccgcac catcgttctg tatcggtgaa gcattgtcta gtcacctgag gtgctcaacc 1560 tcagctagtg gcatacgagc tcaacatccg agtatatgtt actaaattta cttgatggga 1620 gatgaagata ataccttttc gcaagaccaa ctcaatgctg gccggaagac tctcagctgt 1680 ctctaggaga ttatttgctg ggtgtaataa gtgcttacca gcagaatttc agaaggacga 1740 actgctatct atgaatgagg gcgctagagg tacaattgtg aatttcttat caaaacggaa 1800 gtatcaagaa attgagatcc ttccaaccgt agcaatccac gtgatcaaat ataaggttgg 1860 gtacgaaggt gaaatatgaa tggaaagtcg aatcgagtgt tggcattgag atgggagctg 1920 cagttaagaa gactgggatt tggtaatcaa ggggtgtcgg tggtgattga gcaagacaga 1980 aaactagaca tgagaaagat gggaaccgta tggatgatat ctgctggaga aggtctttct 2040 agttgggaag gcttggatct cgttcaaagc aggaattcta cgaatgaagc tgtatcttct 2100 acatcattat gtctataaat atatcttttg cggtaaacca acagcttgca tgagaccacc 2160 ccccatttac cccgggcgat attagtgatt tacaaattct ggacatagaa gaacaaattt 2220 tectaagtgt gttaataaat attttatata agaattgeat gttatgetag aaataggace 2280 attttggagt gttcgaggtc acggggctgt ggaatgcttg gtacagtgaa acattcactt 2340 ggaattatgt catactgcca tcaggagget ggggaagtgt atccggccag ggctccagaa 2400 gacccatgga tagatacatt atcttgttcc agactgaccg gatccctggg aacaccttga 2460 ctgtcagtaa tactataatg gtattgggtt tgtagcgttc ggatagagt 2509

<210> 2323

<211> 1700 <212> DNA

<213> Aspergillus nidulans

<400> 2323

cgacagcatc gacctaggtt cactgatcaa tattgaggca caattctgct gctccacctg 60 cagttccggt catcctgtct ttgattgaac gctatcatga tctccgacgt cagcacgagc 120 ccaaccggag tccatgcctg acagtcctgc tggatggcac cgtcgtaggc ttaacacgtc 180 ccgcattttg gcccttcatc tgtacgtaaa gcgggaacgt ctggtgtggc tgccgctgtg 240 ggtatcggta gattagaatg gtcagtcttg cggatgggag cccgtattga gccgagcgca 300 ttggatacca ctcaatgtcc ttgcgcggct gcgccttgtt tgcttaaaaa cgactggaat 360 tgggacaaaa tgtatggagt agagaatttg gcacttttcg ctgtagcgca gatatcatag 420 gagatatggg cgtagattca ggcaaagcac tcttagaact acccacgatt tcagagcaag 480 tctcgcgcat tgtattgtcc cagaatgtgt ctggtcaagc tatggatttg tccttgggag 540 gatctattgc gtgttctgct tgccgcatgc catatgttgt tgcgcttgat atatatttgc 600 gtgaccctcg gccagcgacc atcacctagt ccacctaatg ggatcgtagt gcttacccac 660 ctctaaatat attgtatctt atcgatactt tcctcgagcc ctgtgatacc actatggcgg 720 cagagtagga actaaatgta ctatctacct acggacataa ccctcggtaa cctcatgtgc 780 agcgtggtct atcgattctc gacagagaga aatcaaaaag agtggccaac ctcactgaac 840 tgtgtcccac actccactga aatcccatgc agcatttatg attcatcacc tgcacttgta 900 tttacaggga tttcaacggc ggatgccaat ggagaaatca tcgcttagca tattctcgaa cgttaaaacg gacagatcat attcaacgtt ggatctatat tatgcaatgt gcatatgcgc 1020 ccgatgaaac ttcaactgta gcacaataat cccttgtccc acacaagaca ggacggatcg 1080 ggtggactcg ttttgtctgg cggctctcgt ttcaacaaag cctcacggag aatgcttgag 1140 cgggaattat gttgtttact ccgcgtccag ggacgcttct ggcgcggaaa tggacagata 1200 ggaatgagcg gggttcatcg ccgttttaat gcagtagaga ctgctgaacg gtagatctcc 1260 agcgtaaggc taggtaaaaa aatgatacga tcctagcctt aggatgatga actcaacagt 1320 gagcgcaaaa aaaaaagaat aaaaaaagaa agctggaccc gccgggaatt gaacccggga 1380 tttcctcaat gcaaatgagg cgtcataccc ctagaccaca ggcccaagtt gttagtaagc 1440 tettagetta cagtatatac egtetaetag tattacagaa tatataeget tettggtttte 1500 tetecaettet caatteagte egtggtgate tetteggagg cagaaggtat aageacatat 1560 atteateata tetgacagaet tetgacagta acagttgete tgaaaacatt caecatteag 1620 cegatecage teatacatee attacgaeet tgeattgata tetggtaaat tetaatgttt 1680 aaaagtgtgt tgtgaggttt 1700

- <210> 2324 <211> 1417
- <212> DNA
- <213> Aspergillus nidulans
- <400> 2324

cccagtctat tcagcagatc agcttgggtg tgaccgtggg cgcgaggttg ggatcatctg 60 ccatgcggta ggggacaact gagatatacc aggtacttta gtagagccag atatgcattt 120 cgtggactac gaagtagtcc gctttgaaat ggccccgatc cgtccacagg aagcaagggg 180 aacggggagg tgaggacgta taatctatcg atggagatca aagcacaact cctaaccgta 240 tcaagtgaca tgatgtatta acacgtaagg caataacacc acgaattcga cctgcctctc 300 gtaaagcaga ctcagaagaa ctacagattg gatcggcctt cccggaagtg ggcagggagc 360 ttatggcgct gactcttcac ccacatcatt tcccgcgcct gggatacagt gaacggcacc 420 agattetetg egggeetagt tigtgeaate aatecetigg eaeggatgaa geagaaaeta 480 gaaggatgcc tcactccctt tgcgaagcct agtatagcac gtgcccattc ggcaaagacc 540 600 atctttgtct gtggagcatc gcggaatgta aaaaagaatg tatgcggcat ggcttcgtat 660 tectgaaggg taaccgagac geeetgegaa tgggetaeet gtgegattaa tagtaeegeg tegatacttt geteetgace tgaggeeate cagataggge ageacecagt ceagteacet 720 gagccagcag ggctggcgag aggatgcgca agcatacccg gctggcagta gaggttcgcg 780 cgaggagggc ttgtcggcca gagctggcag gtgggatagc ccggaagaag gtacgggagc 840 gtttcgtgtg gcagttggaa aatatctgtc ttcgcattcg atacgaaaga gggcagcgag 900 gcggaaagat ccgttgcggg actgaccacg gctattccgg cgggcatgac aggttcaacg gtgtggccat ggaagacgat tgatcggcca ttgcgtctca gacgaaggag gatctaataa 1020 agcaggccga aagcaaggca agcgccagag ctatcgccgg cgagaacaac cgagcctggc 1080 gggaccgcgg cgtgaggtga attaggtggg ggcgcgagca gtgttaggta cgcctgaaag 1140
atatcgagaa gggcggctgg gaaggggttc tgcggtgcga gtcgctgatg gaccatcagc 1200
acttttgcac cagtctcttt ggcgaggaac gatgttgttc gaggatagca ggatggtgta 1260
ttcaaagcaa aggtgccgcc gtaaatatag aggatagtta gtgtaccttt tgtctccgcg 1320
ttgagtttat ggaatttctc gctctcggag agtgaggtcg gtttgggggt gctttcttcg 1380
catcgtgacg gtaaccgagc cattcgaatt ccagcga

<210> 2325 <211> 614

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2325

ccgtggtcaa tgtgagtaaa gatgtatcac tcttactaag ctcgcgtggg ccgggtgttt 60 aacaactttt ttttctgatc gatacccaat cgcctattga ttgggttgtg gaattatcta 120 180 tgaagagggt atccccaccg agggcaggtt gtttaagccc ttcatctagg acgttcttgc aqagtacatg gatgaagagg acgtgtgaca cgaatgagaa cacccttcaa agtggtctga 240 300 cacctgaaat aaatacatct atgtcagggt tatcggaacg aggtacatgc tcttggcgga gaatcatatc aacatctcgc taagatactt tggcgccgcg aaacatatat taccagacct 360 420 cgtagtgatg gatctcattg cttccccctc tttttcagtt cctctcgtac gcgcggcaag atgtagegee catagteaat tgegtegttg aagttategt atceteggat ggagateage 480 tctgcaccaa gctccacata atccaagata gactctngaa caagtttcca tgaaccaaca 540 600 agagentgtg aegeaceaeg tgegtttgte geegteaeag tegggtaeea taaegegegg 614 tcgtgcacct aacc

<210> 2326 <211> 2359 <212> DNA

<213> Aspergillus nidulans

<400> 2326

tccacgtcgg gctcggggaa tatctaccaa acggaccgcg tatctccacc cgcgattgga 60 gcgggagatt gagaagataa ttgcctagtt ggcccttggg gtagaccttg atgattaaat 120 ccactttagg cgaattccca acgggggaga ctggggtgta gcttcgctgg atttttcttc cgtctatctc ggccaatact ttgagatgct gccctagtcc aatcaccaat ccgtcgccct 240 300 ggagccgcac cttgtacaca ttgggggcga tgcattggcg atccactagt gtcagaaact 360 gctgggtgtt ttcaccgctg ataccgggtt tctttggagg aagcggcagg taatgctgct ttactcgcgg atactcctcc agctcgcggt gtcgtagcaa aagagtcttt ttggctgtca 420 agccgacaaa agttgcggca gcagtgttta atgttgtggc agtcaggaat ccgccgagaa 480 540 accetaceca tecgetegae tgaactegtg aaacttggge ttgcgaaaga tagceetgaa 600 tagattgcca ggggtgttgc tttagtgtaa agaacaacaa tgctagccct cccgcgagca ctaggctagg cagctggcca tactttgacg tgtcatttcc attccttgcc tgtcgtttgg 660 720 teggaatttt geetetateg ettaeggeaa ttgaaaegat aegtgaaett tettegggtt gattttccgg tagggttttc gattgcagac taccgacgag caacgtcttc agtttcacgt 780 aggegteatt egagtggeeg gegtettgaa actetgtegt ggeateettt eeageaaatt 840 ggcggagaat ttcatcaccc ccgggatggt cctcacgata ttctgctaca tcatagacta 900 ttccatttcg ttagttgagt ccttctgcgc tgaacggttc ttaccgtttc cctctatcac aatccagagg tcattcggac tgctgtgccg cgcgacttcg gccaaagtaa tgctagccgg 1020 agatgccatg atategegea aagatgeagg tttgtteete aageaaggee aatagaaate 1080 cgtaaggtat aaaataggag cgtcttacgg gaggttcggg aagttcacaa aactgaccga 1140 gcacaattgc gttataatga tatttggacg atcttcgagt tgattcacaa agcccatgat 1200 ccgaactcgt tcaatatgac agtccagaca ttctacctta ttggtgaaaa ggaacgctcg 1260 acacgegage tegatgttgg tgatecaaag acagtgaacg egettegaca gggactagca 1320 gaagtettea atatattgag tgeagaagga ategaettte atgattqtea tggeecaata 1380 agtactateg agagtatttt gegaagtgaa teagteggta taaetgteaa egggeateee 1440 gtacgctatc ctcagcagcc ccaagggatc cctatatttg gaaaccactt tgagatctat 1500 ccagatcatc taggaaatca cgaacgcctc ttcaacaaat atggttccgt tatccggact 1560 aataatatgg gcagagtgac atacctcaca aacgacccag acattgcagc acttgcgttc 1620 agggacaatg actacttcac caaagcacca tcgtcagcga gtcatccgct ttacggaatc 1680 agggaccaga cagcgctgtt tctatgtgat accgaatccc cggcgtggaa agaggcacac 1740 aagtttatte eececageat gaceeetega geegttegge actacactee tetaetteag 1800 cagteggtag acacegtatt taacgtgetg gataaatteg ataacaacgg acaggeatte 1860 aatgtetate acttaacage aaaactaget teecaagtga tetgecaget ggtgettgga 1920 gtegatette ateattega egeegtegae agteeggtae ateetateat tgageteett 1980 caacgetace ttacgeteaa tggeeggtg caaacaaagg gageetggea cacetateta 2040 eeattgggta tgtteetagg teetggacae ggeateeetg getageegat ggtgataetg 2100 gettgtgeat ateagacagg agaceeeggg gaegttaaaa acactegatg ggaattatae 2160 ggtegtatet aggeeggeag cataacgtge caaaagaaaa acggegggae aactggggae 2220 eeteetatae agactgetge getacatgee acetgacteg taaactacet ggeeggacag 2280 eegatgaaca tgtgaacagg ettegteetg agtacattae taaggacacg etegtetaa 2340 taaggggaeg ettttggae

<210>	2327	
<211>	1755	
<212>	DNA	
<213>	Aspergillus	nidulans

<400> 2327

gggctcagcg tgattctcag agccattctc tggaagatcc ttgtcgcttt gataggctct 60 tggggcacct tcactctttg cgtgctccgg ttccagggtt tcaggagctt cgcccgggtg 120 ctccagaacg ggtgcatcaa tatcctcgac atattcatct tctaacattt ctgcttcgta 180 tattttactt tegtetteeg getteeette etegaattge atateaatgt tetggtttgt 240 300 atcagggtac tcgtcggcgt ctatcatgga gggctcggct acctcgtcaa tcatatcttc atcagggaat ccatcctgac catgattttc gccatgagtg ttatccatgt agtcatccgc 360 ggccgtcata tccctgtctg cattcgaagc ctggtcctcc attacatcga tatcgatatc 420 aaaatcatct gcatgcccct ggtaaggaga tgccatctcc attgtatcat ccatcgtagg 480 540 aacttccatc gcggaaaatg ttaaggacga ggtggttgtc atggtcgaag ggcgcgctga aagttetgag ggtggegtte tggeecaatg tgttteggee etgeegtgag tgaeceaege 600 tcagttctgc acggtgaaga agcctaatct atggcctcaa agagaataat agacaaagaa 660 tgatcctact gaaatgcaag gacgtcgccg aagacttttg ttcacttgca acggttgtgt 720

ttcgggcaag ttgtggtaag cgaggggata gcgcggtgca cgggccaaca ggggccgaag agaacagcaa gactccagca cctccgccgt cggtggaata tctacgtatc tggcttcccg 840 900 gcagaacaac tcgtgtctct aaccettgte ttcagttgee ggtactattt gagetgcatt cttgcccaca tagctttgct cgtggtgtct tcatcatggt atgcccaccc tcttccgtaa 960 aactggccag tcgtgcctaa ccagtgcaca caacctaggt cgttctggca gcgtcaatat 1020 gcaccegegg aggeaaageg gtgetetege gceaatteeg agaaategee egetetagag 1080 ttgaagettt actegeatee ttteeaaaae tegeggatte eggtaeeeag eataegaeeg 1140 tggagcaaga caatgtccgc ttcgtttatc aacccctcga cgagctatac atcgtcctga 1200 tcacaaaccg ccaatcgaac attctacaag acattgacag ccttcacctc ttcgcccagg 1260 tgaccaccag tatctgcaag agtctagacg aacgggagat tctgcgcaat gcgtttgagt 1320 tacttagege atatgatgag etggtgaeee teggttatag ggagaatttg tetetgteee 1380 aaatcaagac attcttggag atggagagtc acgaagagcg aatccaagaa attatagaaa 1440 gggtatgccg tattatatgg taacgttcaa ggagatactg agtgctcgca gaacaaagag 1500 ctcgaggcga gcgaagaacg caaaaggaaa gccaaacaat tggagatgca acggaaagaa 1560 geograegea acteaegeaa tategettee gtageeeegt geaaceeeag gttaaeteet 1620 gcggcgtgtc ctggccagcc ccacacgtac cacaggtatg aagcggacaa aaaagaatac 1680 ctttggcaag taccttttaa ttagggccca ttgggggcca ggccttgttg taacaccttg 1740 1755 gttcgtacta ggccg

<210> 2328 <211> 1241

<212> DNA <213> Aspergillus nidulans

<400> 2328

ctgacgtctc ggtgtttcct ctccgatacc agcacccttg actgtcctct ctatgcgttg 60
aacaacacag tcgtcgcaaa caacagccag cgcaccagtc tacctcggaa atttcgcttt 120
accacaagaa cagcagttca tcgtgaccag attcgacctg tggttcgact aacatggtta 180
tctttcagcc agtttgcccg ccaacccaga aaaaagcgca acgcgtgagt tcgatactca 240
caacttcatg atttgcagtt tatcgtttgt gacggccctg gccaagctat actacatcta 300

ctttgcgaag aagctcttca cctctcgatc aaatttatgg ccgcttcggc gctgcgcgtt gtgctcaaca tccgcggagg ttgttagccg cacctggaca ggcgcaggag aaacgggatg 420 tactgcggcc tgcgaatctg gttccgtcaa gtacgtgatg agagagcggt tgatctatct 480 540 eggtetteag taggetetge teeggeateg acttegatae gggettgeat egeaceaace aaaaaatagt cttaaatgta ggctccgtgc tggacccgtc ataaagcgct gttgagctct 600 actoccggtg ctgagaactc tacatccacc tgcttgccat ttttgtcctc cctgcctacc 660 actacctatg ccctccacca cccagcctcc agcatcccct tcgcaacaaa accgccttcc tgactggctg gcgagatcct tagcacaggc gtcggattgt gatcatgcct agcggaaaag 780 840 ggtctattcg ggagggtggt gttgcgggtg ggatcaaaat cagttctacc tatccaccac 900 acagataata gtacattgaa ggtaattggg acgtagcgaa ggttagcagt tcttccgtgt agtatccgcc actgtatcta atgagaccgc tacagatagg attcccctct ttttgcgtcc 960 gatattgact ggtttgcaga gtagagcagt actatacagg cggaatccga tgataaccca 1020 cacctaggcc gagggttatt actggctatc ctgataaaaa aggacctaat acaataggcc 1080 cagactetgg agectggace tggacgtegg ttgaaatact geacegtgta caggttgeeg 1140 aggtctaatg cacggcataa tcaatccggg ctttccgttt tggagggtat gaaactcgtc 1200 cgtataggtt ggtcgcacaa ttgcactact ctcgtagctc t 1241

<210> 2329 <211> 2561 <212> DNA

<213> Aspergillus nidulans

<400> 2329

aaaaggtggg ttatgaatta acgaagaatc ggtgggctcc ttaaaacaga gaaaagaggc 60 gttgttgtga tccatgcaga ctgtcttcct gaaaaaaaaa aaaaaatgtt gcaactcgtt 120 atagaactac gtgccgcatg cgcagaaatc gagacgttcg tgtgctgata caaaacgggc 180 cgcttgttgt cagtcacgtt ctacccctgt gcagccaaga tgaaaatcaa actgctgtag 240 ctgaatcagt caagtcctcc cggatacctg tggaagccgc cttgcccagt ctcttgcgtt 300 ggggatccga cggcttgtca tgcagtagaa gaataaggac gggataaagc gtctgccaat 360 acgtcagctc tcaagctttt cagcactgca gcctcactga aacgcttgag cgcttggagg 420

480 gtggggaatt cgtttgaggt cgcctgcact ctggcgatat caaccgtctc cgcacgatca agaccetaca tggetatgaa caaatecate ttgccagete atcagecate tggtetttee 540 gtctcgtccc cagtgtagcg atagtctaaa cgaatgactg tgctttatcc tcaaaagtat 600 660 cctaactcgg ctagaagggg tgtaattggt gcagataatg gcatctagag ctaggttgtt cgcaacgaca cggtgggtgt gctgaaaacg ccttctcctc tgctgagcag ttaatagtaa 720 tctggagctt cgcgtaggat gtctgttggg gggtttgtat aatccatggt cttgaagcca 780 840 cctaggggct tgtatctgca cacaaggcta acgataggag gaggaggagg agccgaatgc tcattatact ggctaatacg gccagtgagt ggtgaatcaa ttctttggcg tagtaaggga 900 atgagaattt cttggggatt tgattacctt agaaggctga ggaatattac atcctatgtt 960 tagaatagag actgcaatat gttcctcctt aatctgagta acgtctttct tggcctggtc 1020 ttttgagctc aggettaggg ettggtaeta tatgtatgea tatgtaecag tetgeetgta 1080 agaggtetgt gatacgagec ageegeeteg etactgettg tettgtgatt teeetggatg 1140 tatacttact ccgaggatat tgggggaaag gtctgatatt atatattacg cagggatgca 1200 gaagttgaga tqcttgaaac actccatgaa tctctgcaag gtctgcaatg tctcccaatg 1260 accycttgay cyaagyccct accaaactya teeyttyeyt actttecayy gyceetgata 1320 cagaatacca aaatagtgag tacgaaacag ccgattgett tatcgagtac acagagcaaa 1380 teccaceagt cegtgggteg ettgagagtg gaaggaagee caatateaag gagtegeege 1440 gacggattcc catggacagg acgcttattg gcgctcctgc tgataatcaa taagcagcaa 1500 ttgctttata ccgtctctcg ttagacactg ggctcctccg accgtccatg gcaccgactg 1560 gcacacaatg agaacagcet tttgccagcc aaacagatat tgtggattaa ctgctggatt 1620 gagaatetea eteagegegg agaateeega gateateagg aacaageatg gagggegegg 1680 tgattccagc agagactgca agacggcccg ttccttggtg gggatggaag aacgggcttc 1740 catgggttcg gatecageet agaaagettg gacagtettt gtggetatae ttgeaaatae 1800 cctaaaatcc atcttgttcg caaagctggt gtgtttctgg ctcactttag ttggtgagtg 1860 tattggtcct tgagccaggg attgcaagac ctttcgctca cagtacagtt ctagtttcta 1920 aagacatggc gagactgttg tctcaggaag gggtagacct gtccagcctg atgatgatga 1980 ctggatacca ggaccctggg ccgcaagggg tagtacgaca gctagcagtg aaaggaagaa 2040 gattagattg gcctgatagt aagtctacat accattgtta cgaggagcaa agagtggcca 2100 gaagatgtgg tgaggtgtgc gggcagagac agggtctgat gtggaccaac taataatcat 2160 atcagacacc agaattatga gaagcagaaa acaatggtag tagctttggt aaggctgcta 2220 gcagaaaaag gggtagaaat gagtcttcga gccagtggac tggctgaggt tcctgaaatg 2280 caagaagcag gcaatgttct gcagcggctt gttttaagaa aagaactatc gagtattgaa 2340 ctgggataca aagtgaagaa tggccgagcc gtctccatat ttggttgatt aggtgatttg 2400 ttgtttctag catgaattcc acccactcag cgggaaaagg aatactaagt tgatgattca 2460 atgctggagt tgttattcag caaactctgt cagttagttc gggtacggta tgcgattgga 2520 atagataatc agcaaaccac ctactgcaga gctgaacaga t

<210> 2330 <211> 915 <212> DNA

<213> Aspergillus nidulans

<400> 2330

accagtttcc ttcagaatac ccatgacctc cgagaaatcc gtctgaacag atcaagccgg 60 cgcggacgcc gagtagccac tgcactacgg acaccgactc caactccaag accccatcta 120 tccagaaact tttcaaatca caaccgtgaa cgccaaatac cctgaatcga aaaagcacag 180 acactteega ceatgeette tteecegace aatteeagee acacegegea gecateteea 240 gctgacctcg aatccgacct cctcgcgcac ctggcctcaa cacacgccct cgaagacctg 300 cacacaaacc tgctctcaac actccaacgg ctcggctgga ccgagaaaat ccggcgattg 360 agtactgage ttctccgcgc gaaccgatgt gagcgattcg acgacgtcgt tgaagcagtc 420 gtcgcttcgg cgcagggccg ctcgcacccg ttccttgtcg attccaactc cgataataac 480 accggctctc gcgcaaacca tacacacaat cataacgggg atgtggacgg agttgaaagc 540 aacagtgcgt actccattga aaatgcggat ttgcggattc cgagcgtggt cgttgagcaa 600 ggggttcgag caatcaagga tatattaaga gaggtcgtta tactggaaga tgaaggggat 660 ggagccggag atagcagtag tgctactggg acggttagta ataatgctgt tgatgtggtt 720 ggagagactg cgacgaaacg acagggagag aaggtggtta atggtgatac aagcccggcc 780 aagaaggggg gcaagaaggc gaaacagccg aagcagataa gatgagttca ttagacaaga

aaatggggta	ttctatatgg	gtttttcgcg	ggacttcttg	cttcgggcgt	tgagagttgc	900
gattaatggt	gttga					915
<210> <211> <212> <213>	2331 1374 DNA Aspergillus	s nidulans				
<223> <400>	unsure at a	all n locat:	ions			
tatgccccag	cggtgatttg	taggtgtttc	tgtttttatt	atactgtatt	atactgtagt	60
gaagagtgcc	tgagctttgc	aatcataaaa	tgtactattc	tgttgactta	taacttgata	120
gettgeatet	ctcgggaaac	aggatctaga	catgcagaaa	tatataatat	ggcatgccca	180
cagatttgtg	agatacgaca	aagaacaggg	ctgaatagcg	gcgaggaaag	gcggtcagat	240
tggatgcagc	caccacgtca	tgctgcccgc	ttgcccatgt	ccagtcagtc	cccatcaaca	300
gttcttgtct	agacacatcc	agagccatcg	ctttctttca	acccgtcctg	atcccctttc	360
actttcaatt	ctcctttccc	ccctctcac	caagcattct	ctgtctttct	ctgcttcttg	420
tcatttgtcc	cgcttatggt	gcgcgcgcta	gcttactggc	cttgctgcat	cctttgtttc	480
tgtcctaccc	tgcattagct	ctggtcgcgg	catcgattaa	gtccagccca	ttccgcggag	540
gggccgcaca	aagcttcgag	tttttggcta	gccgtcgctc	atctatatca	ttagcctggg	600
tcaggttttt	ctttggccta	ccgactacat	agcccctccc	tcatttatgc	aagaaagatc	660
ccgccgaccg	aagcattcat	gaagcccgtg	gccatccctt	ccttcgccag	ccctagccac	720
cgtcgccgtc	ccttcagcca	tggcggaatg	cgatcgtctt	cttcgtcccc	agcgccgctc	780
ctcctcgcag	gcctcgtcgt	cgtcgcgcca	cagccagaaa	gctaaggcca	tccgaacgaa	840
agcccagaaa	cgccactccg	cgtccaacgt	gaccacgacc	acgacaacga	ccgagtccga	900
aaccgatttg	acctccttcc	cgtccctgtc	gcccgaccgc	tcgcccaacg	gattcttcgg	960
acagecegee	ttgaaccgtg	cgctgactag	cgcgttactg	gacgggaccg	aggagaacga	1020
gtccgctatg	gatcgtaacc	gggaccgcaa	agcggcgttg	gctaagctga	ccactgctgc	1080
ctcgcacagt	tctggccggg	cggctttgtt	tgaggattcc	gtaccgattc	ggtatttccc	1140
tggggtnntg	catttggcag	tcgatgcgca	tatcgagcgc	ttgattgcga	gtaatggggc	1200

cgtaaagttt gtccggcagt ttgcaaggca cctggcgcag cgtcacgcgg agatctctgc 1260 gttgcgccaa cgtgctgacg agagggaccc ggccctcaag aggatgctgc gtgaggcgaa 1320 agtaaagaat aaggatattg agcggcggtt gtatgcgctg gnnggctcgg tctt 1374

<210> 2332 <211> 2824 <212> DNA

<213> Aspergillus nidulans

<400> 2332

60 ttegtgatte gatggttttt caagegtgat gaegacaaca gegegetegg tggetegege ggccgccgc ggaaatgtcg ttgacccagc acaagtcgaa caaatatccc agatgttccc 120 180 gcagctcagc acgcgcgaga ttatgtggga tctacagcgg aatggcggca accggctgcg 240 acgactgage gegttetete ggggagggge ttagaegegg tatgtteata teetggeget 300 tgtgccggct ggtggccatg cgctggttca tccgtaagac aaaacgagat gctaactata actgtattgt actatagect cetecatett tecaaceatt aattgetatt eegeceaeeg 360 420 gtgtccccgc ccagectgcg cettcatccg cgccgtctaa atctgacggg caagacttga ttacacggta caacctgtcc gcgaagatcg cagaggctgg cggtgctgag cctgagtctg 480 ggtctgattc gaaaccgtca gctggaggct ggtcgcagaa taaggaggaa cggcagcgct 540 gctacagaag cggagagatg acatgattct ggctgcgcga aggaggatgg aagcgacgaa 600 660 caacaqcaqc agaqtqccca ataqcgggca atttctatcg tacctgtctg catcaqtgqg 720 tgacttgatt tagattgttt tgtttggtgg atctttggct cttacatctc tactacccct tegetgegeg cetgactget gaaactatga tageetacte egtetgeata gttttgegge 780 tacgtctaca tgtattcatg tatttaactt aaagagacag ttgacctgtg cccagccgct 840 tegecagttg egaacageee tettttatee ttetttettt ettttgtatg gttattetea 900 tgtttgttat ccatactgga ccggactacc ccatcttgga ctctacaaca cagcgtcgca tgctcatggt gttaagttga attagattat tcaatcaact gcattcagaa aggagaggta 1020 gggcatatat acactegaaa tecateatag gegaaagaae getgeeecat gtatttgttt 1080 ttccaaactc caacccaact tgcaagagaa ccatgaaagc catttcaaat cagaactcca 1140 teteategtt atagteetge atgtegtegt atteaegatt egtegeatee getagetgtt 1200 cccgacgagc ctgctccttg gaagctccaa tccgtctgat atacattaac aggggccctg 1260 agcagtagat gagaacaaca taccttaacc catcaactac tccgctgata aaccccctcc 1320 cctcaccaat ttccatagcc ccaacccccg taagcgccac acctcctcca gggcccgccg 1380 catcatccaa cacttcaacg ccggacctaa tcttcgcaga tctaacctct ctcaacacct 1440 tcaacaacct tctcgtctga ttcggatcta caagatcatc ggccgcagca tccagcaaca 1500 tagttgctac ctccagccaa tgaaacggta gtctaggcgg ctcgctctcg aaggcatcaa 1560 acgcctggtc ttgcgcgaca ttctgcggca agaacggcgg ggttgcgtag tacttggtac 1620 cctcgggggt gaaccgcggg cgggcggttg atttttata gctgcgttcg cgcagactcg 1680 gttggcctgg gaggggtgga ggtggggaga acgcgtgctg gtaggcctgg tcacgggttt 1740 cgatatccag gatcagtgac agtgattccg gatgtagcca gggtggtgga aggatatttg 1800 cgcggcgttg gcgcttcagc aggagggcga gccagagggg aacgtttgta cggcggggtg 1860 gaatgagggg tgcgacggga ccctagattg atatcagatt ctggatgatt ataggtataa 1920 gggaaacgta cacctaagag ctcgaggccc tctaagcgct gccgagggac gattgtaacc 1980 agctccattt cggccaggaa ggagatctcc gggggcgtga tgcccgcggg agggggaagg 2040 ccattgaccg tcgggatagc gtccaatggg tacgagaaat cggatgaaaa gattagactc 2100 agggccagtg atacatgact tcgcttgact taattcacgt atagctgtag ttgcaggcca 2160 ataaagtggt agctgaaatg tcgaagtacg gtttgtactg tttgcaagcg gtaccatacc 2220 gtcgctagca gaagcaactg tttcctcctg gtggtttgcc ctcccactcg aaccattgca 2280 cctttgaatg gtccattgag aactatgaat gctcaacctc ggtcggccct ggccctagca 2340 getegetatg cegteceett egggetgete ttgateceta tetggatgae ecaagteaac 2400 tecgtegtee ecgagecata ectegatgaa geatteeata tecceeaage geaageatae 2460 tggtcgcatc aatggacaca gtgggatccc aagatcacta ctccgcctgg actctatctc 2520 ttctcgtacg ccgtctgtgc ccttatcctt ctccttcgcg gttcccccga acatctagat 2580 ccccggcac tccgggcgac caacgcggcg gccgcagctg tcttgctccc cttgagactg 2640 cagaccgcac tcgacactgt gcggaagcaa cggaataccc gtccttctgg cgcctggtta 2700 agccatacgg tgctgaacat ctgtctattt ccgccgctgt ttttcttctc gggattgtac 2760 tacactgatg tectageget getggtggtt attgaggegt ataattggga tttgagtege 2820 gggc 2824

<210>	2333
<211>	2088
<212>	DNA
<213>	Aspergillus nidulans
<400>	2333

ccgttcccct tcgccacggc cacgccatct ctatcgactt ggcgttcagt gcgacactgg 60 ccaacacaag gggcctcgta agcgaccgcg agcatatccg gcttttgaac ctcttctcac 120 gcgccggtct agctatggac cacgctctgt tcacggaaga acttctcgag aaggccaccg 180 cggctattct gaaaacccgt gacggcctcc tgcgcgccgc agtcccaagt ccccttggaa 240 300 gctgcgtttt cctgaacgat gtcacccggg aagagatggg tgcggcactg cgtaggcata 360 agagteteat gaaggggttt eeaegtgagg gageegggat egaggegttt gtegatgeea gtgatacggg atatacgatg aatgggactg agcatgaagg tgagaaagag aaggacggtg 420 480 caaaggtcat gaatggccaa gcacatgtga atggaaatgg gaacgggccc acaaatgcgc agaagataac cagtgatgtg gaaggaagcg tgcgcaatgt cttcggaaat ggagtttta 540 atgagetgaa gaagteattg eccatggeta egeggattge etgtgetgtt gaagaggagg 600 cctagagcga gctacatgtt tacgagatgc ataaaacatg ctaagaaatc gcagagcaag 660 tttgttcgat agatatatag gtagaggtcg aggcatagcc attgcttgat attgtttccg 720 aacaaagtaa tttgggaatt atatgcactt agcactgggt taacaacgta gaccaaatgc 780 840 catagaaaca aaagaagatc aatatcgaaa ggcacacaac caaacgtcta gagcacccat ccttcgaatc ctgctctttc cactttgatc tgaagtcgag ccttatcacg gtcattaatt 900 aggtgcgcca caaacgtcag aagcaacagc agcacgaatg acgtatttct taaatacatc agtgaatatg tggttccaag cctacagggc aaaagcagtt caaaagatgg aaacgagcgt 1020 ttgtacctat gggatcttca tcttctcagg taccagtgtt cgtagcatga ggctgataca 1080 agggtggaag aagaaagtcg gccacgtcgc aaagctctgg aaacatatta tgagcgtgac 1140 tcgacgaggt aggggcgctg tgccccgctg gtagggtcgt cgtactttac gggaggtgca 1200 ggcgaaagtt gagagcgtct aagaatagtt cgagaagggt agtttcggaa acagctggga 1260 cacgtggtta gacaaattga gtagagaggg atcggtagct aagtataaat agtactatag 1320 getggtttgg actggacaac gaaagetggt aaaggactec egagteagge tacaagagea 1380 ttatatagee etteggeagge gteegagge tgeaatagea atttgaaagg etgagaggaga teggagacaa teggetaaatg taaceeagge ageattttgt tggateagge 1500 ateggaaagae eeetgettgt aaactggeta agetgtttge taaceagggg geggtgeegg 1560 gaactaggge taggagetta ttggggttaa eeecetagae agettteaeae tgteeagae teggatgat 1620 geeatgatee aegetgteet getactgaet tgtacetgae geeggtgag tggatggtat 1680 aagaggetgga acatagatte aageegaatgg eeaceactat tteaeettee eetetagea 1740 egtteegagea eatgaatate agateeaggg aaaacaaete taacegtgte aaceegattg 1800 aatgettgea atteaaggee gtggeeeaag eteectgata eteecetagea eatgaatate agateeagg aaaacaaete taaceaatt acaeaattg 1920 tetagttet gagaatgaaa tgtgeacage acaatgaete etaaetgaet eetgttaaa eegtaeaaaa 1980 teaaeaatta tgettteget getatetaat aeteaacaeg ttetaeeta taaagegata 2040 tteaaatata ttgegttetg eaatgeacte taattgatta tttaatat ttgegttetg eaatgeacte taattgatta tttaatat ttgegttetg eaatgeacte taattgatta tttaatat 1980

<210> 2334 <211> 1845 <212> DNA

<213> Aspergillus nidulans

<400> 2334

tgtgtaatat taagctcctt tatttactcg aatagcttgc taatttaact tgtttgactg 60 cttagcccga ggcaccgaag accagctcgt cccctccggc cggcgatacg ggctggcatc 120 gatecteaac ecgetageet gtggeetttt tetggaaaac acageecacg gagaageeet cagacggccg gtttagcgaa cagaatcgca acatctgtct gatgtaccat gaccgctgcc tcaaaaccga cgtgtttgat gcattgctgc tattggtgcc cttagtagca aagcatggtc 300 ttaccttggt gaaggtagcg tttcgttggt gtgctgatca tttagcgcta cggactacga 360 atggaaatga cagtattatt atcgggctag cagcttgagt caattgtgaa gcaatctgaa 420 tgccgtgaga acggaccgtt gccggatgag ctggtcgagg ctctggaaca gacataacgt 480 atggccaggg ctggtaccta tatgatacgc agaaggtaca gcctggtaaa tatgctggat 540 agactagttg gatagatcta ttattattct gcattgtcac gggagggtgt ccttatgagg 600

660 atacetteta catggatate aaaagttgae etgegaaate aaggetetag cateatetat aaaccagtga aaatacgtag taaagtgtat agcctgaatc ctctagtacg aatctacaga 720 atcgtactta atctactctg gagtaggtta gtacgataga gcctttcatt cctacctgct 780 attgcccagt atactcggtg ctagctaggg cttctcgatt agcgcttctt gatcagcgct ccacacaatq qtcaqccaca qccaatctca tqccaqatqa qqctqcaaat qctgaataat tegacecege atgattaace actgtatett ggagtagaat accetacace tetecetatt tgtcaatttt catgcagctt actcctcaca caacatgcat gcagaccttg cattgggacg 1020 ttgcagacat tggtatatet tteegteeae ttaaacatet ggaaateaea gtgagtgage 1080 agattaggaa tcaagacatg agtaaatggg taacattaag tatatgtaaa ttactagact 1140 tgaaagcaag atgtatgtga tacactaagg tcactgagac cagccaagtc atatcatatt 1200 tagattgtga ctagtgaaaa tatctccatg gtttttaaag gaaaatttcc ttctcctaat 1260 aaataattta aaagtettet ttaagagtet gtegtgttge teetgetgea gggteaeegt 1320 ggggcgagtt tatgtttacc tgcctaaccg ctaggaaaag ctcttcgttt ttacatctta 1380 attttctqqt atcctqatta ccctaatact gtttacacct gaaaactcgc gtgatcggta 1440 cctaggtgta gccttgctag caccatgtac agtggattgg agacttattt gtggagacta 1500 gegegggaet eteagtetae gggggetgte egaggaagat accaeeteea eatgaetegt 1560 tgtgttccgg tccttgatca ttcaaagttt catccatccg ctcggctgca atgatattgt 1620 agaggattae aggeacateg ceteatggat egetecagea caagaegeeg teecaagtee 1680 cgcagagttc cagacgagaa gcgcaacgac gctgcccagg cgtaagttcc tgcccaattg 1740 ctgaatttct accgagectg cgactggaga tttcctctcg gttagatgtg accgttgcaa 1800 1845 gccccgtaag agcaaatgtg taggcgtcaa tacaggaaga tgcag

<210> 2335 <211> 610

<212> DNA

<213> Aspergillus nidulans

<400> 2335

accaggggaa agaaggcagc ctctgccatg ccgaggaacc agcgcacgcg aacatgccac 60 caaagttctt tgtggacgat gcaataaggg tgaaggagcc aaagctaaac atcaggattg 120

gcagcaccct cgccggactg aagcgcttgc ctagcatagc gattggcggc gcgaagatca catagggaac gaagaagatc gatagcagaa gattgtactg ccctggtttg aaatggaggt 240 300 ctgacctgtt agcaggggct ggagctattg attttcggcg gacttaccgt cgctcattcc atctqtctct qcattaccga gattqccctt gtccagagca ttgaaaaaggt ctatacgtaa 360 420 agtcaactac tgaacgccgt ttgaagattg cacatcacca acacataata gccaacacgg gcatcaaccg cagatcaaat cgacggcaga gcgcccgttc agccttatga tcaacgacgc 480 540 gagcaacgtt ctcaaccacc ccaggggcat agtcattctt gccgggagcc tcatctggca 600 acgaatatct ctcagtagaa acgggcgtat cgactgtcga aggagatggc ttgaagtcca 610 tgatttggtg

<210> 2336 <211> 3146 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2336

60 acagecattg tacacagaag eggeeegatt teetgggetg caetggagee gtggeeget categtecat eegeeegge tgteettetg tagtgggeaa aaaggaegea gaeteegate 120 180 cettgtacca tegaacatet gaaacgacge tettgtgtge tecaatteeg cetgtattet tcacctgacg caggtcccag cacttgaccc agccgtcacc ggacccggaa agcactcggt 240 acccatctac tccccagtct aggccgaaaa tctccctgat atgtccctcc aagatcatga 300 cagtgcggcc cgttcggagg tcccagacgc gtccaatact gtccagacca ccgctcgcca 360 420 ggagagaacc gtcattgttg aatgcgacag tatagacttc ccgtgaatgg ccttcctgta gctgtagctc cgccgttgtc tcaacatccc atagtcgcca cgttgtatca taagatgctg 480 atgcgatgta tttccccgac gggtggaact ctgttcggca cacccggccg gaatggcctt 540 600 caagtgtagc aagtggttga teettateaa gagaccataa geacacatta ceeteeege ctccggacac gaaattgaca gctgactcag atacgttcga ctcaggtagc gtagctccgg 660 ggaaccaaga caaaccaccc actcggtcag tatgaccttt gactgaaagc ttctcttcca 720 gattcggcac gcccagcaat cggataccac caccccagtt accagtcgca attgtctgtc 780 cgtccggcgc gaaccgacaa atactgacgg gccgatcgcc cgcaatctga gacccgtaga 840 gtccgaagtt atgtaacttt tccttgatcg ccttgcgatg cttgatgtgt gttcgcagcg 900 gtategtega tteetetegt tgtegegeaa egegggettt agegegegge agggaaaace 960 gegeaattge tittegtgee ticaaaaget categgagee tietgtgtaa aacteetett 1020 getgetetee ttegteetee tetecteeeg ceteegeeat ttegatatee teegetgeeg 1080 cegetteetg ettetetgeg atgteegtea acageteteg eagtegatet egeetgteeg 1140 ctggcccttc tccgaatagt gtgatgggct ctccaagctc tcgcaatcgt gcgcggactc 1200 gagtatcatc cgtcggtact gccatggcag cggctcttcg tttgcgttca aactgggaaa 1260 taategeaga tgetttetet geeggaatae eggeegegga egagggtate acatagtege 1320 ggtcaacagc tagtcattca tgtccaatta gtgatcaagt tcttgaacat cagacttgta 1380 gtctaccgag gtcgtatact cacgcaaatc agctagattg atgcccgtat ccatctccta 1440 tcaacaggtt cgcaaggtca gtcgagatcg cgtaaccttc aaacaagaaa gttgtaaacg 1500 acattttaag aaagatcaaa atgtgggcgc tggagggatg cataggaagc ccttacctct 1560 gcctcttcca cataggcctg tctcgctggg tgcatcatgg tgggcaatga aaggggacca 1620 gggggcccga aaccgtggat aagcaaccaa ctgacgtgaa gacctgaagg atttgaccgg 1680 actatagtic caggaagcig ggatggaaag gtaacgacga gigicicggi tgiicicgaa 1740 gctgaagcct gaagagggaa aaaggcagaa agttgaaaag cggaagccgc aaaatacaac 1800 ctataacagc ctcaaaggac gccagcgtct ggactgccta catcagacgg attatagacg 1860 aactttggcc ttgggagatc ataagccaga tcttgaattc taaggttttt taccttgaca 1920 tttgagctcc aagaagcttc ctagtccatc tacgatgagt gtctgcttct actgcgcatt 1980 ggacctgatc cacgccatct ttggcttcaa agttccagaa gcggctagtt acgggtagtt 2040 gttgggcaat gaactggacc gactatgtct tgcacgcggc tttttcgtcc aaattctgtc 2100 catagtecat actetgetet geogratetg agaccaggeg gteggegaat eegetgttte 2160 gtcttcaact acgtcagtcc gtgaaaaatc cactgcgatc gtcagatttt gtaaaaagtc 2220 tagtegeatt tgagtttgee tttteeeata eegeegeget gaegggeteg attatttgaa 2280 cgtcttcttt tgcctttcag gcgtgccggc tggaacttag cccgcgagtc catctcctcg 2340 ttcgcacttg gcttgtggag ggtctcgaaa acgacgagcg aggccctccg gtgacggtct 2400 gacagtetge teatgatett ateggteagg eccagtagag cetgeggtte ageeggeagt 2460

agectacagg ceategegg egagaacttg acagggatec titiggtetec tgeagecega 2520 tetecaatete teeggegtet acegeaggat eggeettege aaceactaca gagaacacga 2580 etececettee ticaagtaca titegteaaga getitieett egacecaaaa egigaetegt 2640 ataeteegeg aatateata eegititegeg geetegteat eaggeaagag eegeggatte 2700 etaeceacga agaatgeeta eaacticaac eetgagette atgaegeett eggegitigee 2760 giegaacaege aggaeeeege gaceaaacgg aaacggegge eggatagegg agaggatget 2820 tiettegig geacagtagg eegggitige gagteegag eeggatageeg aeggegiegg egggitigee 2940 eatgeeeta gigattacat geeteagaca gegeteggat tegacecage agacetite 2940 eatgeeeta gigattacat geeteagaca gegetiggitigee taeacegggitigee egetigaeaa 3000 eteegegaa aataeettet eeaagetige taeacegggit tigtegeagae gagaeeatee 3060 eeggaggegg eageeeegg tetgtaggta taggeetega egaeegeeg attgaaactt 3120 geaacetagg egatenegat etgtie

<210> 2337 <211> 1685 <212> DNA

<213> Aspergillus nidulans

<400> 2337

acteggacaa aaagttttee attgttteat ceagtaateg ttgtegeege caaaaggate 60 gaattgccac ttcggattga ttcgtcaaaa gctctttcat ggctttttcg cctcacgttc 120 ctgaaagccg gtaggtatcg cctcccgagg tcgaacacgg cctttgtcgc gttatgtgaa 180 acgcgagate etgtgacetg aagcacecat taatgcgace gtcaatagaa ccacaaccac 240 tttagccatt cattttttt ttaatctaat aaagtacttt cgagatgcga aggcagacca 300 ggaatcagat tagtggcccg cgttcagctc tcactgattt tctcgctgta agataaccgt 360 cgggattatc gtcatgttca acatcactca ctagtttgtg ttagtccaac aacatctccg 420 cagcacaaat ccatgatgac tatcagcgga ggttgagaga agcggagagt caggccaatg 480 aagggcagga agagcgactc actgacgaag agtatgaaga taatatcggc gagactcccg 540 600 aggaaagaaa gaagcgtaag cgaaaggaag cagccaccct cgcgaagatc aagcagagca aggagttcgc tcgccgcaaa gctcggcgca ttggtgagcc tgatgatgaa gatgagctta 660 tcgcaaggga gatgctgaaa gagcgtgctc ggcctatgcc tggtcaactt gagaattgtg agatttgcag caaacgattc acagttacac catacagcaa gacagggcct cagggcggtc 780 ttctctgccc taaatgttct aaggaggttg gtgacaagga gaagaaatta caacccaaga 840 aaaaaggacc cagaactact cggcgccaaa atcaaagtga ccttctcgac gggatcacca 900 gcatggtgct ctcagtttgg ttgagatgtg caccaaggtt tgtctatgaa catttctttc 960 aggtgttgct tagctgacac tgttcagaaa gtggctgata atatccaaga tatcacggag 1020 tttggtgatc ttccatggca acctttacgg tatgtatcta tttcaaccag aagtgcggca 1080 ctgctaatgt acatgccagt cgcctaagtc aaatactttc aaaacgacgg gcattgacac 1140 ccaggacact ggatcttttc ctccgacccg atttgggatt cattgacata tgcgactcgg 1200 gcagtatgac tggtgtatcc tgcttatggt tttgttcatg ttttaactca cctgtttaga 1260 gcttgagacg gacgacttca gaaagatttt cacgtttatg cccgctctga ccagcgtaaa 1320 ccttcggttt gctggacagt tgaaagacga tgtcatagac tacatgctcg atcgaaatct 1380 gagtatccga catctgcaac ttgattctgc aaatcttgtc tcggatctga gatggagaca 1440 agtattccag aagctggggg ataagctaga gacactcagg ctgtccaacc tggactcttc 1500 gctagatgat gagagcattg aagtcatgtg taaacactgc acgggactcc gacggttaaa 1560 gctcacccaa tgttggagga tgtgtgaccg ttctcttcga gccatttcaa cgttaccgtc 1620 tctggaacat ctgtcgttgg acttgataca ggaaacgaag accgatagcc ttgttgaact 1680 1685 agttt

<210> 2338

<211> 1447

<212> DNA

<213> Aspergillus nidulans

<400> 2338

aagccaccga gtgctgtcaa acctgaaggg aaaatccttg cagatacctt ggttgagcgt 60
aacattcccg agggaactgc cacagctcca gagcctgagg agttggacga ggaacttcac 120
cggaaggaaa ttgctaccga gttccaccgg atgaaaaaca ggatggccag acaaaacggc 180
agttctttg atgatgaaga acaagaaatg gtttccgctg acccaagaga accgccaaag 240
cgaatcagta aattccgggc ttctcggatg gtatagctcg tataacaaat tcatacagtc 300

tqaaacccga cacttccgat agatattaga tatccttgtg ttattttagc atctagatcg agtttcgaga ttgggagatg ggagttctct caaagagcat atcaggcatc ggttggtata 420 ttcatcgttg agaactccaa gatcaaccac gagggctctc tgactggttt cctttcctgc 480 540 tqtattqqac tcqqtcqaqt acttacqqtt tggaattgat ggaaatccqq ttacqtttca 600 ccctcaacag cattacattc aacctttagt gggcttgaat ttagatttat tttgatcaat tattqccqaq taaatccacq aqctcqtctc aqaacactaa tcgtgaagga ataacttggg 660 ccgcatatca tggccgggcg ttgtagccct gttcctgaaa tagaactgca cggtgatctt 720 cctqaataqt tactctqaqt attctgggtg cacgctttct ctgcattgtc atttgctact 780 tgattaactt gatctggata tgatagtgta atgatgccaa cgttccaata gtgcttgttg 840 900 agtctggtta caaaccatgc ggctaaccta cgttgtagta gtatggttat gaacagaaac 960 ttggaagaga aaccatatag tatcgatgcc cagtgtcaac gaatccttca aacgaaagaa tccacgtact ttgtagcagg gaaagtgtta taaagtcaag ataaaactga tttgatcctt 1020 gtgagtggtg ggtggatgtt cccagcggcg agatgctcta cagaggtata ccttgattat 1080 acaaccacta ttactatatt tatagacatc cacttaccaa ggcataacca ctcttcgtaa 1140 tocatgacca caaccaacat acttttctcg attcaatctc gacagcggtg aattgtcact 1200 gcacgcatcg aacccggcat ttccacgaag aaccaattgc tttgttttcc actttgttga 1260 atgcaataat gacgtccaat ttggtggata ggatcaacgt gggtagtttc ctgaaggaag 1320 aggtgtacgt acagagtacc cagtctgacg ctcaccagcg atcagaattt gtatgagatg 1380 tttgatagaa atagaaataa gcaaagccgt tggcgcaatt cattgagctg gcccaccaaa 1440 1447 gttccgg

<210> 2339 <211> 1265 <212> DNA <213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2339

tcattcagct ctgtacaaag tacttggtaa gacgccacct gtctcttgat aatgtatatg 60 gatattattt ttttataggc catctctagc cttctatcct atgaaagttt caccagattt 120

acctcagcac caagctgctt ctcacccacg actgatgccg ctcaacttcc tcaaaaacct cttgccctgg ggcgagagag tcatattcaa tctcccgcca tgtcaaatag tcgagatcga tacagegeag gagaaagetg caagageeet aaageacete etcaaaetea aecatgeeaa 300 ttatgcgatc ctgtggaatg aacgcaaatt tcacaaccat gcgcctcact cattatgctc 360 gttttatttg cttggagcca acgcagatga cctaaatcgg ttatatgagg cggaattaaa 420 gccgttagaa gcttggattg attcacctgg tgagattagc acgtacgatt ggagggatta 480 tctgggaaag agagagtgag atgtctgtct ttgtggcatg agaaaatgct aatagggctc 540 gttcagatac caaagagcgt acgtcgattt cttcgaagac gagcttgtcc gccacggcta 600 tgattggaag accgtcgtgt ttcaatacct cttctcaggc aaggaacctc ttttcaatqc 660 tctggcctct gatcgtaagt attagccttt cttaaggaaa gcctgatact cacaatgaga 720 cagttggcca tcctctcatc catctcgcct acgctttcga agtctccagc cgtgaagtcg 780 ccatggaagc cctttccctt gcaactgtct gctacggcac cgctcacaaa tacctcgatg 840 acceatecta eteceaaget gaatecteet ateatteeae gteeeeettt gagateetee 900 agaaagtccg cgctgacaag cgcctaagca acctcttcac agcgcctgga gaccacaata 960 cggaaatcgt cttccgcgat gcggaagcaa caatcctcga tcactggaat gcctggaaga 1020 ttacgtccaa cagcgacccc gtgaaatcgt tccgagaaag tcaagagctt gctgttgcat 1080 tattgacage cacateaagt tetgataace gggacgegaa atacgaette ttettegtee 1140 acgtecteae gactagteat geegtgeggg teetgeteee getgataeea gegaaattee 1200 agatececet egtgeggeag tggtggttaa tgaetetnge tgtgtatate gggeagetga 1260 agcca 1265

<210> 2340 <211> 1307

<212> DNA

<213> Aspergillus nidulans

<400> 2340

tgttgctcct cgtgctctct ggcggtggcc tccctggccc ccctcccctc agtctcggtt 60 ctcccctcga tcggccacgg tcttgtttta ggtactgaga ctcatcgttt atgattcatc 120 gagcccgcca gccgcgattt tcttgccagc ctgctttttg ttcaattgac tgattctgct 180

qcqqtcttca aatatactca agagtcgtgc tcactgcata ctttactctg gccggggtcg 240 cttgggatcc gaaacagaga ccaatacgaa gcctcatcgt cgacggtcac ctccgcgtag 300 ctccaaccac qaagcctagc gctgcatgct tccagtttgt cttacatcga ccgttgtctc 360 atcttaaacc gtcctcgatg cctactctag gaggtctttt gaagaaacgg cgaacgaggg 420 480 attcgcaaga cctctccaag gagctccagg ccggttccac cacgactggc cacaccacga 540 cgtcaccaat cgctgccgaa gactcccagt cccagcagca ccacggccac cacggcggcc accatttett ccaccataac caccataacc accageette taacaatteg getaattegg 600 cgaattcgca gaattcccac gccgctaaac accaccaatt cgaccagtct tcagctacca 660 gtaaccagec tteegaeggg caaaccgect ceatgeaate eeeegeacaa cageceteta 720 780 gtacttccqc acactcgaat tccggccacc acagcaatgc cgccagcata cacaacatca 840 tacacccgtc gcagcagaat accccgcagg tgtcgcgggc ggagcgtacc accaagggca aatacaccct cgatgatttc gcaatccagc gcaccctcgg cacaggtagt tttgggcgcg 900 tccacctcgt gcagtcgaag cacaaccacc gctactatgc catcaaagta ttgaaaaagg cgcaagttgt caagatgaag cagattgagc atacgaatga tgagcgacgg atgctgaacc 1020 gtgtcaggca tcctttcctg ggcaccctga gggggacttg gcaggatgct cgaaacctct 1080 acatggttat ggactccgtc cagggtggag agttgatcag tatgcttagg aaatctcagg 1140 tgagctatgc tggtccatga ttactacagg agcgagctga tggtgggcaa atggaagcgg 1200 ttccgcaacc ctggcccgaa aatctatgct ggccgaggta cttcggccgt ggagtatctc 1260 1307 cactcattga gtattattag gcgagagctt aagcctgaga acttgtt

<210> 2341 <211> 1308 <212> DNA

<213> Aspergillus nidulans

<400> 2341

ctctctgcga taacgtgtga tactcccaag agtctctatg cgctcttacg aaatgaccct 60
aagccctctg agcatgcggt ggaagaagct tttgacggaa acctttgtcg ctgtactgga 120
tatcgaccga ttttggacgc tgcccaaagc tttacaagcc caatcggctg tggcaaagct 180
cgagcaaacg gtggctctgg atgctgtatg gaagaacaga aaggcacaaa tggatgttgc 240

aaagggtctt ccgaggagac taccgaagac gttaagcaca aqtttqcqtc tcccqacttt attgagtaca aaccagacac ggaactaata tttcctccgt cgctctggaa acacgagttg cgccctctcg cttttggtaa caagagaaag aagtggtatc ggccggtcac cgtacagcaq 420 ctcctggaga tcaagagtat tcatcctgat gcaaaattga taggtggcag caccgagacg 480 cagatcgaga tcaaattcaa gcagatgcgt tatggagcat ctgtctacct tggagacctc 540 gctgaactcc ggcaatttgc ctttcatgac aactacttgg aaattggtgc caacatttca 600 ttaactgatc ttgaatctgt ctgtgatcag gccatcgagc gctacggctc agctcgcggc 660 cagccctttg ccgctataaa gaaacagctt cgctactttg ctgggagaca gatcagaaat 720 gtggcttcgc cagctgggaa cctggccact gcatccccga tatccqatct caacccaqtt 780 840 tttgtcgcta caaacacgac tcttgtcgcc aggtcgttag ataaggaacc gagattccaa tgacacagtt cttcagaggt taccgatcta cggcccgttc cgcagacgct atcatttcaa 900 gtctacgtat acgtacgcat ctgagaaagg cgagtatttg cgggcttata aacaatctaa 960 gaggaaggat gatgacattg caatagtgaa tgccgctttg cgggtctcac tctcgccatc 1020 gaacgatgtc actagcgtga gcctagattg tggcaggaag gcgcctcaga cggaatctgc 1080 gcagaacgcg gaggtcttcc tcaccgggaa gaacttactg atcacgtaac tctaagaggt 1140 actactggtg ctttgggagc aggattcaac cctgaagttg gtggttccag gcgagatggg 1200 gacttaccaa atgtcactgg atcttggatt tttttaccag acctactatg agcgctatgt 1260 ccgaaatcga ggcctggaga agtgacctga ataacagtgt ggccactg 1308

<210> 2342 <211> 1517 <212> DNA

<213> Aspergillus nidulans

<400> 2342

gtgataaagg aattatggac ttctggagaa ttcaacactc cgagcactaa attcgctgat 60
actttaacct agccgcttgc gtagcccagg gaggacgatt agtgaatgac ccgcgaaaga 120
cgttcggggg ctctgggctg aggcgttacg aggctttcaa atgggtttat gctagatgct 180
ggctctagtt cccacctgct gagacacggt atctgcaccg gtataggatt ggacgaccgg 240
ttgtaagatg tgctctcaag caaagcttcc ccttccaaca tcccggctcc ttgggcccga 300

aggetagect actegagact etegteaata ggeeteaatt gggttagege geegteteat 360 gagettgatt tgetgegtta tgaggaatat geegaacteg gtaateegtg aagaegettg 420 480 tccactaggg gcttgggctt ggacttgggc atgggaggac tatgagactc tatcagcgaa 540 aggttccctg gggccggcct gcgcgattct gaaggcggaa atcaatagtc tactatgggg tagtgataaa cagccagcaa tttcttggta ggtgtcctcc cacctataac ccaacttctt 600 gaaagaagcg tcctgggtag caaaggaagc tggttaaacg ggaaataaaa aaccttcggc 660 ttttcgagtc gcgactccaa ccagacaacg gcgttatttc ggatccgtcc ttttccttag 720 780 agggatattt tagaagcatc tggaaagata tggaaataat gatggagcta aagatggtca aaateetgta tetgggageg aactgggetg ttecagatee ggaactggee etgetgaeet 840 qcccaqaaca tttcttcttt tcctctatgc ttgacatgaa tagagtcacg cactcacgat 900 caactetget egetetaaga geceaacaet gaacaagage aegteeageg atgateeeta 960 ctgagtetee egaggaeetg ggeeacgagt etteacaeta ecaagggett ggeegeaaet 1020 cccctccacg gtcagtggtc tgttcccagc ttccccacaa ccccgggctc tcgaaaatgt 1080 cacctcctgg tgcgttatgc tctcttcgtg ctagcgtcgc gtgctttccc gttctttttg 1140 gacteteagt egeteatete teggaagaaa tetttgegaa agtgggttag tgtggaceet 1200 ccccgaggcc cccgccgcg atataaattc tctatcgatc catccacggg ctcctgagac 1260 ggctcgcctg acgccaaaac tactacttct tttacggtgt cggatgctgc ggcagtccag 1320 ggtttccaca aaatggagtc ctccaaggct caggatgtga tcactccggt caagaatgaa 1380 cagtcgccag attctcacgg gtcgccgacg ccgatggcga agggcgttgc atacgcgagg 1440 gcagctgctc acaggagcat agatgaccct ttacagggga tataactctt tcccaaggtg 1500 tcatgtggag cgtatta 1517

<210> 2343 <211> 321

<212> DNA

<213> Aspergillus nidulans

<400> 2343

ccccggttaa agaaggaatt gatgctaagt tacgaagaca gtgggttatc agttaactat 60 aggctaatct tttgcggggt tgaagatagc gatgtcttga gagatgaggg aataagcgag 120

gggagtctgg acgctgtgct ttgcatcaag gtgcgctgtg cggtcaagga tccaaaaagt 180 gtcatgaatg aggtgtggaa gttattgaag cctggaggaa ggtttatttt ctgggagcat 240 ggagagagca gagactggtt gacgggtaca gtgcaaggta tgcggctctc cctttccggg 300 gaacatggac ttaggaatga a

<210> 2344 <211> 2772 <212> DNA <213> Aspergillus nidulans

<400> 2344

60 gcagcgaccc tacctatatg tatggattta gatctgacta gcttacagcc tcatccccct ggaccccagc ataaagtatt ttctcgacgc agcgaacctg ctcaaagcaa gcagcacact 120 acagttcacc cgggtgatcc cgggcttctt catggactac tggggcatgc cgcatgtgaa 180 240 gactcaactc tcaccaatga cgatcgcagt agacatggca aactgcgagg ctgctatacc tggtgacggg aacgacatta ttgccatgac atattcctat gatatggcga ggttcattgc 360 gcgcttgctt gaaagcgaga aatgggagga gttcagtgtt gttgttggcg atgagactac 420 atataatcag ctggtcaaga ttggggaacg ggtaaggggt gagtttgacc ctttccgatc tcaaatgttt cacttgggaa ataattgtaa gacacttgct gatatcgata ggccgcaaat 480 540 tcaaggtgct atatgatagt gcggacaagg tggaagaggg cgctgttact gttcccactc aaccggaggg aattggatat agcaaggagg agctggagga gacgactgcg ctaatggata 600 660 gactcgtgat cgggaaggtg tttgactttc cggctgctat ccggtcgaga aacgtcgagg 720 gtctggggtt ggttaaagta gaggatctcg tgaaggaggc gtgggggggg aaagcgtagc tcagcttagt cggtggataa tagttctccg tataaacagg gatttcagta tcgtagtgca 780 840 aagccgcaac gccgcaacgg cgcaccgcgt tacaatacac tcgcttcgta ccgcatctga 900 agtccqttqc ctagaacgtg qcaatcagcg tcctaatttc gtccatcaat cttccatgat ctttttgatc ggcacaaaat agagcccgaa taaccaaatg ctcgctcgtt acgtccgcaa 960 catttgtcgt ttaaggatcc ggtcccttcg aaggacgaga accgcgtact gttgggagtt 1020 ctcagctgta tagttaacgt acgtcacccc taaggtgagg cgctagatca cagagttact 1080 ttatgcctct actttaagaa atttgtcgtg actcatcttt catactgaca agcttgcagc 1140 tcctaaggct tgttttgccg atccgacccc tttggtgaag acccagaagg tctccaatga 1200 cctgcagttg ggatggaact aactaaataa aggagctcta tacgataatg actggtctgc 1260 tcttatttct ttataacagc ctgactaaat attctctttt tttatatgtg cctgagacga 1320 ataggatttt ggtttaaatt taccacaaga caaaattcgc cgtgttgcat tgccgttaac 1380 qqcttqcagc acgttaatct gactggtcga gccgcatact cgagccccat tggtcgtgaa 1440 ctaagatgga gtaagcatcg ttgtatcagc agaaacaagc gcattaagat tggaagtccc 1500 accacaaacc ttagtatgac ctcaagcttg gtatttctag ctaaccgatg tggattcaaa 1560 tctcgtgcta gataggtata tttgcggggt cttccgtcgg cgtggtgagc cctatgtcca 1620 ccggagacgt catccagcat ccagcctata gaaccgttga taccatttct gccatgattt 1680 ttgtttccaa ggttgacaca tggcgcgcct tatttctggg ctgctctgac tcagtcccca 1740 qtaaqcqaqc ctqqaaaact gaggctgcac cactgattgg aaaacggtct gacgtcgctt 1800 qtqtqtccqt qcqttcctqc tqtqgttccq tqgcagqtqc agtqcqctqt cccqgactcc 1860 aacgcgacac gttgaaattc tttctgtctt cgttcacctc gctatatttt cttctaagcc 1920 ttccgtcacg gtctgtatgt gacgcagtga tacctacaat atttgggttg gcatggggag 1980 ctccaggcca ttacaacctt ctacacctgc gatttgtcgt cgttggacac cgtatgggaa 2040 tgactgaagg gactaattcc tagattgtgg gtttccatcg agacctcact ccggttgtgt 2100 tcaaqttcqt tqctqacctc cttgaatgtt cctagcacct ggggtctcag aataatgtgc 2160 tegeagaega tggeaageaa caeegaaeag gttgetagte egeaegaaee caeeaaetgt 2220 gcgttcgccg agaaaaacac ttcttgcgag tcctgtatca tctctcgact ttcaaaatgg 2280 ctctggtcgt gccggactac gccgcctcct ctcgtcgaag agaacgcgag acctgtagag 2340 gatgagagtt ccaagaaccc attcccttgt cgcgcatgca gggcttcaaa agtgatatgt 2400 gaccgtcaga caccgcgctg cgggcactgc ctcgatcagc agattctgtg cttctatgtc 2460 gagccgctgc ggatcacgat gaagcgagcg aaacaagcga ggcagctgga ggcccggtcg 2520 gaatcggtta catcatgctc gtgaacctcg cccagatacc tgatgattta ttattatccg 2580 gaggaactgg ctttttcgct tgaggttggg atcagttgga ctggtgttat tccagctttg 2640 agttgtaatc atattctact ctttccatga gaaagcagaa gctcgatcgt aggcctcctg 2700 ttactgactt tacgeteaag atgeactgee gaetattaee aatagetgge tacaatgeet 2760 <400>

<210>	2345	
<211>	3189	
<212>	DNA	
<213>	Aspergillus	nidulans

2345

60 acacaccett tatetgetat acceeetget tggeettgga gtgaageega ageegageaa 120 ccqaacacqa ccacatatcc aaaacatagc acaggctgtg ctggccaatg tacagacaag 180 tagggtggat attataaact gctcgaggag caaggtttac tgaacacaga agaccgttag 240 ataactgaga acgctctctg aatcggcaat gatagtgcaa gacagacgat aacaaacaca agctgagacg atcaagagca aatgaggaga gcaaggctgc gcaatgacga agacaacaac 300 agagtagaag cagaaacaga accttgcaac tccttgttga tgagaacaat ccgcaagtac 360 tgacggggca aggaaacact tagatgctaa aaatgccaca tagatacagg actgccctgt 420 aaagcgcgag gttttatcca tcggatgcca aaacgccttt ctgccatcat taacttcacc 480 540 acgacactcc gagtagtatc aaggcggccc gtgagtgggt caggaactcg cgcggtgctc 600 atatactcag aaacagacga atctagaatt aaatggctca tgccagggat gcagtcaaag cagtgcacaa atagagacaa ccagaaaacg cagaaaacaa aggctcaaat tcgccgttcc 660 aaagccgtag caccataacg agtgatggga gcataatgac aagagtagat gtaaaatgtt 780 gaaggaggt cgctccgaga ggtccagccc gttcagattc aactggcctt gacgatcagg 840 cagcaggggg agcggtttcc cagggtccat caatgatgag aaatatagaa caaaataccc ggcccttccc acagtgtcca tctgccgttc gatatcttgg gttcgttctg aaaaggggaa agacgcgaac tatgacagta tgaaccacga ccgaccccaa gccctcccga acaagaaaat gactgaagga ttgaggtcca acgtgacaga gatattaagt agaattacaa attccgtaat 1020 cagaacagta gtgcgtcaca ccattcaacc ttgtggtaga tgagcaggca tgacataggt 1080 ggggacagca gaatgatcac ctaccgcagc aaagtgcttt catcaccttt tgcatcaagg 1140 tgggctgcgg ctcattgctc gcctgctggc cgccaggggc tggctggttc ttggccgggg 1200 tcgccgggct gcctatccga tgacccgaga tgttcgcgtt cgagttctga aactgtgcca 1260

ctgtcgaggc agctggtgtc gtgtcgaatc ccccgctctg acgttttggc gggatgccgc 1320

ctctgacgtt ttgcggctcg cgcgtcttcc cggctccggg cttcgcagga gacgggggcg 1380 ggggctgcgc ggcgtttaaa cggtctgcgg tcacgccggg tctttggctg ttgcggatct 1440 gctggccgtg gaggtccctg gcagaagtat gcatggcgga gttctggaga gcctgctggg 1500 acgaatagga cttgtattcc caccctcgac cgttgttcag tttcatccaa tcgtactctc 1560 catcctcaac ttccccagcg ttcttgaggg cctgagtaag aagatcccgc aggtaatcgt 1620 agtcaggggt gtcttcgaaa ccaagattgc gcacatagct aaggtacttt gtgaattctt 1680 ctagacgtgg tcagcacagc cggggagggt tcgacgatga acaaacctgg aaatccctcg 1740 cagagtteet tgatggeggt ggtetgette tteteteeaa tettttegta ettetgtttg 1800 ttggtggcag ccttcaggcc ctgccagggc aagccacctc gaaggaaata cataaaaacg 1860 tggcccaagg cctcaagatc gtctcgtcgt gactgctcgc gtcccaagtg ggtgttgata 1920 ctcatgtagc gcgctgtacc ggacagcgac tttcgctcac ggtatgggat atgttgcttg 1980 gttttgggat cccggtattg cttggccatt ccgaagtcga cgacgtggat aacattggcg 2040 gccttggagt tcgggcgacc gatgaggaag ttatcgggct ttatgtcacg gtagatcaga 2100 ttcttctcgt ggattgtttg aactcgagag agctaagaaa gtcaggaacg catttctctt 2160 ttctcaagtc agcatggaaa actcaccatt tgtttggcga ccatgacgac ggtcttcaca 2220 gagaagcgtc ggttgcagtg atcaaacaga tcctccaaac tgggaccaag caggtcaatc 2280 acgaggatat tgtgtaaacc ttcctggcca aagtagtaga cattaggaat gccggctaga 2340 ccagtcagtg attgtttcgt tgcatattgg agaacactca cggcatccga ccaaaatttt 2400 gtacgttcga tattcatctc gcaactgggg agcgtcactc ttccgaggtt cctggtgtcg 2460 ttagcttttt ttaacttcca tccaattttt gggacgtgac ttacgaattt aatcgcaacc 2520 tgctgattga tcaggagatt cgtgccctca aagatcacac caaaagaccc ttcaccaatt 2580 ttettteeta etetgtagtg tacacceaet acattggaeg atgaggaage catgtetgeg 2640 cggacgatgc gagtcgaaaa ccttaacggc ggacgaacgt gcggaaactc gacgggctgc 2700 aaacacgtga aggctagcag tcgttagcgg aagacaaaac aggaactcca cagcgataca 2760 aaggaaaggt acatgagatt ggtggcttac agagacgccc gagattctat gctataccat 2820 tcatgcaaca acggcccacg cgtagacgta caagacccag gaacttgaag agactaagcg 2880 cagacaacag caaaaatcgg ggcaggcttc tcgtgaaaca aaaccgaagc aggaggacga 2940 cgatgtatta gggaggaccg tagctaatcg gagcgactcg atcgagatga gttctcgaat 3000 cagggtgtgg acttggggtc gatatcgacg gcaattcggg gacggtcaat gaatataagg 3060 gagaactccg tatagactcg gagtggaagc tcccaggaac cttgaaatcg gcaccagctg 3120 ccgcgcagtc tggacaactg caagctgcag tggttgaatg ggtcgggcgg atgggaagag 3180 agtgagtga

<210> 2346 <211> 1560 <212> DNA <213> Aspergillus nidulans

<400> 2346

agacggcaca agaaggaatc tacacatttg cccacaatta tattgttcct tgctttacct 60 120 caatcgggaa ctgcgtttac tcatgtactg cgccgtgcat tcccaagcgc gaagaccacc 180 tccgacgtcg ccgccgacgt tacgcagatt tcgatttcta cgacgactgg gataacgagg 240 atgtggaaga tacgattcta ggatggggga cggacgagct cgaccgtctg ctggcaggga gcgggttagc gcggggaagc tctgagcagc ctcgcagaca aaggaagatg agctatggtg 300 ctcgccgggc cagtaggaga aaaagcggac tgttgatacc tgatgagcgg gatgatccga 360 ctgtcattcc aagttcttcg tttctgggat ttctcgagcg gtttccgtgg agatttggtg 420 cgcgagggtt gaagtacaga ccctctgctg ctgacttgca ggagcacccg gcggggctgc 480 gccatgtaca cgaggaaagc ccactgattg agtctggtga agaagtggac gaagagacgg 540 ctaatggtgg caacgggcgt taccgaagct ctacacaatc atcgcgtgaa acggcgaact 600 cgctcagctc ccgaggtgat ctccttccaa gcgatgaaga agatgcgata ccgcttgacg 660 atgaattcgc catggcgctt actcgccgag gaacagggct agagtcggac gaccaggagg 720 gaggtaagcc tgagagcatg aggtctgcgt cgggcacatt cagtatcgca cctaccacat 780 catcaaagag ctcagggaag cagaaaaaga aaaagcgaac cagcagaatg cggtcgcctc 840 agagttcata tgtggaggtt tcacgcgaca tgccagtctc aattgaggat ctcaagaggg 900 aggaggagca ggctgcaagg gaagaggaga tggaaatcgt acggaaacgg ctcgctgcac gacagttagc tttgagccgt ggaatcagta ttgaagacgt tagggtatgt tcgccaatat 1020 ctgatagcaa gtatggagta tctgagctaa cttacccaga tcgcttccat acctccatct 1080 <210> 2347 <211> 1257 <212> DNA

<213> Aspergillus nidulans

<400> 2347

gtctcttttt accttttcgg aactcctatt tccctttatg ccagcqacta cggcttccac 60 acaggatace ttetetteeg aggecaette acegeaaatg geegggaaag caaettetee atccagaccc aaggeggaca ageetttgge tegteegtet ggetaagegg taettaeeta 180 ggatectgga ccggtgataa tgactaccaa gattacaatg caacctatac ccttccctct 240 cttaaagcag gaaaagaata cgtgtttact gtggtggttg acaacatggg cttgaatgag 300 aactggatcg ttggtcaaga cgagatgaaa aagccccgcg ggatacttaa ctacgaactc 360 ageggecaeg aagecagega cataacetgg aaactaaeeg geaactttgg eggegaggae 420 tacgtcgata aagtacgcgg tccgctgaac gagggcgggc tgtacgccga gcgccacgga 480 taccaccage cetaccegee gacaaaatee aaggattgga aateateeae teeesteace 540 600 ggcctctcga agcccggaat aagcttttac acagcgtcat tcgacctaga tatcaagtct ggttgggacg ttcccatata tttcgagttc ggaaacagca caacccctgc cccagcgtac 660 agagtgcagt tatatgtgaa cgggtggcag tacggcaagt acgtgaataa tatcggaccg 720 cagacgagat tccccgttcc tgaagggata ttgaattata aaggaacgaa ctgggttgct 780 gtgacgcttt gggcgttgga gggtagcggt gcgaaattgg atagctttaa gttggtqcat 840 ggaataccgg ttcggacagc tttggatgtt gagggtgttg agctcccacg ttatcagtct

aggaagggtg tctattaggg tttactgtag aatttagtag tagagtgatg gaatgaacgg 960 tgaagtgaga gtgtattaag gccggatacg tagatcgacc cgaagataga gatgaagtgg 1020 tgtagagcag ggatccgggg ccatcccagc caccgaataa aaccagcaca aaagcgcata 1080 taaccaacca cgccccgat tccaatctta gtatcacccc atcattccga gtcaaacaca 1140 cttcatgttt caaacacaat aatccaagag aaaagaagct caaacacaaa ccatgccacg 1200 acatacacct gcatcaaggc agacaaaacc ctaactacaa ccattcgata aaaagtc 1257

- <210> 2348 <211> 1086
- <212> DNA
- <213> Aspergillus nidulans
- <400> 2348

cttcttccat atggtcaaga agtcgctgca ggctcggtca gcatccttcg gacacataga 60 aaatcggtat ttggagctcg tacttgtact gtggctgcaa gggagtatct gcatacgaca 120 gtagetttgg tattagtttc atccattgca tgtagectgg caagactcac actgeegggg 180 cctcattgtt cctcccaacc gtcaagaata gaagcgagat caattgaaaa cagtcatcca 240 atacgtaatc cactgtatta gaagcacata attagcacaa atcgggtcaa tttgctttgg 300 gggtecatgc tactaacagc gattatgggc cagacgacgg ttttggtctt tccgaacagc 360 attgagcttt tctatctcct tggtcacctc ttcgtaaaga ggaaggacat cacgagatct 420 aatatacgac gatttgtctt gtttcagcag ataaagcgcg tcgcgaatqc gaagtacaga 480 ttccaagatc ggttgctctt tcggatcaag cggggtttgg atggcggggg attccatcac 540 ggtcgcagga atcggaagta taggggacaa actagaaaag tgtagatcaa tgggagacga 600 gttattggag atcgacagat caatgagaaa aaagaaaaac acggttctgc accagctcca 660 gatattgtag cagaggtact agctacgacg tatagaagcc cacctattga tcgctcccag 720 cgctgaccta ctaggtatga tgtcggtatt tcctattatg gagtagcgta ctggtcacga 780 ggagcgtgct gcggaagaag tcacgggact tgcgctggcg ctagactgcg attggaacag 840 ccctaagcga gggctcggcc gccaaacaca caatttccgc gttgggtctg gctgttggct 900 gteccegtte gaettettea aagecagteg ttgataaaaa aaaggtette cegteettee teteteteet ecceeatece tetegagaet ttgtecagte caacgacaac categacace 1020 atgtctaccg ccgagctcgc ctgctcctac gcttccctca tccttgccga tgaaggcatc 1080 gagatc

<210> 2349 <211> 2369 <212> DNA <213> Aspergillus nidulans

<400> 2349

tgaattcact ccatgtaagc tgccaatact ggtatctcag actcacgagt cgctcgtctt 60 cetetgaagt ceatgtetet egegagetet tteccategt geteatttte geegttggtg 120 caatactgag taagatgtag gaagtagtga aggctaaaat ttcttcttgt tgtgtaaatt 180 tatagattag atgacacacg ctgttcagag gctgcagatg gcatgggaaa ttatacgaat 240 agtatttcga gccaattccc ggtgatgaaa actctgcttt tttgtgctag tcagcccagc 300 ccctctactg cacacggtct gcctctgttc gaagtacttt gtgctcggac tcgagccaca 360 gecetgeece gggcaacaeg ceteactaae aggggttgtt geeggteagt eteteeceet 420 ttttttttgg ctggtatccg gccaatcagg tcatagaatc aagaagagca cgtaatgata 480 ttgggatact tttctaacac cgcgattttc cgttactggg tctagatatt gatccggccg 540 tcgaggtatc gtcagcatta gagccttgaa ggattaggcc ttgattcggc agtcagagca 600 actagctaca ttggtggtat catttaattt ccttgattgt ctacagagct agaagaccaa 660 ctataaaaag caaacaatgc cctcgtacct ctttaacatt ctgaagatgt caggaaaccg 720 tttcactttg caatccctat atctttattc tagcctccaa attgctcaat ctgtcaaatg 780 ctttttttc cccttcaccg gcttgcatct tgtcaaacac tcggtgagca tcaagcgact 840 tatggagcta cccctttgga tccctttctt gccaaggacc gcaccaacct tttcagatac 900 ctacataagt cttgcccgag ttaactgaat ttacttaacg tgctctaatt ttaatactgt attactctat cactaggcac atgtattttc ttgcttggtt ggtggaaggg tcaaggtgag 1020 tttaaggcag accgcgtcac gagttcttaa tagctggggc tcccagattt taagggctcc 1080 gaattcacaa agggtcctca aacaaatgtt ccctgtagtg attgatgggc acggcaaatc 1140 ccgcacatct cggacaagta aacaccgagg ccaagtcaca accgagatac tcgccaatca 1200 gcttggtata tctctggggg gaggaacaag tatggccggt gttccaccaa tgaccgcaca 1260

ctacggactt cgggcttgca gattacgtgc aggtagagga tctgtgaggt atcggctaat 1320 gtggacttcg attaccccag gatatacccc gcatgattgt aaattgattt catctatggc 1380 taaqtaaqat tqcctqacct cqqqctattc tagcatqqqt qccqaqtacq ctccatqcac 1440 cccatttcct tatattggcc acaaactacc ccaagcacca agaatgaagg agtagcctta 1500 cgtgtcggag tcaattggac aaaagaatgt ttgcgtcaac cctcaggaag acatttgtct 1560 teettggaet ggeaacetae teggeegeag ceetaaegae caceteaaat teaacecaet 1620 ataccatete caacteeege tteteagteg cegttgeaaa atecaaegge catgttgteg 1680 atgcaaatct cgacgggcaa gaccttctcg gcccctcag tggcaacagc ggaaaaggtc 1740 cctatctcga ctgctcctgc acacccgagg gcttctggac ccccggtgcc gaaccagcgc 1800 tggtgaacgg cacagactca accggaacac cctacgtggg agtgattatg accgacacct 1860 acqaqacaac taaccaqaca ctatctcaat atctattcct ccqcggtqaa gaaacaggtc 1920 tgcatgcctt ctcacgagta acatactata acgagagtga ttatttcctc cgcggcctcg 1980 gcgagctccg gacgctgttc agaccgaata caaatctctg gacacatttt tctggcagcg 2040 aagggaacta cggccctatg ccgctatcta gcacagagaa gatcaccgtc caggacgcat 2100 caacttacct tggcgataca actgacgacc cttacgtgtc gcagtacttg gactacttca 2160 ccaaatatac ccttaccgag agctgccgcg atccacgatg tgcggggccc ctttttaaag 2220 gggtccaccg ggggggggg gaaccccgtg ggccgcgggt tgggagcaaa ccggggggaa 2280 cacacaeggg gggcccccc teteaaacat attggggggg agegggacce caacaccaet 2340 2369 tctttgttcc aaggccaccc cggcatcat

<210> 2350 <211> 2127 <212> DNA

<213> Aspergillus nidulans

<400> 2350

aaaataaatc atgtatattc ccactacatc ccattcatac atgagtataa aaatccgtga 60

ttgcgtagtg gcaggcaaca agacgtagca cacctcgaag acaggccgga gcctggtgcg 120

gcttaacaaa tcggggcgtc gtccggaact ccccaccaaa gtccaaaatt cttaccttct 180

cactccgccc tccattctcc attcttatcg gataccactt catcggggaa gtgcaaaggg 240

agtttctatt caccttgcta tttgactacc taattgtcga aggctactgg ctttcccttg gccagttttt ttttttgcca cgactccgcc cgaccgccgc gagtctggcc gaagaacctg atattgttcg taccgcacaa taagccaccg aaaattgtac aagtgtgaat tagatctagc 420 480 taacatctct cagtgatttt catgttcagt tctttcaaac tacacggata acgccttgct aaacgaagaa accatttgtt caatatggcg ccgaagaaga agggaaacag gaagcaggag 540 gaggattggg aagccgaact tggagagagc attcctcctg cgggcggtga cagcccagct 600 caggaggaag ctcccggcgc cgatggtgac gatggggagg ctggtggtgg tggcttgctc 660 720 gccgctttga gaaagaacaa gaacaagaag gccaagaagg ggaagccgac aaacgacttc 780 gtcgagggcg aggaccctat tcaagaagcc aacggtgatg cagactttac tagcaagcaa cctgaagaag gcacgttcga cgaggatgat gtattcgctg ggaagaagag caagccgatc 900 aaggctgcgc ctccgccacc agcacctgtg gatgaggatt ctggccctcg cgtgaaaact 960 aagaaggaga aggagaggga gaagaaagag agggaaaagc agcgaaagag ggaacaggta tgcctttttt tccccgctag taggcctcgg ttgttttttg ttgactgaca tgcgttatcc 1020 aggccgcgaa gaagaaaact accgaaccca aacaggctga acaaaagaaa ccagaaccga 1080 agaaagagga acctgttgct gcaccctcca cgcctgcccc tgcccctgcc cctgagcctg 1140 agcctgccgc cggtggcaag aagaagaaga tccccgctca cctggctgca atccagaagc 1200 agcaggaagc tcttagaaag cagcgcgagg aggaagaacg ccgtctagca gaagagaagg 1260 ctgcagaaga ggcgcggcga ctccaagagg aggaagaggc gaggaagaag gaggaagctc 1320 gccaaaggag gaaggaaaag gagagggaaa agaaggaaca attgaggagg gaaggaaagc 1380 tgctcaccaa agctcagaag gaagccaggg agcgtaatga gctccgcatg aagcagatgc 1440 ttgctgcagg tgttggtacg gttgctgggt tgcagaagga tcaacctgag aagaagaaac 1500 ccgtttacga gaacaaaaag aagaagggtc cgaagaagca ggatgaagac cttgaggctg 1560 ctgctgctcg tgctaaggct cagcgcgagg cagaagacga gcgacgacga aaagaggagg 1620 aggagcggaa agcaaaggct gaagctgaag ctgccgctgc cgctgccgct gctggtgatg 1680 aggagagcga gctcgacgat tgggagaagg ctgctgatgc cgaggaggtg aaggatagct 1740 gggacgcacc tagtgatgat gagccagaga agcccgccgc tacaaacgat gaagagataa 1800 ctctaccaga gcgacctgca gctaagcccg ccaaagagga agcaaatgag gagtcttcag 1860 aagaggatte ggacgaatet gactetgatg aagaagaaaa ateegeegeg caaaaaageaa 1920 tegeecaacg gaaggeggag getgetgage ggaggaagaa gcaacaegag gaagetttag 1980 etgetegtte aaaggacaac ttgegatete etatttgttg tattettggg caegtegaca 2040 etggtaagac taagetgeta gataagatte gacagacaaa egtecaagaa ggtgaageag 2100 gtggtatace caacagattg gtgcaca 2127

<210> 2351 <211> 4174 <212> DNA

<213> Aspergillus nidulans

<400> 2351

catacaacgt tattgagtca cagcaacaaa cgcgagtgtc tagaacaata aggggctcgt 60 120 ctgtagtttt aaaaccccgg ggtctccttg ttcttaaata cctaaacatc tggggattac attaattggt tececetgge caegecagae tgeatgtaat tgeacagtga etggaecaet 180 ttcatagaga gatggtggag gataaaaggc agccttggtc tggaagtgcg tcaaccagtg 240 300 ttttcattca gcccatgtcc agtaccggca aaaatccttg gtggctcttc catcggccat ggccgaacct ggggaaaccg tcatgggccg gccattcggc agctctcctt tcagaccaag 360 tectgtgaaa gtgttgatge cegtttegeg eetgeegtte geaeetgeeg ttggegeeta 420 ccgtttttta cagtctgcta gtgacgaggt cacgagtgat ctggaataac acgtgatagg 480 tctagtggcg tctcttctcg aagttctctg aaacgactcg atctggagga tatgcgtgtt 540 taacctggaa ttttctagtc gcatgcctac ttccggagtc ggtacaagca caaagaatca 600 gatgggetgg tgtcategga teatgatgeg agatagaega teaeceaece gtteaecage 660 tatgtctqcc attcqcctct gtgqatgcct agatggccca tgtccgtcct agtctgccgt 720 eggetetgat tgatgeettt geeettgeea ceaetaggea gaeteaaegt etgattgttg 780 gtatacgata cgactaatat gtacgetega tatagacatg etggagtett gtttgettae 840 900 tgcttactac taacggctta ctacttattg cttactactc gggactaccg ggcaattgtg taatgcaaat gcatagaatg atatcatcta tcggtcctat ctacaaccat gacatcccaa 960 ctgcccaaag ggtgttcgat ctgacctaag tcgcctcaat atatgcactt agatgcacac 1020 tcacgccttt gggcgtaaaa taaacgggtg ctttaacgcc tcggctggcg tgcatcgctt 1080

eteeggatte agactgagge aacgategag cagategaca aacaaageta geteetttge 1140 ctcgctatct gtcatccccg tgtgcccttg cccatcaacc gggttttgag atcgcgcgtc 1200 ggcttcttga agtccatgat gcgggtggta aggcggccgg tgatcttgtc ctcttcagtg 1260 ctgtggaagt tggcatttcg tcgaagtgga ggtgcgccag agacccgcgc cgcaggagct 1320 teggegggta tttgecaegg caetecatga tegatttgag catetggttg ttgtttegte 1380 ccgtgaagag aattttgccc gtgtagagct cgaacagtgt gcagccgatc gaccacatgt 1440 caatggcgta gtcgtagggg atgcccaaaa tgatttccgg tgcccggtaa aatcggctga 1500 ccagatatgg agtaatctcg ttatccgaag ccagcgacgc ggaacccaag tcgcacactt 1560 tcagtatgtt gcgctgctcg ttgacaagca tgttgtcggg cttcagatcg gcatggagga 1620 tattgcactt acgcatcaag ctcaatccca ggaaaatttg ctgggcgtac gctcgaattg 1680 cacgcaggtt taaacctaca tctcggccaa acttcttcaa cacctcccgc aggttcatgc 1740 tgaggttttc gaagaccatg cacaaatgac ccttgtgctc gaagctccgt tcgaacttga 1800 tcatatgttt cttgtcctct ggatcggctt ctcggagctt ttccaagatg ccaatctcct 1860 tcaacccage ettetteatt gtgteattet geeggataat tttgattgee acaacgttae 1920 ccgtctttga atctttcgct cgaacaactg acgagaacat tcccttaccc agattctgtt 1980 gcacatggta acgcccgtcg atcaactcac caattcggag gttataatat ccttcaggat 2040 cateceaatt atecateata etaaegtega geteeegege ttggggeaca geaatggegg 2100 atgcgtgcgc cggcttcgac gtttcctcgg tatcttcagc aaacatgtca tcgtcatcct 2160 cagcaaatat atcaaatgaa teetttgeet etggeteetg ttgegaeggt gegteaggea 2220 aaagcacgtc ctgcttggtt gttttcgttt catcatagct cgcggccgag acatcattac 2280 tetgeeece gtgeetttet ettteggett teatgteaat agtagggteg tagtetgeag 2340 ctgaaggttc atctttgtca gcgccatcca cggcaccatc tttgactaaa tccaagtctt 2400 tgccaatgct aaagtcggga aatgaaccgc cgtccggagt agccgctgac tctgtacatg 2460 ttatcatacc gctactattc aagagtgaag ggaatgattg cttacctgct gtttcgttgt 2520 taggagttgc tgcttcgctc gtgggagtag tacccctatc accaccaaga tgcagtgctt 2580 gaatgegeag gggegtegee tggtetetat atttagettt gatggettea egeegtttge 2640 gccgcgcctc gagctgggca gcctcatcaa gaggctcttc atgccgttca gcgacatctt 2700

ggccgttcat gctaaagcaa tcagtataat tcaatttaca gccgggggac gtacctatca 2760 ccatcagagg tagggagtat agaagctgcc tgaacctggt tttttttgagt tttagcattc 2820 tgcctagaat ctcgagcgac actcggggggg ttcccccttt cgctcactga ctgttcagta 2880 gaagacette tittgetetg egatgetaca etgecetete geograttg tigegactee 2940 cactcgtcgc cagagtactg tttgcgcttc cggacttcgc ggtagggcga tcgactgcgg 3000 gtgegtggge getteteeet tegtegatea tagteatege tgtaeegaag gteegeaagg 3060 tggttgtctt cgcggtcgta atcgtaataa gacctagcct gtctttgtgg gtacccatca 3120 tgtcgatggc accetegteg eggeggtgga aacgteegte cagagtgtet gtegteatea 3180 taaccatacc aatagtcatc atggtcgtaa tcgccggccc gtcgacgctt atacccccta 3240 taateteggt aeggagageg tgagggegae egegateteg teettgeeet agatetetga 3300 cgacgaggcg acctggtcac cgaggcggat gaactaactc tggtgggacg gtcaacgctg 3360 ttgtcattaa gaagagattg cgacgtagtt gccttcgtct ccgaacctga ttcgataatt 3420 tegecetetg aggeggtega tgacetgege gaggacatga tgagategtg ateaaaagae 3480 qcqatctttt ttttttttt ctttcaggat tcgctgggca gcttcgcaga tagcagaatg 3540 acteeggtta geaagaatge ttetagaage gggegtttgg agtgattgag aaagteeaac 3600 caactgggta agcactgcct atcttctcac tatcggacaa ggtagaacat ggagctatcg 3660 agatgggaag gtgatgtacg ttgatatttg acgatagcct tgaacatgga atcgatgagg 3720 ageettggae gttgaeegte gegteeaget eagteaeggg aaageeeggt tatagtetaa 3780 gcccgtttga gaattagtet agccccgcag gggatcatet tgttcaettt ttccatgatt 3840 cccatctcct tatcatcgca aaaaataaat acaaaaattt tcacataaga aaagccccca 3900 aactettacq catateatea tqqqqtqqtq caaqeaqaga aqqqtqaqte teacatgata 3960 ctgttgcacg acttatggac ggtcttagcc cactaactct tctatctagg cgcaagggta 4020 agccccttag gcggccaaag gaaagaggaa cttgcgatgc caccttgctt aagagagcca 4080 agagcgtcca gacccttttg gcatgccgat aacatactat gggtttggtt acaaactagg 4140 4174 caaaggactt tgaaagcaag caggccccta cacg

<210> 2352 <211> 1003 <212> DNA

Aspergillus nidulans <213> <400> 2352 60 ccagagttgt tgggagcatc gtagaagagc gagccggcaa tcagagcctg gataagggtc 120 gagaectgtt tgataatgaa tgtggeettg teaceceaga ggatetggta etgtegegta acgcaaatct tgacctggtt cataaagtcg acggtaaatg ggctgctttt gggcagctgc 180 ttcgcctttt cctctgcaat tgcttgcttg aaatcttcgg tccgtagctt tgcgtattca 240 300 gagtcagggt agtcgtattc gctaatcata tctgctttca cggcggattt gttatactct tctaacatgg cgtcggcatt tcgggggaaa cgcgcctcga accctgaacg gatcttgcgc 360 420 teggttggea eggtgaeaee ggteaggaaa teageaaegt ttgaaceete eeggeaaaea 480 aageegagag cetecatgta gggeetgget tgagteatgg geeegtagta gatetgtttg 540 ccctcatcca aaaccagcac cttgtcgaac agatcgtaga taccattacc ggcctggtac agagtgacaa tcgtagatag gcccagaaca tcggtcatgg cccggatagc cttggtccac 600 tegagegegg tgetegegte cagacegegg gtaetgttgt eecageagaa gacagatgea 660 720 cgagtagcaa gacattcgat gatggagaca cgcttgcgct caccaccgga aacaccgcga ataaattcgt taccgacctg cattcgttag gatgacaaat taaaagagat gtaagaaatt 780 caaagtacct tggtgtcaac agtgtgcgag atacccatgg actggagcaa gaactttttg 840 tattcttcgc gataggcctc gggcgactca actccattcg gcagacggaa aggcaccttc aaccgagtcg caaagtccat agtttcaccc acggtcaagc tagggaagaa gagctcttct tcggtgttca tcacaatctg gcccctgtcc tgtaacgcaa cct 1003 <210> 2353 <211> 3110 <212> DNA <213> Aspergillus nidulans <400> 2353 60 gagacctggc tgatggagga gggtgccgat gggttcacgg ttgtctttcc tttcctgcct 120 caggggctgg atgatgtgac gcagaaggtg gtgcccgagt tgcagaggag ggggatcttc 180

cggaaagatt atacgggcaa cacgctcagg gagcatttag gtttgccgcg gcctcataat

cagttctttg cttgataagt tgaagaacga ccgttgtggt tgggggtgtt cttatagggt ctgaagataa ccctaatccg gacctgagct gtggacgaca acggtcaatg gatcagactg 360 420 gagataacag tgggtcaaat tcatacgata tcgatgacaa tgaacatgta catgataatg ataagaccgg ctatcaatca actaactgga attagtacgt ctgggctgga attggagtaa 480 gcaatagccg acggagattc tccgtgcggg gaggagttct ccctgcaact ccccatctgc 540 cccagataac atattcagag aaaaatgtcc gttgcaagta gaaagctcta ccaaccattt 600 caatgeetea tetgecagag tegetteace egecaegaga ateteaaaeg ceatgeeete 660 ctccataccc gctcccacga cgaactccag ctgtcctgcg acttctgtac cgcgaccttc 720 tegegeecag acetgaggaa geggeatatg aagagaagae aceeegaaca tgaggeeaga 780 840 cgggcgaaga agagggttca gcggggggag tcgacgagac aatggagcga gggggacggg agggattccg tctcgccaga agggagccat gacggccgtt cccagcaggc agtaaacaat 900 cagactagag ggagtgcaag teettggggg gatagaeggt egeegaaeat ateagaeetg 960 atacagcagg cettggagga geegegagge gataggateg ggeaggaagt ggtggatetg 1020 cagatgctgc tggatacegg gcaaatattc aggccaccag agaacatcga gcaacacttg 1080 tcaggettta etteetegge cageetegaa gaeggeaget ggagaeeete geegteacag 1140 atctcgaccg cgtgcgctct cttctttgct catgtctcgc actttgtccc tttcctccat 1200 caacccactt ttgacgccga ccagacaccc ctccatctgt tgctgagcat gctatctctc 1260 gccttccagt acggctccga tccagactcg gacacgcaag ccccagactc tggcgctctt 1320 ctctcagccc gctgcttcca ccgcgcccgc gcccttctga ccagttccag caccgcaggc 1380 cctctctcaa ccgtccaatc ctacctcctc ctccagatag cctcgatgat gtacctctgc 1440 teggaatece accaeaget teagatgeae teggeeagta tetecettge eegeacetea 1500 ggtctcatgc aacgaacagc tctcgaaacg tcgacgtcta catcgctcac caccctctgg 1560 cacgcattcg tgtctgcaga gtcccataaa cgcaccctct tcgccctcca ccagattgac 1620 getetetggt accagtteet eteegtgeeg egeteeatet egeatettga gateaageae 1680 gatctcccat gtccgaggga gcagtgggtt gcggcctcgg cagaggagtg ggcgcatggg 1740 cageteatee ggggacagae ggggecacag tegetecagt acgttgacge agttegacgg 1800 ttcctttccc aagagtccct gctcagcctc ccggtattcg acccttatgg cgcaatcaat 1860

ategegeaat tteteatete etetgegege gagattteeg getggtegae gatgaeaggg 1920 atgctaagta tegacegett eggagegeta eggtegtege ttgagaeget geaceegtte 1980 atotgoccag cocatoogto totgtoccca gtotcatoaa gegecectoc agegeaggat 2040 getttatgee eegetaeetg geagaeggee atgetegage teeagatetg gtegeegget 2100 catacatcag gcataatcca gacgtcgata agctcgctcc tggaacacag tacacagatc 2160 cacctetece egtegeegea gattetgtge gaagaaataa eggeteagge tateaageea 2220 catattgact ggttcttgac ctatctggaa aacacagttg atgctgaggg agaggcaccc 2280 tgggtggtgg tgtatgcata caaggcgttc ctcattgcgt ggcagcttgt tcgagggggc 2340 gtcgaggggg cgatgagggt tgttggggtg catgatgggg atgtcatagg cgcaatggag 2400 tgggcaagag tcgtttttgc tcggcggaag aggtgggagg ttggacgctt agttatgggg 2460 tgtttggata ggttagctac ggatatcaat acatgagtct aatcatgttg tacttgtctt 2520 ttggctctta ataatcccga taaaatgatg gagtttcgtc gcttcacttt cgctgtttaa 2580 gctattacaa atcaataata tccagggcgg gcctatgcct catcgcaatc accacttatt 2640 gcctacagta tacgagcaaa ggactaccta atacatctca tacctccacc ccaggccaac 2700 catctccctt gtgactccat tcttgatgac cttttcgatc tcttcctcaa ctcctgaatc 2760 caggegeega ttetecetge geacaateea eeggtaaaca gtgacegtaa tgeecaagea 2820 gacacctgcc ccaatcaacg ccccgaacgc cgccataaat ctcggttcgt cgtagtaaag 2880 gtaagaggcc cagatattcg atgtgcctcc aatcgcattg accagtgcag atgccgccgc 2940 ccgtttactc acgggtcgag caagatgcag attgatcgtc ttgtagagga ggagctgcgg 3000 gcccacggac gcaaagggga gtatcatcat gctaaagtac cgagccccca cgttcaatgt 3060 cgccatcggg atgatgtaca ttaccacggt gatagccacg cagatcaccc 3110

<210> 2354 <211> 2492

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2354

ttcctgttaa gaagttgaga gtagttatat aattggtatt ggttataaca tcacaataga 60 acaatatctt caccttcatt gcacttattc tattaagaaa ctgtatattt ttatcatata 120

acatagatag agagaagtaa acgtcaccaa aaaaaaaagt agaaaaagac cctggagtgg 180 cggcagaaag cctgcagcaa ttaggcgcac agtaacaaag tcaggccact atttaatgca 240 gcaccatatt tcccagccct tcagcgatca gtgaccatct ggcaccatca gggttttcca 300 ttgttgcgcc attgaatcat tccactgtca tcatcaagcc ggaccattat tcaagattcg 360 gcaaggcact cccgagtacc ctgtaggcat aactcctgga agtgtaggta atctagtaag 420 480 tggtaccaaa ctcgcgtcat cggtcggaat cgcaccctcc aggaacttcc agaacttccg aggctatgat atcaaaaatc aggagtccgg cagtctggac cttgacaaat tgatcggacc 540 catcgagtca tttatgttta ggtaagaccg cagaaagctc agacgtacag ctcaggtgaa 600 aatttaggtt gcgatgccga atccgagctg ctgctaggga aagcccggag cgaacccgga 660 720 aaactccgta gacatgcaat gcagctcggc gatgaggcaa tttggcacca ttcgcgaagc tgatgctgag cttagcgtct tgggcatcgt cgcatcataa agggactcta cggcataata 780 gaatatgcca tatagggcaa aatacgtacg aaagtgggcc gggatccggc cttccgtgaa 840 aatcgtccgg tggatctcgc tttgttgttc tgcaacaatt ttttccaggg ccaggccgat 900 gtaggagttc catcacctga ttgggctata gtgagtcaca ccatgcgctg cagtcattct gccatgggga tccatcatgg tttcatgctg tatataagga gctaggtctc ctcagcgacc 1020 tgaageteee teeeetttee ettetttaee teatetegte ettteaaggg ggtgatggte 1080 atteccetet ttactgteta gggttgttat etettggtat ttgttttget ettegeetat 1140 acttectata ettecacegt geeettgaga cagagaggga aggggggaaca tacaaaaaga 1200 aatacccacc gaaaagttat cgcgcttctt tcgtgtatag aatgggacag aggcacaacc 1260 gacgacgaac ccgcctcga tctcgaaact ccgtcaataa aacgctgact ccgagtgcta 1320 tatctcctcc agecgacttg ctctgcacct cgtcctatcg gtactctctc gactgtctag 1380 aaaaccgccc ggcctcgacc cggcactatc gggggttgac atggcagcct tctgagtacc 1440 tgaaaccgga catgatcatc atggagacgg agcaattccg gctctttgga ggcgagcctg 1500 gggatgacgt ggatctttgc tatcgcatgc tcgagtattt tggaggactc gattttatag 1560 atccgtgagt tccctcgaac tggcattacc acgcgaagct cgctctgaca tcgttgcatt 1620 ttcagtctgc aggagttcaa accgttgcct gggtgaagat cgttcagtga atcttggcga 1680 acatettgae gatatttegt tgtgetgeeg eeagtggaea tgaacaaata gaaaaaaage 1740

tetggaaaga egattegaet aaaaateteg acetgatteg attateegae aacegeceta 1800 atteegaaaa aagttegtgt gtgacaggga gateaeteet eeettaagge geaageaeca 1860 gtttacatgg ateaeceaag teaecegaett gtageaatga agattetttg agaateggat 1920 tggtetatte aaaacttgge eatgtgaett etggttgaga eeetetgeee tagegaeatt 1980 gageegeett eagaetagge ttgeteggtg ggttgagtte geggeegate ageeaegget 2040 ggetgaeteg ttgaeegetg aatteeecat ggatgagteg egaegttgga tgeateatgt 2100 ttgegtaeat agtaceateg eagggttag gaateteatg ettgtageea gteeteagea 2160 teaggaaate aeggegaggg gtgtetgtat gaaceageae gteatgggt gtaeetegat 2220 aagggacaee gttageagge teaaaaaege gaaegteeae etgattagag tegtetegat 2280 eacatgtgg eeatatttt eatggettta tagagtaae gagtgtett tggaaacaa 2340 attaaatata aatageatta aaagaeaatt aegtgataat gaaagattnt tggaaatatg 2400 eatgggtatt ggattnnngg atggggaeee agaaggggt eeeagtaata geettgtgge 2460 ettattetgg aatgaaagge egtgagtgat aa

<210> 2355 <211> 1645 <212> DNA

<213> Aspergillus nidulans

<400> 2355

tcaactaagc atatctcgtc cagtccctct agatgtccgg atgaggtttc ccgccggacc 60 tccaggtccg atgaattggg acttcctgca gaaacagcca ctcttgatcg agttcatggc 120 cgatctaagg tccgctgtcg ccggtaaact aatcgtccta ttgaagtgcg gcaactgtcc 180 ctaaattttg aaggagaaaa aaaaaaaaag cacggtacac accttggaca cctgatcgac 240 ctcattcttc ccctgcaqaa gcggctcttt cgtaagaagc tccccgaata tacaccccac 300 actecacata teaaceteag gacegtaact eteegcacee aacagaaget eeggggageg 360 gtaccaaagc gtcacaacga gttgcgttag ttttggcgga gggtctccgt agtagcgtgc 420 480 cattccaaaa tcagcgatct tgagctcgcc gcggttattc aaaaggaggt tggatgtctt gagatcacgg tgcattatcc attgcgagtg aagaaagtcg agaccagaga tgaactggag 540 gagaagggtt ttggtttcgg acgggagaaa tggttctcgc atgtcgtcga ggagggtctt 600

gagatcgtgt tcgaggaagt ccattacgag gtagactcta aatatgccgg agaaggggga 720 gaageeteee eegggtttga tggttaacat tatgtatetg ataettttea tggtggagga gcatgcgatg agaggagtag agggaagagg gctaaagacc ctcgtatggg gcatgaatag 780 840 gccgggctat gaatcatagg ggttggtaat caggcttact cgtccatttt gtttcccatg acqacctcqc qqaqgtaaac aacgttttga tggcgcgctt caagaagagt ctggatctcc cgaagtccag ttacggggaa cccgtcgggg gaattgtcta gcttgagctt cttcagggca acgacttcgc cggttgtgag ctcctttgcg cggctaaccc agccgtatga gccttcttca 1020 atatggttca ggcgctcgaa gttgtccaca tggcgacagg gtccccattc caacgcgggg 1080 aattgtaaca gtgtcgttgg tttcccttgt ttcgcagcct gctcaccgct ggatcccggc 1140 tgctgctcat ttgagagccg tcgacgcttc ttcggaggcg cttcactggg gtcgccattg 1200 agectggaat caceggettg gegtteeget geagettgag cettagettg etettegagt 1260 cgctgcttct cggccttagc ccgtcgcttc tcctcctttt cgcgcttgcg ctgggcaatg 1320 agegettetg tetegggate ttegteggee catetggatt tagaggtega cattgeagtg 1380 gatgcggatg cagagtcgag acgcgaggtg gagaataaca gttggtgttg gaaattggag 1440 acatgacgct atcggaccgg ggaaacctgg ggcctgaaag ttcaggccgt catcggattt 1500 caaatcatcc ccgcttgtcc cgccattaag tacttgtact cagacaacca gcttaaacaa 1560 ccgccttact cttactattc tcgctgagac atcttgctct ccattgttat acaccagatc 1620 1645 ataatgattg agccatttca agtat

<210> 2356 <211> 1978

<212> DNA

<213> Aspergillus nidulans

<400> 2356

tcatgatggc attggttgac cttttcgagc atgatctgat ggatgcgcg gtatcgatat 60 ggcgcacacg ctttgtggat cttgccaacg cccttgtgga cgccgtggac tcaacttctg 120 gcgcctggtg gcaggtcatg tctgcgcctg ggcaggaagg caactatatc gagtcaagtg 180 ggtctgcaat gtttgtctat gctttataca agggtgtgag ggttggtatt ctacctgcgc 240 cagaaaaagg cggggaggct tatatcgaag tcgcggagag ggcctacagc gagcttgtaa 300

agcgattcat tgttgagaac gaggacggca cgcttagtta taatggaacc gtgggtgtct gcagcttgaa ctcaacggcg acgtatgacg tacgtttgca aattgactga acattatttt 420 480 gtgaggcgct gactgagtga gctacagtac tatatccacc aaccgcttgt ctacgacagc gtcttgggct ctgcggcttt tattcgcgcc agtacagagc acgagttgca ccttgaagct 540 tctttgaatc tctgaacgcc ggcatattgt ccggtctcct ctgccagaat cccacgagaa 600 caagaagatg gacaggcgtc tgcattcacc tttcgagaaa tgatgcgttc gacggggtac 660 720 aatttaggga gtggaacagt atatatgaga gcaatatgaa tagcgaaaac tgatgcttac gttagtgact tgattgcttc ttgaaggttg cgtaacttat aagaaacatg atcaagcaat 780 attcatactt aagtaaagct catcctctgg cggcccatat aagtcactta gcccattacg 840 ttgacaacaa tcttcttgag gctggacagc cgtgtcccta gtctaccata ttgccaaaag 900 960 gtacaaagaa caatcatatt gtgcattctt ccataacggg tttaaacaat tttctagtac aactacatat ttgaccgtcg atatttggcg acatatgtca gaaatgcaag gatagtcgcc 1020 tcgaaaaccg tagttagcga ggcaatgggt acgccagagc cttcgatatg ctgtagatgg 1080 caggtgcaag atgcggtcag attgcttatc aagagacgaa tacagtcctg gagaaaccca 1140 ggatctcacg agctcatttt tttattcgtc cactcctgga cgctttggtg agccatcacc 1200 atgtcactag tcccgcctgc ctggtacgtt gatacatcat cacccttgcc acgccaccaa 1260 ttctcacaga acaactagag agccgattca ttcctcttcc atgaacccaa acctggttgc 1320 gtttctctac aaatgtttag ctaacctagc cgtaatatac ctgcaaaagg atatgtaaag 1380 gacgaaaaga acctccgcgg ggccgaaccc gtcaaaggtt aagctgctga cttgtcgaca 1440 taaactaata atgacagtcc agaaaggagc aggcttgtta tttctggtgg tggaacggtc 1500 gagcatccat tcaatcgcag gagatccgca tccttgagaa gggggaatag ccccaaaacc 1560 ctgggtaaga aaccgggctt gctactttag aggaagaaac cgggtacccc ttgggcaaca 1620 gcaggcggtg tttgaaaatt tgcaaaacat catttagcaa agggcttacc ctaacccgga 1680 taaatggtag agaaggttgg tttacaaaag cactgcaaag tatatgccgc gtgaaacaat 1740 ttatgagctg tattcactct ttggaggggc tagggcctga agttgtagtc tcttcgaagc 1800 ccaaccgtgt attgctgttg gggaacttgg aattttcctt agacgaacaa gttgggatcc 1860 atccgtattg gttttataag gccaaagaga tttgggccct tgggggggtc ccgggtaaag 1920

<210>	2357	
<211>	996	
<212>	DNA	
<213>	Aspergillus	nidulans

2357

<400>

acctaaattc ttatgctctg gattcctcgt cacgctacgt gatcgtgctt cgatcagcgg 60 tggacaagct tatcttgtca ttttcaagct cttctacttc tcatcgtctt tctacactat 120 atttctgatg atgaaagtgt tcccccgaac tcgagaacga gaaagggcgt ggaagatgac 180 gttaggatcc gttgggatct cgttagttct cgctcccatt gtgcatctta tctttgggga 240 gagacattcc acacggccat tgttggaaga cgtaagtcga gctacctgat tcactcgctg 300 ttgctcttta aagaaaaaa atactgactg cgattactca ccgtaggtct tatggacatt 360 ctctatcatt ttggagtcag tttgcgtcct tccgcaattg ttactccttc gccagacaac 420 tgtgcctact gttatcaact catactacct tttgatgctg ggctcttacc gagcgtttta catcataaac tggtttgtag ggcagttgga tctgagcatc aagtggactg gatatccatc 540 atctttggat cgttcaaacg gctttctacg ccgactttgc ctgggtctac tatacccgac 600 agcgagttaa gctgcggaat ggaggggtgg tcgactcgga agattaccgg aacagttatc 660 ttgtgaacaa ggtgttgaac attagacggc gtagaagcta agacgaagaa gagcagagac 720 tgcacgacca ggatgacggc gatgagcacc agtcgagata taaccgatgg ggtgcacgag 780 gaatctccgt ctccgcagac gacacattag agaatcagcg gaacgggcgc tcctccccgg 840 cggatcatga tgcgggggga ttctcagagg atgataggaa ctagagattg attgcctcag 900 agcgggggat cttcctggta atctggctga ccaggttacc aggaagattt ctaatggatt 960 996 tgctgaacgc ctcagattaa tccctacatt gtatac

<210> 2358 <211> 1152 <212> DNA <213> Aspergillus nidulans

<400> 2358

gcgaatattt ttggggagac tgatgcgctg actgttttct atgtttttc cggagatttg 60

gactettegg tettgtggce tgtttteegg atetgaagea tatgtggegt tggtgttgtt 180 tactctctga caaagacctt gtacaatata ctactcatgt ataatgcata tacataatta 240 ctagaatttc aaatgctcat aggacaatct tgttgcatta gtttatagta gccattgcac 300 cettttecca cegeagegtt gacaagttgg ggettegega cegeetattt tetgeeggga atgcqtacgt aatgggcgga gcggaaagcc actctagcct cagtgaaaca agcaaacagg 360 420 agcagcacga ggcgcaacaa accttcgtat ctcatcgctc aaggcacaat aacaaagccg teggtgeaag etetgetete tggtagagea geteacetat gaattggtag tgteetegge 480 aaqtqaacca tccaqcttaq cacatacacc ctacatacac tctgaaccca gaaagaccat 540 agcaatggcc agctcaagta caccgtacta cgtccacgat gacccccgtg acgacgagtc 600 gattetggat gatggagtga ttgaggeega tgaaggtgag ttgegtteet aagteaattg 660 tettetgget titgaetaae attatgette etgteeteag caattgagge egaegaeeet 720 ctccacgaga cagaccgaac cccctccgc ggtaacatcg aaccagactc gtcgacttcg 780 cgcggcggca atggcaccag tggcatttcc ggcggctatc tgacctcccg cattcctggc 840 900 gaagaccgcc gcgcacctca gaacaccatc gacgagagtg tatggcagac gctttcgcgc 960 gateteeteg cegtgtggga gaagatgege caggteetet acceeaagta cetggtegge ggtatgttgc agcgcggtgg gggcggtatt ggggccgcgg agcgcgggga agcgtcaggt 1020 ttcggaggcg gcgtgaggaa tttacttggg cgctggcccc atgctgacgt tgtgttgcag 1080 ggagggatga gcgaggggct aagagattgg gatttatggt gagttgtcac atgcttgaag 1140 gagatgccct ga 1152

<210> 2359 <211> 2054

<212> DNA

<213> Aspergillus nidulans

<400> 2359

tgccgccgaa gatacagcga cgaccgagga gtcggtagct gtcatcttga taagcacgga 60
taaagaaagc ttcttcgagt tgcaggccat gaagaatgca cttgtagagg tccgtatcta 120
gacgtgttcc cgcttttgaa caaaaacctt gctaattctt atatccagaa actggaagag 180
aatggcagca ttaataacat taaagaagcc attgacaagg gccgaccaag tacaacggac 240

atagteceag ggteagteet geateaettt gtatataaat eeegegteaa tgteeaatte 360 atcatgtccg cgtatgaccc ggagttctca accatcaccc gacgccgaag gtatgtcacg 420 tcgaacttaa gagtcaataa cagcacctaa ctaggataaa aactagactg atatcaacat 480 ataataatct ccacgcaagc gtccacgcca aacacaccca tgtcaaagtc caccactgcg 540 tcactcagtc ctcaagctcc tttgcatgga taacgccagt tttcgaactc tactgtgtag 600 ctgggccgca tgcgaaccgg aatgcgctgg cgcaaagcgc cagcaaggtt gtgcaatggg 660 tgcagaagga agaagagcgg ctgtttataa ttagtggagc ggtgagtcat gctttatttg 720 tgatcgtata tgcaccgact gatttgttac aggtcttttg agcttgttta gccctttcta gattgtatgt acatcaaccc atactgcccg atagagtaga taactaggta tgaacgtgta 780 840 ctaagaatga tctaacgtta ttcttgtctt tatctccgag cgaagtaaac agaacgttta 900 ctgaacgcgc aactggtcag gtccatcgca tttgccatgt atgcttgacg caatctagga agattegatt tgcgtgactg eccagtecte gtettaggta ettattgege ttgeettete aggttggcca cggcgtctaa tctatcgtat cgtccctcag cgcaaaaagc tgctggaaga 1020 gctcagctga tttactccga atcgcattat ggtacatcgc attcgtgatg aactgcttaa 1080 tacctgtgat cttcgcagcg gtggtttgcg agtgatcgta gtgtacgtac atatcttcta 1140 tgtatgtcgc tgcgtacacg gggacttcgt tcttcgctag ctgcgcctcg tcgtagaggg 1200 cgggccagtc ggtcgttgag gcgaggatct ctgctgcttc tctgacttgg ttaagttcgg 1260 tgtaagagtc aaacatgtct ttgtatatct attcaagtct ggggttagtt tgatgtttag 1320 tttggccttg atggaacggg tttgatatgt gtacgcacca tctctcccgt gaaaaggact 1380 tctggtgcat ttgtgtcaag gctgaagact gggttcgatg accggagtct gtctgcggac 1440 cagttggagg cetetetgtt teagttageg atattagega tattgatgca gggcagtcag 1500 agttgtaata cccctggcag tagatggact cgtggaggat agcatagatg atattgctgt 1560 cgaagccgcc aaagctatca atagccacca gagtaggatg ggtgaggaag ccgaaaacct 1620 ccagateget ggeggegege aatataagat etaettaggt teageagagg gaeegtetat 1680 gtctttgagg cttaaatacc atgaacgcta tcaagcccac ctacttcctg ttagcggcta 1740 gttctgaatt attaaacagg tcatggattg gccataccat gcatgccaaa catgattccc 1800 agttgctgga tgcgttcagg aataagcgtc ccagatggta cgctaacctt gttctgcttc 1860

aaatggtcga cgacctttt cacccgatag acgtcttccg gaaacttggc atagtacgcc 1920 ttgtttctct caattacctt ttctactata tgtaagcagc aggaccccag agcaagtggg 1980 tggacgcacc gtaagtacgg gagtagacag gatccggtcc cgttgacaag gggcggaacg 2040 cccgcacgat gaat 2054

<210> 2360 <211> 1608 <212> DNA

<213> Aspergillus nidulans

<400> 2360

gctaggggag atgtcatcaa gtaagtaatg acacccatct acttttgcca ggtcgccatc 60 caacgtcaat gctcgatggc tgcgtcagta tcaaacaaga ggtgcagttc gccgactcgc gttaccctca atagctctta aattccgata cggccaaaag cgcaattaga gggttttgga 180 teggateetg ttetteagge agtegetgtt geagagaeta teegttgggt teagagtaat 240 300 ggtgttatgg ctacagccaa acqctacatc ttggcggtat agattggcct gtgacaactg 360 ccaggatgac acgtetttac ggggcggcgc tatcgctccc ctatgttcgt ctgatataga ccgcaagata catcatatgg atgaatcata tgggctagcg tggaagccag cttggcgctt 420 cgctcacttt ctgtcagcgc agtatatgaa gattccagag ccaacctcag gatatgggat 480 cqagaaqaqa ggttaccaga taagcaagac gactggattg ttaagagata cgagagattg 540 gatgtgcatc cacgatacta tgcaactcta tatcaaagca ataaccagat aacgctcaga 600 660 gaatacacag tactttctat atacagaacg gaagcaggac gcctctagac caggaaatca 720 ggaacccata atgacaggca cggcaaggtt caggttgtca aaccagaaca tcaggcctaa caaggataag ttacatcctt gtgagtgttt gtctgatttc cctgtccgga cccgtctgtc 780 tcccagtact taacctgctt gccactgatc aagccggcga tatcaaaggg atcaatgaat 840 900 gtaacatacc aaggeegggg atcetggaaa ceagggeeet egaetteggt caceeegtet ttagcaaggt agattttgtt cgaacggggc aagaaccgca tcggatgaaa gatgttgagc atcgtggtgt tagcatacat gatgaccacc tcaaaaaaacc aaaagaacca ctcgttccgg 1020 atgatagggt tgacgtcgtt cgggtcgtcc cagctatgct gcccggctgc agtgaaatat 1080 tcgacggtgc ggaaaacggt gcgtgtggtt atgaaggtgc aactgcagta taggacggtg 1140 aggacgetet tgagettett ggtgagaagt eeggegegat ageattee ttggaagtaa 1200 acageaagag acacaaatee ggeeatgaet acaagetgea ggateaggge agetttaage 1260 aageeatege egattteeeg eegeetetge gttgeeteea eatttgetag etgtgetgee 1320 eegtttgeeg teaagaette tacaaaageg aggaageega gaaaggtega gaacaegegt 1380 eegggtgta taggtgaaag gtaagggatg tagtagagta tgeggeegag aataaagaag 1440 ttggegeeet egtatacagg eetgatgaea ttagcaaage eeatategea atgtgtagga 1500 tttaeteacg geeeageeag aaggaagaea gtgetegega tatagategg tacattgtee 1560 eacteaceaa aggegeetat ageeeteaga ataaageega eagtaatg

<210> 2361 <211> 1194 <212> DNA

<213> Aspergillus nidulans

<400> 2361

cgggccagtt tcctgagacg ggtaagctaa gttccaagga ttagtaggaa ggaatcgaga 60 120 acttacccct tgagaagacc taggtggtat tctgataata actagttagt cgacttatac ttaagatttg ccatgatatg tacgtacccg tggccttgtt ctctatactc gagttagttg 180 egggtttget ttetgataga gtagattatt gaacttaete tgegteette geateteate 240 ctcgatcctg tcagatagca aaaatgagta ccacatccca tcaactcatc atcttaccca 300 catactectt gatettetet gtgatgttea ceateteget ggttgaagag eecegeggae 360 tcagatatcq qatttgaata gccgtataca ccagatgcca gggtttgagt agtccaaagg 420 cctgaggcgc actatttgaa acaagcagca acagactaca caagttaatc ggttccccgg 480 attcagtact ctccaaactt gtcqcqqaat ctccqcaqct tcaaattcqt tqtqatqcca 540 600 aggeetaate tggettaagt aateategge etagttetet gaaatteeeg eetttateaa taacgtcaaa caacctcatt caatcaactc aaacatttag cgatggcaga cacagcagtg 660 atcgatacat cacctgcagc ggccacagca gagccgtcag tcgatacaac gccgcaagat 720 780 ggcgaaagag aagaaataac accaaatgga gagaacgctc ttgtccagca acaatcagaa accgccgaaa caggtatcac agacgcgaac agcacacaga agaaaacgaa gaagatcatt 840 cggcggaaac gacgacctgc acggccacag gttgaccctg cgacgttaaa gtccgagcct 900

cccccacaaa caggaacggt gttcaacatc tggtacaata agtggtctgg cggcgatcgc 960 gaggacaagt atcttcgaa aactgcggcc ccgtcacgga tgcaacatcg caagagatag 1020 tggatatacg cgcgcaaata aagtgcgggg gctcttattt ctgtttgttt tttgctcggg 1080 ggggtatggt ttttcaccc aaaaaaaaaa cttggtctac cgcgttaaaa aaaagcttt 1140 gcttaacagg gttacccggc cagaatatgc cccccaaaag ggcccatgaa aggc 1194

<210> 2362 <211> 556 <212> DNA

<213> Aspergillus nidulans

<400> 2362

60 tacgtcgtag tgcggggaat tgtcgaatta ttctctccca tggcggggga acgttgcctt tegtegeegg eeggategee gatatgggge tecaaactea catatetgga aagteageeg 120 atgagttcct cgccgatgct aggctgtttt atttcgatct ggccctggtc ggacatgcga 180 tgccgcttca gcttgtgatg gatttcgctt ctgatgggca tgtcttgtac ggcactgact 240 300 accoggoggt taaagatgga gacgtogctc aacagtggat ggcogtaggt gataagcogc taattgctgc aacgcgcatg gctgcacaga ccctttttcc gcgcttggca gagtagagag 360 cccgagactg gcatgagcga gtagacggcc aagccacgct ctccattcta acacttgcca 420 ccacgagtgt agaggaaatt tgtacggcat tgaagtatga gatcaatcag tcgaaataca 480 540 actaactcca tagcaaaacc taccagcgga caagaagaac aggcgaatca aggcttatgc 556 gatattgagc tttaga

<210> 2363 <211> 1330 <212> DNA <213> Aspergillus nidulans

<400> 2363

acagggggg taaacgcggc gcgatttgat tgccttaaag ttaacctctt gggtggggac 60 cccagccggg taaaatttga actcggtcac tttggaacac catctcggac cctaaaaaaa 120 aagccgttca actttaggca aaaatgcctt gggccctctt atttggacca agaacgccgg 180 aatggtttaa caacgggggg ttccaatccc ccctaacggt ttaaaaacga ggggtcacag 240

ccccaaaga tcccaggccc caattaacaa gggcatttac ccaccctccc ctaattttca agttccctgt tcccttcttg ggcctgccct tttcatttgg tagccgacat aggccgtccg 360 cacqqaqtct cgqqtttcct gggcgttgat ggatcagaag cttgacctca ggtgaggacc 420 cttaagcacg gctaactcga acgctacaat gatcttgttg tcaagactag tgtgaagtcg 480 gtgatettge tttcgcacat tgtaggtgge cgctgtatat catacagage atattetttg 540 600 gagccgctta tatcatgtgg cgttctcctg cttgggattg gtcaggtcgt cgcggacctt aaqaaqctca qcacqaccqa ccatctcatt gatggtacqa attcccagct ttgccatgat 660 720 agecegeage teattggega tgtagtagaa gaagttgate aegtgeteeg getggeeete aaactttttg cgaagctcag gatcctgggt agctataccg acctaaagaa ttaattaata 780 aatgtagata atacaacaag ggtgaactgc tgggggaacc aacagggcag gtatttaggt 840 900 gacatttccc tatacaccaa attagcggct gcaatgatac gtataccgga cagggatcct tactcatcat aatgcacccc atggcgatca aaggagtcgt ggcgaagcca aattcttcag caccgagaag acaagcaaca gcgacatcgc gtccagtgcg gatctgacca tcagtctgaa 1020 caataacacg gccacggaga tcgttgagca cgagggtctg gtgagtctct gcgagaccca 1080 actoccaagg aagaccggca tacttgatac cagtocagcg agaagcaccg gtaccaccgt 1140 cgtgaccaga gatgagaatg tggtccgcct tggccttagc cacaccagag gcgacaatac 1200 caactccgac ctcggaaact agcttgacgg agacgcgagc acgggggtta gagcacttga 1260 gatcatagat aagttgctta agatcctcaa tggagtagat gtcatggtgt ggcggaggtg 1320 1330 agatgagacg

<210> 2364 <211> 1643

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2364

ttctgcaaac tgtatgctca ccgtatacgc aagaacgcat caagaactcg atcctctttg 60
aaagacatct atagcttaga gcctgcttgt ctgcgcatag ccgcctcctg gtcacgaagt 120
agccgtcgca agatctttcc gctagggctc ttgggaacag tgtcgatgaa tctcacacca 180

cccttaagcc atttgtgtcg cgctttatga tcctgcacat atttgacgat cgacttgact gtagcctcgt catctggtcc cgcctcaggt gacttagata caattgcttt aggtacctca 300 ccggcagcgt catcggggat ggcgatgaca gcgcaatctg ccaccgctgg gtgggtgagg 360 agatgegett caagetegge tggagegaet tggtgaeeet ageaegeagg ttagttateg 420 gggggtcatg ctttcctgta cattgctacg aaccttgact ttgatcagct ccttgattcg 480 gtcgacaatg aacacatgtt cattgccctt ggggctcttc cgaatcacgg cttcatcacc 540 ggtatgcatc catccatcgc caaacgtctc tttggtagct ttctcattgt tgagatagcc 600 aagaacgacg ctgggagctc ggacccagag ctcaccaggg gtgtcatact tggtaatatc 660 ctccccttct ggggtcacga tacgtgcctc tacgccgggg ataagccaac cggaagaccc 720 aggcacgatg tcatcaaagt gtgtggccgt gacgaccgtt gatgtctcgg taaggcctgt 780 qaategaaat cagtaateta teggteatae teatgaaget gatgaeetae catatgeetg 840 ccgaatagca accttcggat atctcttttg aaagtcgaga gcggtctctt gacccagtgg 900 tgcgcgccca gtcacgagcg ccaccgccga gttaaggtca tactcagcgc atatttctgg gctccgaagc atagtgataa tgatcggagg aaccttgcag ctcgttagat aggttcgctt 1020 ccggacagga taagacttac cacaaacaaa acagagatct tgaatctttg gacggcggcc 1080 aaacacgacc tcaactcgaa cttgggaaga actatgactt gatctccccg gaaggtccca 1140 gcatggcaga taacaaccag tccgtaaata tggctctggg ggagcaggcc cagcaagacg 1200 tcactatagt agetgeegte egeattettg egggtateae gecatgattt etetaaagee 1260 gtcatctgca gaacatttgc aataacattg cggtgcgcaa tcattactcc tttctaatqc 1320 tetgteageg eteaagaaat geceettate tggagggtgg ttaettaeag gtaaceetga 1380 cgttccgcta gaatagcata gataggcagt tcgacgcgcg ccctcgcctg cccccattt 1440 gagettetee aactteggaa gagaetttee tteetegaeg atetgtgaga gtgtettaaa 1500 ttccggcggg atcttcccgc taccgggcaa cacatcaatc aaataaatac ggtctttagg 1560 tagccctgcc gcaaatgccg ctttcagagc ccgtgggaga agcgnaacgc aagtgaacat 1620 agcctttgct ttttgatcga gta 1643

<210> 2365 <211> 3683 <212> DNA <213> Aspergillus nidulans

<400> 2365

tttaaggtct tcattattgg ccggcgggaa ggtgtccttc aggaaacagc cgcttctgcc 60 gtcaacggat cgatcattcc tgtcactgcg gatgtgacgt ctaaagagtc actgcaagcc 120 gcctacgaca cctttgcttc tcagaccgac cacattgacc tgctagttgc caacagcgga 180 atcgcaggtc ccattacaaa cacagagatc cagcccgatt gctatcccac cctatccgag 240 tttcgcgacc agttctggtc gatccccatg gaggaattca caaatgtgtc ccatgtcaat 300 gtcacgggag cgttctacac catattggca ttcttgccgc tgcttgaagc ccagaacaag 360 aaacgaccgg cgccgatacc gggcactgta tcctctccca aaccacaagt gatcattaca 420 ggctcaattg cagggtttac ccgccttgca cttcccggct tcccatacaa tctatccaag 480 qcaqcagtga cccatatggt taagatgctt gcgacaacct tcagtcaata cgacatgcqt 540 gtcaatggta tcacaccagg tctttatcgt actgacatgt cgttgccgtt ttacaagtcg 600 cagggtgtac gtgggaatgg gaccgaggat gggtcgtttc cacgatctat ggttcccgtc 660 720 acaaggagtg gtagtgaaga agacatggcc ggcattatac tctggatggc tggtgccgcg 780 gggggatacc tgaacgggaa tattgtcgtt agtgatggag gctcggtgag tgttgtgccc tcgacttatt aaggtggttg gtagaggacc cggtattttc ctttatatat gtaatacagg 840 atgtcaaatt gaccgcgaag gattcctatc aaagttacca caatagttgg cttgttctcc 900 caqaactqtq qqtctqaatc attccgttaa aatagaggcc cctgctttgt gatagctcca agagccaaat cctgcaatct ctacactatc tccttcatat aaactgtgag tggttactta 1020 ttgcagtgtt attagtctga atgcctcaca tgacctcagc tagcgcacac tgtatctcat 1080 ctcatctcac gcatagcttc aatacacctt agcctccacg ttcaacatca acgtttttca 1140 attetegacg tettecatgt attgateact caaaatggga aagaagacat ggagaatget 1200 tggtaaggag cccaagctcc catagacaac tcgtctttga gtataactca tcgctattcg 1260 caaagaacaa ccccaatgta atgaaccagt tggcgacgaa gttgggtcta tcqtccqaqc 1320 tecaatteta egaegtatat teeetgaatg aaceegagea aettgeeeac attectegae 1380 ctgcctttgc tctgctggtc gttattccgc ttacaccagc ttgggatgaa agtcgcaagg 1440 ccgaggacgc tgacaaagaa ccctatactg gttccgggac tgatgaaccg gtcatctggt 1500 acaagcaaac cattggccac gcctgcggat tgatcggtct gctccatagc ttgtttaacg 1560 gtccggccgt cgacttatca agcttgactc ctttactggt cgtcctgtac tgcttaagca 1620 caaaagcgtt ctcattcttt cacccgtcag ccttttgcat tgctcaaata gctgcagata 1680 ccccagtcat catcttccga atcagcattg ttgccatcgt cctgtatttc atggtcggct 1740 tgaccatttc agcgtccgcc cttttcgcat acgggcttat tctttttgca ggaaccatgg 1800 taagtgcata atctgcacgc acaaccatac tatatcaatg ctgcgttcac tcattgtctt 1860 agtgcatgac agccatgttc cgcgcgattg gtgctgcttt tgactctttc gatgcagctt 1920 cgtaagtctc gggattttct atctctgctc tggtcatgta caccgggtat atgattcaga 1980 agccggaaat gcacccatga ttcgtctgga ttttctggat tgatccacta gcgtacgcct 2040 taggcggttt actgttcagg taaccaccc aaaacccgcc ccaacccgtg gtttaactag 2160 tctacttacc gtcgaggtcc aggacgcgat tagccggaca ttcaaactcc attagttaaa 2220 ccggggtagg cagatgttag gatgaacagg gacacttgaa attcttatcg aatactataa 2280 tgttatcgcg cgcctagcct gccttaggct agcacgtgct actgtggaat gggatggaca 2340 attgtcatta ttggctggcc gacgtggccg ccttatatct agtttactaa ataatgacta 2400 agcgagctcg accctaaggg gcaggcggtg ccataggaca gtatgtcctg acaagagtcc 2460 tgtggaacat aaaagcagcc agatcctcgc aatcgtctcc tcccctttat acgtcctatg 2520 tgttcgaaat atgacactta ttcatcttgt acatacacct gacaatacca aacatcccgc 2580 aaataagtga aggaatccac agcaagcacg aacttatctt tgcttcactg cacccagaaa 2640 atcattattt tatctttttc cgttagcgaa aggcatgggt gaccggttac cttttgaggt 2700 gctgttgcac attgcggagt gcttagagga agaccgtgac tctctcgtgc agtgtactcg 2760 agtatgcacg cggtggaagg cagtctttga gagactcctt tacagaagat tacacgtcct 2820 cagcaatgat cttggtgtca gtgtaggaga cttatctctg acacgttttc aagctctcac 2880 ttcagcggct ggtaccgcgc ggcgctctta tataaagcac ttaatttacc atattgtgtt 2940 gccatatgat gtgggagctt ggcccggtga cacgccagac ggcgaggcaa acccttttca 3000 gaaggcaaac gatgctgtgt ttggagtggc tgtcatcagc ctatttactg ctctactttc 3060 atgggaaaac acgcggttca aactaacgtt ccaattagtg ggttgtctgg atagttatga 3120

actoggatg gaggaaacct ctgttgacgg gctagaggaa gaatcaattc ctccgccata 3180 tcaagctcga ctcccttcca ttgaactctt tgaactgcct gaaattgaga gtatcgataa 3240 atttttgtt tcagattatc ttctcggctc ggtggggata gggaacagaa ctgcaattga 3300 gatagctcat tgtttccta agcttcagtc tttagagttg agtctcatta cccatgacga 3360 tccagacttc caaatcaata gccgaaaagg tatgagatga acttctcttt ttctccccca 3420 agctggctac tgacaaatcg gatattttgc caactatgct gatgttacgt ttctagaact 3480 gatacagggt atcaagaaac taccacctac tctcaaaacg tttcgttatt cggagcatta 3540 tagcgaattc atcgatagag agcttcagtc tgtcgattt ctattgggcg aaagcgatat 3600 gcttacgccg actctgcggg agttctcctt gcagttaagg gagctaaagc tgatagggt 3660 agctattgcc ccagaccttc tat 363

<210> 2366 <211> 449 <212> DNA

<213> Aspergillus nidulans

<400> 2366

60 ttgacaagca cgggttgtaa tttatgatct caggcgaaac cgcatgaggt ccttaggagg cacacgggca acgtaaagcc aaatatgccc agggtgatta aacagcacta ttcaagcaaa 120 ttccaatctt tcgcaccagt cgaatcgatc agaaatcggg agcaggatca acctgatcaa 180 240 qaataaaaca qgtactgaga gcgacgaagg atgcaaaaga cqccggaccg aaagcaagca gacttaatca acaagggaca ttgagtcaga agtagcagca gtatcgtgct tgcgtgtttt 300 tgagtcggcg attgagaatc cctctcttta atgtacgctg tatcggtact ttcactgccc 360 agcgctacct atgagttcgg ccccagggaa aagacgagcc aggcaaggac ggggacagag 420 449 agagatggta ctgtggcgac agtgaccga

<210> 2367 <211> 1457 <212> DNA

<213> Aspergillus nidulans

<400> 2367

tggctctcag cttaaggtgt gatcccaggc cttggagata ggcctgcact ggaaagcagc 60

ggtgcaaacg ttggcaatgg cttggcaggc gacgatgccg aacatgatat aggacattcg qcqqaqqtac ttqtcqccca qqcqqqtata qaaccaqcaq acaqaqqttt tqacqaaqcc gagacaggat agatagaaca tggagctcag ccagacgttc tagtagttta gcatggttcg 240 cctaaagggg gaaaggagag gcttacaaac gcataggtga ccatgttgct tgggtctaca 300 tcgtcaaggt gcatgcctag accatgcttg acggctgcag tgtgaattat tcgtcagtta 360 ccaatcttcc agagtcctgc agcacactct ggctctcact cacccacaat tgtcacagcg 420 gagaaggccc aggagaagcc ctacagagtt aactgatcag ctgtcgattg ttccagagtt 480 ttggccagtg ttttgaccag tgtttgacca gacggtgttc gttgaagtac tcacacaggc 540 aaagataatt agagcatcgt caacatcgaa tttcttgaga acatagagtc gagcaaagag 600 acgcaggagg atgacaaaga cagtgatgat ggcgaaagcc agcgcgatac cggtcactgt 660 cggaccetgg gtttcaacca tgatggagga gcaatggggt ttggcactgt agagaaagct 720 780 taacagacgg cctcgaccac caaaggggac aatataggtc tgccactcag tgagagcagt cgagcccgcc ctgaagaaaa cggtccagag gttccgccag gctggatact ataaaccttg 840 agagttggca ggccggggag caggagccac ttggggaaac cctgagaaag cctggtgaat 900 ccagagaaaa ggaaaagagc gttcgtcgtt gacagaccga tggggcattc cccctgaacg 960 gacttggatg atggacaata ttgcatgcga ctggtgtctc atccttgctt gcttcttttg 1020 cgctccttgg cccttgtgcc tgtctctgat atggactact ggtaccggtt actgttcgtg 1080 tgtcccgctt caatcgagaa caggaccgct gattgggggt ccagatcgag gccgcggcac 1140 ggcggagcca tgcgttgtct ccgtgatcgg gactatattg gactgctcag actatagtgc 1200 tragtarret ragrettete geraragart regreratete tegregetage actraatreg 1260 aaagcaateg gegeeacagg ateetggeeg atggagaeae eteggaagte ateetgeaga 1320 ttggatgccg cggccgacta ggccgctgag gggaagagga acgctctgga ggtcatcatt 1380 attactcaag tetgtggagg egaategaee tggeggtgeg gtagecagga geecaeggag 1440 1457 accaaaacgg tctggtc

<210> 2368 <211> 1889 <212> DNA

<213> Aspergillus nidulans

gttggtatgg ttggtgttaa cactggtttg attagtgatg ttgcgtctcc gtaagttgtt 60 ctttcaagtt ccctgtcgtt cagaggtgca gtttcgggct aactatttgt ctagattcgg 120 180 tggtgtcaag caaagtggct ttggtcgtga aggtagcaag tatggtattg aggagttcat gacaattaag agtgttactt ttggtgggat gggtgagcct ttgcagtcgt gagaaaatat 300 agatgaaggt ctggcattag ttaaacttat gatatcactg tataaatgaa tatattttc 360 gttgcgaaat caataaatac tagaaatttc ctactcctca acccctagtc cggcgccatg agctatgcgc atatactgac ttggggtgat aaataaatag ctggcgatca aaggccatgc 420 agctaagaaa agcctaaata taggggaaaa tgatattgcc caaaatctaa tttacacgca 540 aataatacaa cacagaacat atgcgccgca accaaccagt tggtcatgtc ccattgaacc 600 gtgaaaaatg tccagacaag cgtcgagaat agtccaaccc ctgaggctgg aagcccaaga 660 agatgatact ctcgaagttg ttaaagcagt acacccatga ggtctgtttc tcccgactca gaggtgaagc geccatetea taattgaatg gatategtee tgteetetee teteaaaaae 720 acaaaacttg cattctattt cccttgacgc tgcttatgtt tegggttctt egagctacac 780 gaaggttggc tgttagcatc atatcaccca acacactaga gccacgacaa ccaaactcac 840 caaatgatat aaacccggtt ctttctccga acgggctata ttccaagcag cgcccgttag 900 cccatgacct toggaacaca tagcctcaat cttgacctcc cacttcctgc gaacaacatt 960 taggacaata tgcatacctt gcacccttca caaagccgct taaccgacga ccttgtcttc 1020 atcectetea ettgeteeac etgeeteacg geagaaacae eageacetgg cacaatagae 1080 cttgaccacc caaaaaaaaa ccaattgtta cttgtgagtt gtgataattg tgaaaatggc 1140 cyggcaagga ctcggaagtt gctgttgtgt cygggaagga actggcggag ggcggcggtc 1200 gggggaccaa ggagggagcg gagggagatc atcttgatga atcgcggagg agtctccaat 1260 cgtaaatact gagaacaagg cgagaccctt ggaagttaaa atagtgctgg attcgatcct 1320 tgttgttcgc atcgacctta ggagattgtc agagtgctcg gcggaaaatg tttcggattt 1380 tctgtttcgc cgataatccg gagatgctct gcagtatgat ggggtcagca aatgctccac 1440 agagactetg egtatgttat gaggatgata aggtaaggaa aatttgattt gtttgegaet 1500 aagtatgtac ttggacaggc cacatgattc aaactggcta ctcggctttt cgtctcgtac 1560

ctttctgtcg tttccctgtt agcccagagc ccgttggctg tgtcgtggaa gctcctggag 1620
atctacactt ccaagatatc tactcatgcg gagtaaattg caagccagac aggatctcgt 1680
cggcactcag ccttgatcac tttactgcta ctcatttcat gctatacctc tgctattatc 1740
agttagtgct tgatttcat gggcttcgga ctcataatct gactccatgt cagaactgta 1800
tccaactcca attcttgaga atagagttat cggactcggt gcatcgagtc cttccgaata 1860
tccatatgcc ttaataacgc gaagtagaa 1889

<210> 2369 <211> 2734

<212> DNA

<213> Aspergillus nidulans

<400> 2369

60 tgcatcgatg gtaagcgtcc ccgcgagttc tacattgtct atactgaact ggccagttta 120 gagatgtatt tgaaatgatc gaaccgttta tccgcgggag tggttccaaa gccagtgccg 180 gcatcagaag gtgcaaagag ctggcaagga ttatcaaaac ccaacggacg ccgcaatggc 240 cgacgccgcc cactcaggat ctacctccaa aaggcgtcgc tgatgagttg gttgactgct atctccgtac aatcgagact acattccggg tcctgcacgt acctacattc aggtccgaat 300 atgacgetet atgggtatet gaageaegge eeageatege gtteaeagte eaacttaage 360 tggtgttggc actggggtct gtcacttacg acgagcggtt ttcaatgaga cccagtgcgg 480 ttegttgggt atttgaggeg cacacetgge tetetgatee agaetteaaa eeteaaetta acatacagtg tttgcaaagc aggattctac tattactagc ccgcgagata atcaatgttg 540 gtggcgattc gagttggata tctgccggcg gactactccg cactgctcta catatgggat 600 tacataggga tecqtetqta etqeeqeeta qqteqqeqet eqetqttqaa atqeqaeqee 660 gactgtggaa cactatecte gagetateae tgeagteaag cattteetee ggtggaeete 720 cactaatttc cctgggcgat ttcgactgtg cgcctccagg gaatttcgac gacgaacagc 780 840 tactggctga ggacccggtg ccgaagagtg atgatgagta cactcaaaca gcaatcgcca 900 gggcattgag gggaacctac ccacagcgcc ttgcaattgt gaaattcctg aacgatctaa gttcatatgg gacttacgag gaaactcttc gacttgacgc agatttaagg gaatcttaca gggctattttg ccgtatcctc cgagggtatc ccagcaacgg gccttccccg tcacagttcg 1020

aaaaatgcat getegaette ateateeaet tetatgtgtg etgeeteeat atteeetaea 1080 tcgagaagtc actgcgggca ccggcatatg cattctccag gaaagtcgcg atcgagagcg 1140 ccctcaagat gtggtgcgcc atttacccat cttccagatt catgagcaac acccgtcgcg 1200 agattagegg atcegttgaa aataagetga eteggttegt ggaatgeggg tttgggtttt 1260 tccgcactgg tgttataatc gcggccatgt tcgtgacctt ggagcttaaa gctcagctcc 1320 tggatgatga cagcctaggt cccagcccgt atcgggtaga tettttetet etgetetgtg 1380 aggcgaaaga ccgttgttgg aatatgattc aatgtggtga gactaatgtc aagggctacc 1440 tecteatttg tetggtaace geceagateg aggggetgat geatggagtt gaacegagea 1500 aactccccga actccttctc cgcgcagcag aagaggcgga ggaccggtgt cttgacttca 1560 tggaggagaa agccgatctg ggacggagtg gtggttccgt tgaggtgatg gacgaatctg 1620 cgaatacagc gcccttcatg ggcgactggg agtttattgt aagtgtttgc aatctagaaa 1680 attqttctat qccaacaqcc tttaqatqac aqatcctttc cttaattatc ctqqqactac 1740 tgaaccactc agetgggtta tgaatgaaga aacgagacca ttcataatgt aactgagcaa 1800 gettageaaa cacagggega cacegagatt tteatgtetg aetttgettt ceacegagga 1860 tcgggtaaaa gagcttacat atcttgctag cgctgctgcc tattaaatat gactccatcg 1920 cacctgaatt gagtaactee catggeeaat eggattttte attegaetea geeteactea 1980 acceaatteg gaageaceee cactegateg acttgateaa geagtatatg aaaceacete 2040 gcctctggcc tattgaccat gaggttgctc gtgtaataat attttactac ggttgatctc 2100 acteaatetg actegtgact gtgetgtegg cagaettttt gtaceeegat catggeetea 2160 aacacagagt attegeagae tetgeaacae attacagatg ecaaactegt ggagetatee 2220 aacaagegee gtgtettett gaagegeaaa gatgaagege tgteagaage ggaagetgtt 2280 gaatctccgc gcgagaaget tcgagtactg tgcaaggggg taaaaacctg ctttgacatc 2340 cgtgttcaag aagatgaccg tgtgtcggat cccatacata gcaaccgccg tctcgtgatc 2400 gagettgeea acetegateg etttetgaag caageegage acgateeate gattteagtg 2460 aatacactgg agcggtggcg tcggtctctg cttggcttgc ttgacgtcca gactctgaaa 2520 tacgagtacg cgacgetgtt cgcccagctc acgatggagt ggctgtctgc caataaqagc 2580 cccaaatcgc cgggcgatat ctccagacgg gagggtttcg aaaaagtgct agcgcgcaga 2640

agctggaatc gagaaagttg tgggaagagt ttgtgttcac acctgctgat ttggagacca 2700 gcgacattaa ggctttcctc aataatctct tcac 2734

<210> 2370 <211> 2860 <212> DNA

<213> Aspergillus nidulans

<400> 2370

60 taagatcaac aaggtatget ctagttgcac ccccaattgc gtacagcttt tccattgctc acacattcat tcagggcatg atcaagatgt acaacgccga agtactctct aagttcccag 120 tagtocagoa otttocotto gggtoattgt toagotggga gogtgacoco aacgotoott 180 240 ctccqqcagc gqatqctcat atcgccgcga caacgcgaga acagatgagg catctacggt 300 atcatectee gagggacegg gtaceagage eccatggeaa getacgaaag etecaggatt 360 aacaactaac gttccaaqaq ctcctacctt tacagtccca agtacatcaa ggcaacatcc 420 tggtcctatg gctcctacaa gggcgccttg ggcaacatct caaccaggtg gaccggctcc ccctggcgat tctacgtctg caggccatat gccaacgaaa gctccgtggg ctaagtaacg 480 cgcaatattt agcaaacact tgtattccaa aacatactgt ccgatatctt gtaggaagct 540 600 atacagacaa aaatgaccat cgggtatcat ctctcaagca aaccctcaac gccttcacaa aagataaacg taaaggtata tcactctgaa tccqaqccat aatcaaccaa agccacagcc 660 tgagatacgc cttqctttqt cctagqcact tcctcctgac cctccactac accattccta 720 geactettag cetgagtate agageeacea cegttagege cetectetge ettetteeg 780 teccettece tggegtttte etettettaa ettegggett eeagacatat geactateee 840 cggtaccgtt tagaaatggg tcgacagcgg cccgcgtatt cccagctaac ttgataggaa 900 acgaageegt gegateegea accaaateeg cegtttteeg etteecactq etgeetttae 960 ctttcttctt atcagcgtca ctcagtcgag acatagcagc ctcaaacatc ggtttcgcgc 1020 gcgtacttaa acaagcacta gaagcaccat cctcaaactc aaccatcccg gcccttaccq 1080 catceteete ggeeteatee acaattteaa tgeecaaact catettatet tteagegeet 1140 ctttgatgcc ctccttcttc tccagcacct ttctctcagc ccgaaacccc ctgcgcaacc 1200 tettegacae eteatatgga teateceaat eeegateetg titetgetge aacteeagta 1260

tecgatteeg egitteatea aegateeget tatettegae etteceetet agtettgeaa 1320 acggateate tecageegee geceetgeag eacttetece acegageaag ateteteeae 1380 ctcctatcaa gtctgtccca tccgcttgtc cggtgtctct cctcctccca ccctcagtaa 1440 caacqtatqc cqtqttcttc gggtccgtcc gaatctcaat ccagccgccg caaagcgtat 1500 gcttcatgcg aaaactgtag accggcgtcg agtagtaatt acccactttc ttctttctg 1560 cgttaaaccg cacccctgc ccaattatgt tctccggcga acaggtcgtg caccataccg 1620 cqaaqqqcat ctcqaaqcqc acaattaatq cqcctttqga ttggaggtgc cqcgcgcgcg 1680 ageegagtgg gtgtttgttg tggagettgt tggeagtegt eagacettet tggtegggeg 1740 ggatgtaccg gcccatgtct gatagaaaaa ttatgattag ctaggctcta agtgagtgtg 1800 aggatattat atgcgtgggg aagcgcgagg aatgggtacg cactgaagcc ctgcatcttg 1860 acggtgtttg tggtgtgata ttggttgggc tatgtattaa aaagtggatg gtgtaggctc 1920 attcctcggg tatgagctgc tttgaacatt tgagtgtgat cgactaactt aagtcctggg 1980 atgatttgct gttgagcaga agtttgagtg acggaagaca tcatagaggt tatccgagct 2040 gattttatgc ggattactaa tgatgtacat agtgcccata agcacaagca agattgaatc 2100 caaagtagat aaatgtgaag ataaatacat aaaccaaaga ttattatacc gagaactaca 2160 atgtaacgca ccgtccaccg acctcgcact cagttcttat atccagaaca ctctccccaa 2220 tgtgaatett caccccttt ccaccaacaa cagtetteca atectgeace teaacattee 2280 aaacactcac gtctttcctt gtaacttcca atgtaaaagt ttcactttgt ccggtctcta 2340 ggaccttcgt tttctcaaac tgtctcagct gcctactcgg cgtgtcaagc cccagcgaat 2400 caggaagctc aacatatagt tgcgcaacag cacggccaga atgttgtcct gtattggtqa 2460 cagtcacttg cactgaaaat gcgacgtccc agagagcagg attgccgcct tctgcgccac 2520 cggctcgtgg gggaggttgt gggtctgtgc tgtatccgtc tgggtagggg tatgtctttg 2580 aagagttggc aacggcggcg tcagcttgcg ggttgttgag gtatgggtaa atgtagcgcc 2640 agatgcggtt aaacttggct ggccaggctg cttcggaggc gggagggata gtattggggt 2700 atgtgggtgt tgggcctttt gcggggcgag aaggtggata cgcgctgtct aacggggtaa 2760 cgacggatag ggcaggctct gagaactcga aggttgtgta ggagagaccg tgaccaaagg 2820 cgtagcgtgg tgatgatatc ctctgtcgta tcacatagtc 2860

<210> 2371 <211> 2532 <212> DNA <213> Aspergillus nidulans

<400> 2371

60 gctggaatca gccaatcccg atgatcactt acactttttc gctcgacctg actgaacggc 120 tagctgtgat tattgatgtc acggctgaat tttattgcga tggttcccgg tctgatgagg 180 gcaaagactg cgaaatcggt tattgccggg tcgacgtaag caactagccc taggctggaa 240 gtaagtatgg cgcccatttt ggcgggttta gcgacagact ccaaacaata acttagaagt 300 tcatttatat aatcaatcca cggatagcct ggcgcataag ggttgaggaa acatttcggg 360 actaagacat tgcaggtccc tgaaatgccc ttgatagaca tgcaggttgc gcgagcagtc 420 acttcctacc ttggtctgga tatttgggcc tgggcaactt atacaatagc gcattttctc 480 tgttctctac gctataccta gcgctccaat cagaatcact gcagtcccct cgacaaggag 540 cccgactctc tctctctgct agcaaacttg acaacatagc caacccttat caggaggcac 600 actggtacca accatggtat atttgtgcaa ccacatacac gatgcgcttc tatcgcatcc 660 tattccgact ataagagtca agagaaatct ggcgcacgta cggtagagtt ctgttcagaa 720 accaccettg acagcataga tetgaaatga acctgeatea etgtttaaea aaccetatee 780 gcaggcatgg agcgcagaaa agactcaccg acccactcat tgaagtcaac atctgaaaaa 900 tttgcggccg ggatttgaac cgactcttta ggcgcacagc agctgtccgc tggactggag tccaaggtct gtttatacag gttgatatcc gcctttgtat caacaatcaa cacatctaaa 960 aattccgtgt atcatcctgt cagtggcacc gtatctgcta ccatccaggg gatcgaaatc 1020 acaaacaagc ccacggacat acctttaagc cctgcccttc ccaaccagtc ctcgtactcc 1080 tccaccagac ttgctcccgc aacgcaacct acatacagcg caatatcgct cacaaaggcc 1140 ggacttaagg gcttccgtgc cagtatatca ctgatggcaa ctcggccacc gggctttaac 1200 agcctggcaa tttcagcaaa gacaatgggc tttgcatcct tgggaactag gttgataacg 1260 cagttgctga tgatgcagtc ggcgctggaa tcaggtaacg gaattgaggt gatgggggct 1320 ttgatgaatt ggacttggtt attggggaaa ttagccttct ttgcattggt ggtcgcgagc 1380 gtaatcattt cctggagttg cgacagaggg gagagacgtc agtttacgat gctgtgtttc 1440 tattcaacgt gcaaaggata agtgttgtta agagattgca tcagcggaaa gagggctaac 1500 ctcagtcata tcaacgccaa tagccctccc ctccgggccg accttacgag cagctaggaa 1560 gacatcaatg ccgccgccgc tgcccaaatc aacaattgtc tctccctaga tcggtaggat 1620 cgcagttaga ccgacttcca gattattcca agtataggat cagatgggaa ttaccggctt 1680 aagatttgcg aacgcaatgg ggttcccaca actcaggcct agatttgcct taccggggag 1740 agaagagagc tctgctgcgg tgtatccgaa ggcttgagcg agtttgtctt cggtgtcgtc 1800 tttattttcg ttggtgtctg cgtttgtttg tttcgcgatg ctgccgtagc gggattgcac 1860 ctcggagtag gtgtcttgaa tcattctcga taaattggga ttagaatgaa ggctggaggt 1920 aggtatgtat gtatagatac aagtcgactt atgggacttc gcgcacgaag aaagggagtg 1980 atggggtgaa agaagaggag agggcgacga catctcctgc ttatatgcca catcaagtgt 2040 ggtggctgtt gagagtgggt tgtcatagtt ttgaaagtct gctatctggt tggctggttt 2100 ataactggta tgtcactgtt aacatgagag ctttgacctc ggatgaataa ggtaccttat 2160 gccgggtaaa ataaacaggt aaaggatagg aaagaagatt gtaaaatcaa gctaccatct 2220 gtgctttttt tatccttaga aagcggactt gagaaaaatc ggactgtgga caaaatgagt 2280 cgcgccaatg gtcaagacaa cacgtctaca gtgtttggat cttgtagtag gtttggagct 2340 gcgcacggct tattctccgg atctcaagga ttgaatgact ttgctgttgg tcacttccca 2400 gatcagcgtt aatatggtga cataccgtat ccacagagct tcaaccagta cctgaaaata 2460 acagaaacct ccaagccgct agacggctac ctggcacagc cacgtcggtg ttcaaccgta 2520 2532 atatatcgta cc

<210> 2372 <211> 1732

<212> DNA

<213> Aspergillus nidulans

<400> 2372

cagtctatgc ggagcatgtt tggatgatcg cgcagacagt aagcttggtt tttgctgctg 60 tagcgctagg aattttattg gcgagaggac cacgagagaa ggcgtgggtt gggtggactg 120 ggggtgtgta ttttcggaga gtgcatgagg atccgagttc gagtggaagt cctgcgagtg 180

atggaagtgg tgagagtggt aggactgagg ggcaggctcg gtcttgagta gttgagatgt cgtttgatca ttttggaccg gtcctcctac aagetcatac agaacgggeg cgcttggact 300 gtgtatacat agaataatet gattagaaga gggteteaaa ataacacage agtgataetg 360 gacctaqtta ctqctttqaa qtcqacqqqa atqqaqctqa qcctaqqtaq qaqqcqqcac 420 480 tgaatagcat atcagtttca gcagctctag tccttactat caccttacca ctcgcccgac atgagtegaa tegaatetgt agetettett egattetttt aggatagaaa gtageageeg 540 tteeteagge teectetteg etgageeeta atetetegtg acetgteege aggeeateat 600 cgggcagaaa tatgaacttc gccggtgcag ccatgtgact cgctatcata aatcaccaag 660 gggcgcaaag aagcggaata tatatatatt ttttcttatt tcctttgggt ccttttttt 720 aatcaaagcc atagaatata tgccattctt ttccttttct ctttttcttt tctttggagt 780 tttataggca gtattagccc tgggactacc acagtatcta tagagtaaag taaccgccaa 840 ttaaacgata accgattcaa ttgaacgatg cgtatttgaa tagtatagat tgcttgtacc 900 tacatgcata gattactggc aagatcaacc agataccttg ccctactata tgatgttttt tecetgegae atgetteeet gtteagegat atgaatgete ttteacceaa aactteetee 1020 cagacatgtc atttggggca gtggcgctgg ccgcgttaac ttttggcgtc gaggttaaac 1080 attggtagca ttactgtgcc ggtcccaaac acccacagat tgtatagttt gccacactaa 1140 geteegaeet egeetgttgg gttgetgett aettaetett tetggtgagt etgaggagat 1200 geggagtgae aageteegta taattggttt egacegegeg etgtaggget gtgtgetget 1260 cttggctgga atctttgatg tcagaactga gacgctgaaa cggacggcac acagaacagc 1320 atctctctgg agtcatccgg gaggtccaat ggaaccggtc gcctctatac cttcacccct 1380 ctccctccag tagtagcagc ataccctacc aagccactag ccgatgacac ttggcgcaac 1440 cattgcccac cagcttacga gagttgaggc acagcatctg cttcattggg agtcttccat 1500 aaggagggcc cgatgagacc gggaaccact ggtccttgcc aaacqcqaca ttcttagqat 1560 cgcggcagac aagcactaac gatccttcca gtcgcaaaac gagcccggcc tatgcatctc 1620 tgtggaaagg aaatgaagag aaacatagca gagttcgcat ttcctgtctc gtcgttttat 1680 cttgcagctc cggattacgt gcagtgacgt cctgattctg cccctctgct ta 1732

<210> 2373

<211> 2207 <212> DNA

<213> Aspergillus nidulans

<400> 2373

aaccagatcg aagaaaggat agacatactt caatggtgcc gggcacagtg cattgaaccg 60 120 gattccctcc cgagcatgca cgatcgccag ctccctcgtc agcgccagca cagcaccctt ggacgccgtg tacgccagct gcggcgtggc actcccgacc agcgcaacaa cactcgccgt 180 gttgatgata ctgcccttgc tcttcttgtg tctccgcatg ctcagtaccg catgtttaca 240 300 tccaaaccac acgcccttga cgttgatgtt ctgcgtcaag tcccaaattt tctcaggagt gtcgatggca tcggcgtcgt ccgcgtgcat gattccggca ttgttgaaga tcacatctgt 360 gccgcccag gagtcctggg actcgaccat agcctgaacc tcggattcct tggagacgtc gcacttgatg gtctcaacac ggggcgcgtc agggacgagc tctctgacct tcgcgagggc 480 540 tttttcgaga gccgacgcgg agatgtctgc catcaggaca ttggcgcctt cgcgggcgaa 600 taagatgcta gtttcgagtc caataccgct gttgtgttgc tgttagctgg gttattggta 660 tacgtgggct gtgtgtgttg tgtggggtgg gttaccctgc ggcaccggtg atgatggcat 720 tettgeettg gagaeggeet eggggggtag ceattgegag aatatgtatt egtgaatgaa aatcggagtg tatagcgacg ttgaggtcaa tgctaagtat taagaaggag acttggatga 780 agctccagga gggccaggga tcagtggtgg gtgcggggca cgaggatcgg ggacgaacag 840 900 acttatetta egtagttate teagataage eecatageta tagattgeee tgtgeecaca gggacggact ctcaccgaca ccgacaccac tgtttgccta tcttccaccc tctttctagt 960 cgatctatat tectgttagt gagacgatee etateataag ggataaattg ttaetaacea 1020 gtgtttttca gtgtatttcg accttcaaca ggcacagtga accaataact cccgtttcac 1080 teettteeag ceaeegtgga eeeegetgat acetaeeeae etaegetteg gtteetgett 1140 cccctgctcg catctgttca tcgtcaaggc gcgaacgata tccagaatca ttacagaaat 1200 gtccgccaca gaagtcacgt ccgaaaacgt cgcgcaaatc ttgcagaatg acacacgggt 1260 gaagetgget ggegtegaeg eegaeggeat gettegegge aagetggtet eeaagaagaa 1320 attecteteg gtegtegatg agggattegg tttetgeteg gteatttttg getgggatat 1380 gcatgataga acatatttcc gcgagcttgg gatcagcaac aaagagaacg gttaccggga 1440

tetectggee aaaceggate tetecagttt cegeegeate eeetgggaga ataacgtgee 1500
tttetteete gteagettet atgaceegga tacgaaggag cegttgtttg catgteeteg 1560
gagettgetg aggatggete tgegeaagee egaggegeaa gggtategtg egatggeggg 1620
tggtgagteg getetggaac ggttgagaga geagtgetaa tactetgagt atceagegga 1680
atatgagttt taccagtteg caacaceeaa tegeaatgee tegteeaegg catcettett 1740
gaaagagaae eeggtegagg egeteeegte gateaeagae gggatgtteg gatacagttt 1800
gacegeteeg atteataace aagactacta etacggeate tttgatgeet gegageaatt 1860
taactgtgag ategagggt ggeacacega gageggaceg ggegttatg aageggtggg 1920
tgactactga aetgggeeg ttegtgtet gacaacggat eaggeettae agtteggega 1980
ageeaagggg atggeggata aageaggaet ttteaagtat gteetggetg aetgeggate 2040
caaggaettg etgacaagea tagatatgte gteaaateea teggeacgaa acatggeate 2100
aegeegaeet teatggeaaa geegegegag ggettaeeg geaacagtgg ceacatgeae 2160
atttegetgg tgaacagtga tgacaegaat gegtteeaee gtteaae

<210> 2374 <211> 1370 <212> DNA

<213> Aspergillus nidulans

<400> 2374

atcqaaataa tacactccta tagggagacc caagcttagg atctccacga tccaagctca 60 ttgtcgacga gccgtgcccc cttctgaagc ttgccagatt ccggatctga caaagaagcc 120 aagaccgctc ctgttccagc cagtgcatca tgctggacga atgtcaataa gagacgacac 180 240 egegacatge accaetttet ageegeegaa gtttetqaaa tetgegacae etteeaaege agactagaca gcaaaaggag actgttggga tttttgatgc ctcttgtcac tgtgatgaaa 300 360 agaatcaagc cagctccctc caactcaggg cacttggttg caaggatgtg accatcattc ggtggccgtt tcgtcatggt attcgttgtg agccgccata taccgagcca agtagcgctc 420 tgactacctc taatctagtt ccgcagccac tccgagctga gttccccatg gctccattat 480 tcccctatca tgaacaaatg tggggttgct gtgctatcgc atgctccttc cagcaaatta 540 gagacatccg caatgtccag gagcctggaa ctcctgtaca acacatcatg aatcatccca 600

tecaegggee cettacaage egtagtgtag ageceetetg tegeggetga atteattteg agtcccqaat tcqatcqcqa qqcqtqatqa aaaacattqq aaaatqttta gtcttatcqq 720 cqcacccaac tcttcaqtct tcqttttctt gctcacgtag tcgagcgata tatgttctta 780 840 atatagacte gagteetteg ttteggegtg ceageateat caeateegat acattgateg 900 ttgaccgacc tgcgtgcctg agccaagaac ctgtcagcaa cacggaagac atcctgagac tggctaaaga taagggagct cacttcgcga agctttcaag atcttgactc gccgtttcta tacggatgac ctctgtcagc cactttccaa cgtagaaagg gcagagaatg gcaataaaca 1020 gccccaggcc caaattaaag ccagatgcca tttctgcgct ccattccata tctatatggg 1080 aggtttaaaa ctgggaggat gtacctatct gaacccagac aagctcggtc agtgcaccaa 1140 tgaactgagg tgtggcgttc acaccgaget tgattgtctc ctcatccaca atctttccaa 1200 tggatagcca gagggcggat ttcaagcgct acgaaccagt gagtcacttt ctccgttcca 1260 caaggcatat gcctaccttt ttgaggccaa cattetcatt tgcatccatt ttgctggtta 1320 tgcgagcaag agtcaagccg gtctgagtac cccacctaga gagacttagt 1370

<210> 2375 <211> 2378 <212> DNA

<213> Aspergillus nidulans

<400> 2375

60 gagtaaagga agaagatcag tgttcgtgcc attgtaaatg cagtgaatgg gtgaggaagg cacggttage tgggaagtet ceettgaagg tgaggggatg gtegetetee egeeggaaaa 120 ggatccaggc attcagcagg tccggcagga caaaaataga aggttcaaaa agagatattc 180 tgtaactaga tacccaagtt ttggatggcg tagtgcctca accacataat ttacagaaat 240 aaagcccgtc agatcatgga gcaaaatgaa acaaaaacga aatcaccaaa gcagagaaat 300 gaagcaacct tacaacgccg cgagaagacg ccctcccgtt tcaagaaata gtgtgtttaa 360 accttettet ttttettgga tggetetgea teattgtegt getttegett ettettttee 420 gactegeege ceteagactt gegettette ttetteteet cettetegee ettgtettte 480 ttttccttct tctccttctt cttctccttc ttgtctttct tctcaacatt ggcatccttc 540 atttcggcgt cgctatcgtc gccatcaacg tccatgctgg ccaaaacagc atccatagca

tttttctgat accagttagt tcgctattca gggtatagat gtaaattgag ggtgaacata ccatggcaac ctcgttctta gtaggaggag caccggtcgc gtagaattca agacgttcct caacctgctt cttgagggca tcaccgtact tcgttgtcgg ggtgtcgctg aagttgtcaa 840 tgcgggaagc aatggagcac ttgttggcca agaagcgcga gatgcgaccc ttattcttag gaccagccct gccgatgaag gaagagtggt acagaagacc gtacttagga gtgttaccct 900 960 tggtcttcaa ggctcggaaa agagccttct cagcacccaa aatctggaca gtggaagcgg gatatttgga caggtttgtc aagcttccag cgtgggagat aaggcgagcg ccgacgatgt 1020 ctccgataag agcagcaagg ttgggggcaa ccacgttcat cttggagacc aggtaggagt 1080 gaagggactt gcggtacttg gaaaggctga cgacccgttg ggcgaatgag atgacattct 1140 ccatgtcaag atctgagata tcctgggcca tacctgcgtt tggcggcgtc gataatgctc 1200 tgagcaacac cctcatcgtc ttcaacaagg gcggcaatgt cgtgcagatt ctcgtcagtc 1260 agggtcttct tgtccttaat gaacagggcg agctgggcgt aacgctggtt gtccgacaca 1320 atcttgatga gctcggggaa gtgccaagag taccactcgc ggactctcat ggagaaagtg 1380 ttgatggcct tgtcgagctg atcaaggata gcgatagctt gaatgatgtg gttgtcgtcg 1440 cgctgaaccg agaacttgac ctttgcacgc gagtacgcgt gaccgagacc gagttgtgca 1500 gtatccatat cgccctcccg caattgcttc agcaacttgc tagcatgcag tcggactcca 1560 cggagcatat cttggacgac ctcgctggtg tcaccggtct cgcagtccac gaaagaaaac 1620 gcggacttga tgctggtagc caaattccta tccgcgagtc ctagcacaat gttctttttc 1680 ttgctcggtt tgggcaaatt catttcgagg aaagagatca gcgtctcaga agcgacacct 1740 tctgagatat cgttgatttc gctcagagcc tgcttgttgt tcctacgttg ggtcagtcgc 1800 ggaccgcaca caagccaagg gccatagagc atactcaaaa ggcaagaaac tggcaagctg 1860 gaccatcttg ccaaattttg ccaaatcatt cacaccctcc tgaacttcct tcaggttgtg 1920 teccaeagea tecceettgt gggegaeett gaagagegag taaeceatag ggeeetegaa 1980 aagaagatag tetgeeateg egaatgggtg gaaatetggg taetttaata tatageaett 2040 ccaatctttg tagacaatcc ccttcgactt tgacggaact tttgaggcta tgaacctgct 2100 gtcggccggt gtgggaattg acaaaagtgc ctggaaggta gatttgtaga gtcgaaccgc 2160 cggagctctt tttttttcac agccggcgcg ctagtaagaa tcccgaatgt gggctttttg 2220 ccaaaaccac ggcctcaccg cattcaacgg gaaccactac tacaggttgc ggctacacac 2280
tcgcagcacc aagctccttt tcacaatagt ttcggctcgt atgggctgtt gctcttgagc 2340
cgacaggtgc gcgtgcgacg ctcttaccta cagatagg 2378

<210> 2376 <211> 2315 <212> DNA

<213> Aspergillus nidulans

<400> 2376

tacatcatgt atctgacggc ttttgcagag ctttgtcgtt cttctttcct ttctttccqc 60 categtegee geogttatge gaacegetgg gettagatte egaagageta teacteaegg qaataqcaqa tqqtgtgtct qaqgaattgc ctttcgcttc agcttctctc tttgcgtctt 180 eggtgaeget aegttggtet etateggeeg ettteteeet eegeettgeg aageeegatg 240 teggagetee tggatetaea gaagaaceat getteecaga egaatetget tgettgegae 300 gaggategeg ttegaettet ttateetegg tteeateate attateettg ttetetttt 360 tgtttgaatc ctccttctcg tctccaggtg ggggcttctc tttccttcga gcggtgctgg 420 aagaaaaggt acgaagggac ggcggaacgg agcggaaacg acgtgaagtc tctaggactg 480 atcgggggcc gacattgtac ccgcctggag caaaaagagg ccgaagaatc agagatcgcg 540 gtgtctggag cgcggctctc cagcggagag tctggccgcg gacatgctcc taacttctat 600 gacgacagac gagacacaaa aaagttgtga gtaaacagcc acaaggtatt gaacaaaaca 660 gaaggtaaaa ctctgcgaga gggccaagag aatatcacaa tagtccctgt ccggccaggc 720 aatgacaaag aggaggcgat ggcgagctca ggcgattgat taccgaagca agcagttcca 780 tcattccctc ggtgatcgga aaacattatt ccggccgggg aactctggtt aagccgaatg 840 actgagaage ttegatteeg etecateaat attegeaaca gaaaaatttg gagaaattge 900 agcattaaac teteceettq qeatqagtat acteeqqett qetteatteq etaacteaqe tractingting that the trace trace to the trace of the trace of the trace gctattcccg ggtgtatact gcgcacttca cgacaatgct caaaacataa ccagacatcg 1080 ggaattegag ettegteete aacaegeeaa tateatgttg etgeeattga ategeetgeg 1140 aggegtegge gggacageae etteatgaaa egeteagaet teatecaage tagggtaggt 1200

aacccaactc gaaatgtctc atcgctcgaa aaatggctga ccgctgtctt atctagaatt 1260 ttcacqctac qaaaqtactt qcqqcaatcc ctqacccqta taaaqtcctg ggggtggata 1320 aaggageete egegggegae atcaaaaagg ettattatgg aatggeaaag aaatateate 1380 ccgataccaa caaggatccc ggcgccaagg agaaattcgc tgaggctcag tcggcttatg 1440 aacttctatc ggacaaaaaq aaacgtgaga cctacgatcg attcggctcg gctgcctttg 1500 atcagaatgg cggctttgac ccgagcgccg gcgcaggagg caatccgttc gctggcggcg 1560 gaggetteca egggtttggt ggaggatttg gtggaggatt eeegggegge tttgeageag 1620 atatcaacat cgaagatett tteggegett tegegggtgg tgetegtegt teaggteggg 1680 gtagacgggg tccgttccaa gagattctag ttggcgaaga tatcgaagtt caaaccaata 1740 tetegtteat ggaagetgee aaaggtaett egeaagaeat egttateaet eeattgaagg 1800 agtgcggtac ttgcaaaggt gacgggttga aagagggtgc aaaacggacc caatgtcgtc 1860 aatgcaatgg tactggaacc cgagtccact tgatgcaggg aggcttccag gtagctgcta 1920 catgtgatgc ttgtggagga gctggtctta ttgttccccg gggttcgcac tgcggcacct 1980 gcaagggaga tggagtggtc cgcgagcgga agacagttcg ggttgatatt cccggtggtg 2040 tagaagatgg catgcgtctg aggatatccg gtgagggtga tgctcctcct acgggcacag 2100 cagctgcacc tggcactcgg acgcagcgtg gtgacctcta tgtgtccatt cgagtgtcgc 2160 ctgacgageg gttcagtege teeggateeg acateetega tagggeatee attecaetea 2220 atacageget tettggtggt gaagttetgg tteetacatt ggaeggeeag gtaaaagtea 2280 2315 cggttgcgac cggacctgga accggtgaca ggatc

<210> 2377 <211> 1585 <212> DNA

<213> Aspergillus nidulans

<400> 2377

gatgattgga tetettttgg agtegacate accgtgetet egaeggatgg etttegtgta 60 cattteeatg taetttttga aattteggae gggeaaacgg gtteeattta gettgaetgt 120 caegeeegtg gtaeeageea ggtegtagae tegtegettg ataagegeet eaaaategte 180 ategatgeea teeatgeeaa acctgggaaa gteggeettg aatgttaeee ttgtgaagae 240

300 ggatccctta gcagcggtga tcttaggttt gcccacagtt tgcatattgt ctgtccaagt ctqqaqqtat cqtttcttct ttttcgaatc ctgagtttcg actgtgaact cggtagaaaa 360 qacqttacaa agcttagcac cgaaaccgtt tcgaccccca gtgatcttct ccttggcatc 420 atcgtagttg gaggacgtca aaagattacc gaaaatcaac tgagggatgt acattccgtg 480 ctcttcgtgc atttccaccg gaatgccttt accgttgttc caaacactga tttcattggt 540 600 ctcccggctg taagttactc taatctcgtc catgttatcg tcattctgct tgttatcggc 660 cgcgttgaca acaatttcgt cgaagatttt gtataaaccg ggaacgtagg agacttcccg aaactccatc ccqtcaatct cggaattgta cacccacatt tcctgtgtgg tccgctcaac 720 780 tgagccgata taagagtctg ggcggattgt gatatgttca cggagattca actaggtaga accgtcagtg cacggctcct tagggccttc agcacgactc cttacctttt ggtatttgct 840 agacgetttt acttectegg atgeateeae ategteaatt gggategatt cattttegae ateggegage ggtttgaage egetettett tgtegeaget geagggaeet tetteggtgg tqtctqcqag acacggagtc cacgtctagg gggtcatcag gatccgacat ctcgtcttcg 1020 ctgtcgcctt ggccttcttc ttcggcttga cagctgcttt ctttgctggc gcttttttgg 1080 gggctgcttt cttcgcggcc ttcttgggct tctagtagtc aatcgcaatc agcaaaaatc 1140 attgcggagc attgaggaca tttatgcgta cgggagcttc gtcggtcatg aaatcggagc 1200 tgccgtcatc ggagaagacg gagcccatca aagagtcgtc gtcgctcatt gtggctcaag 1260 ggcgtaaata cgcaggagcc ttacggtaaa atcagatgca gggtaaccgg ataacaggag 1320 ggcaatgagt gacaagagga aacaaaggca aattggagac aaaagaggtc gcgtcccacg 1380 cgaggactcc tttgacgagg agggaataaa gagcgagaaa accacaacgc ctcctccacg 1440 gtctcgatga atgttgtgct gacggtttgt tggcgacgcg caaagttgaa acctgcgccc 1500 gaaggcctca caagtagtgg atggtttctg cccggatcat aagttacccc cgtccgcacc 1560 1585 cgaaatggga aaactcataa cagac

<210>	2378
<211>	2157
<212>	DNA
<213>	Aspergillus nidulans
<223>	unsure at all n locations

<400> 2378

cccgctcgta gcgggtaggt ctccaacgaa ctcccatatc ttcgatacgt gtctcctggc 60 tattgacagc cgcaagaaca atccagagct tcgacatgac atgatgcagc gttggctgga 120 catgcgggcg tctcatccag aacggatgtc tgaggaggat atctttgggg ccgccgtcgc 180 240 taatgttgga gcaggtgcgg agacgattag ttcgacggcg caggcggtaa tctactacct 300 attgaaaaac ccacagtatc tggctacggt cagaaaagag cttgatgagg cccaggcgaa gggagaactc tcggatgtta tccagtatgg cgaggcgacg aagttgccat tcttgcaggc 360 420 ttgtgtgagt cacctacttc cgggctcggt tttttctcgt ttcttgtggc tactattctg 480 tattctatat atgatgctaa tctgtctggc gtggtgggta gttgaaagaa gcataccgct tccaccctgg tgtttgccat aatctgcctc gtatctcacc caaggggggc atgacgattg 540 cagggcgata tttccctgaa ggcgtaaggc tcaaggccca taaatacgcc ttccatactc 600 ttgatactga aattaagcga aactgcaggt cattctaagc gtccacccct gggttataca 660 ccgcaacgcc gacattttcg gtgctgactg cgatacctac aaccccaccc gctggctgca 720 aggcgacact aagaggatgg actatttctt gatccacgta cgttcctccc tgattgcctc 780 840 tctcgttcac ctcatatatt taatgtactg atgaatacag tggggtgccg gctacaacca atgecetgge eggaacetgg egeaattega geteteeaag gteettgeaa etgtgetgeg 900 agactacgat atcaaactca tgaatccgaa gagcgagtgg cgcttcgaga ctcggttcct 960 ggcagtgccg tatgggtggc cgtgccagat tcagaggagg aagcggggga tggtgcaggt 1020 agctgcatag ggtcttggtt cggcgcgcag aatgggtggc aatgtctgat agcgaattgt 1080 ggcgttccga gtactaatcc ataaatctga acagattttc ctgttccctc agcatgctat 1140 tgcctgacct aggttgcgaa tgggcccacg agtttcagtg gcgtcgtgcc atgggtgtcc 1200 caactggcgc cggttgccgt tacattatta actgccagga actgtggtta aagtccatta 1260 taatgettgg tatgttgagt cagagecegt etettetage tegtaaggea tgtagtge 1320 eggagagatt etttaeggat tatetteage teetegeget agatetgeat ttaeagetae 1380 ctgcttggaa tctaagtctc agtgacgaca taaaagccta aatcagtgcc agaaatgggg 1440 gttgcgtaac tcgcaacggt cacggttgtt aaaaaccgga gaactgcact ccaatgctgc 1500 tccaccggtc aaagcgctca ttaccgccac agtctgaagt tttggcatag tgctactcgc 1560 gtttgtgaca acgtgagaga gtgggttctg aggaggatca atatttgctt ccctgtgttc 1620

cacaatctaa gaacatacga tgtgcgatct gcggtggga cgaagggttt ttaaactaga 1680 ccttgaggcc gcgtataaag gaatacggcg gataagagtt gaggtgctcg gagattaact 1740 cgagcttaca tttccaaaca taagatgcgc tagaatagtc atagcaattg atcagttgca 1800 tgagtaaggc aggcgtggaa ctacctaact aagcgttcgc cggaaagagg tgaaagtgcc 1860 gtcctacatt gagacttttg gggccgtgag ttggacggga ggcgcttgac catagtgacg 1920 atacttaata catactgacc aggactccat tcatctgctt cgagaaaaca gggcgatggt 1980 ttgtcttcga atctgctgaa agctgggcag ctntgcgtca cttagaccat gtccctatca 2040 accatttagg gtttcaacag attccatccg tcccttctgc acatcttgat gccttcctaa 2100 gactatgcan atcatcccc ttgaaaaaggg agttttgacc cggttaacag gggtata 2157

<210> 2379 <211> 3373 <212> DNA

<213> Aspergillus nidulans

<400> 2379

ctatggctca ctcaacactg atcggctaat acaaaaaaga gggaaatacc actccaccgg 60 120 gctctgaaaa gaccaatgat gccaacgggc cccagttccc gaaagaaatg ggtccagaaa ctcttttatt tctggcctat acgccagtgc caacggtgtc aatcctagtc ctgtcccgaa 180 gatcgtcaga gatgccgatg cctcgacggc atagaactcc tcgactagta tcgccgcttc aacaaggete ttgctgcccc cacctacgge ggcggggate tgtcctttta taaggccage 300 tcccactgcg gcctcgtaga ttggtttaag cgagcgaaaa cgatcctctt gcgttggaag 360 cgttgcgtat gtttccttcg cgggcgcaag atgtgcagct gcgaaggcgc gcgctgctga 420 gcgagtccgc tgctctgaaa gagataggtt gaagtcaacc attcttgcga ctactcagtg 480 540 ataggtaact tacaaaaagt gaggtagaag tgcggagatc atggtaagct ctgtgctcag ctcagcccac tcgccaagta aaggttacat ggatgtcggc cgaatccacc aattgttagt 600 aaccactagc actagtctga tcaggttgca aggactcaga atgaagaaga catatgctta 660 gaaacgcggc gatacatgca gtacaccagt cgcgggccag agagagcttt tacccgctgt 720 gtaccatggg ctccaatatg agtgctttag tatcatgaag tgtgaggaat ctctcagata 780 ctggtgttta ctcggggtac acgctgtcgc aggctggcca cactgttcag agcccctgaa 840 cgtcacacat gctcccaaac gcaggacgaa tatacacaac cttgcgaacg ataagagtac aagtctcaaa ggtcgtcacc actgaaatgg cgaaataaag tggctagaca tatccctagt ccgctggggg acaagacaca ctttgttcaa tggtgttgtt gcagcttcgt tcacgttcaa 1020 tectgteact eccaageteg ataagaagte gagactaegg ttgagetgee taagtagggt 1080 ttctcgacgt gggctatggt gatgtgtttt ggggtctgaa acgctgaagc aaaggagaca 1140 gttgttgttg tctagaatcc aatctgcaat ctagattcaa ttatgggaca ggacagagag 1200 tgaggatgtt ttccagtagg tatcaacacc accaggcacc gcaatgtaaa tctcgatctc 1260 taatccggag aaaattgacc ccagggacgc ggacgcatcg agagcccaat caggaaatag 1320 ggcaacgata gcggggttag ggcgataatt atgccatgac gtcaccatct ctcagcttcc 1380 aagtttcaat tgatgtctat tatgttaaat cacccctgc tcacaaacta tcctaaagtt 1440 tctcaaaact caacagttat tatcaaagga gcatccggac tgcagatatg tacccctccg 1500 cccgcatccg tcgcagcgac gatcttgcca aactagccga ctaccatatc cagcatgacc 1560 teteategte ggacegegat gegetgaagt eegeegeaaa gacegtttee etetggacaa 1620 cagtcggatc agcagttggt attggcctcg gactttacgc tgcgttccgc ttgcgcactt 1680 cgaggaaggc cttctttgat gtctttcgcg cggcagagaa gccgacccaa gttgtctttg 1740 cggatggacg gaccggtatg tgtttcttgt cccttgcaat ttcttattca tagttgcaaa 1800 gaggctaata tggatcagag gcgattcctg atatcacgcc gctgctcaaa ccaagcacgg 1860 tgggagactt tgttacctat ttcctcgcct ccatgggcgg tctctttctc ggtggtgacc 1920 teggtaagee tteatteege teetggagtt cataaattae tgacattgag geacaggett 1980 tcttggtggt gcagcaagcg gaagccggac gctaacaggc gatcctgaga gaaagaagcg 2040 gattgagaat gccttccgga gcttccgtgc ggacacgctg cgaaaggaag ccgatgagct 2100 agagaagggc aagtcagtca cagacgagat gttctgaggt gtaaatcgga gtgttgaaag 2160 cagtcttgac tttctgaccg attgaggaaa ttgatttatg tttagcccca atattggtga 2220 cggctctgta cgattatgat gtgggggacg atcttaatcc tcagtatatg tactatatct 2280 caaagcgcac aatttgatag gcctggatgg cctctgttac gtttcgccat gtctccatga 2340 gcgtcaggtc acaagcaacg tccttctttc aaccgcgctt tgtcgacaca gttctatcaa 2400 cttcatcacc agttccgcat ctctaggctt gactgcaagc tccgtctttc cggaaatggc 2460 ctcatgcaca ttctcgtaga aatgttgata tcctcccggt atagatcccc agtcctgcgt 2520 ctctatctgc cctccgtcaa tcacctggag tgtacctttc gattaacgtc aactggggct 2580 ctttatatgt ctctttatca acataccctg actgccccca tcttccagcc cgtagctttc 2640 atggccagga taaatgcctt tctacagctg gtcctcctgg atatcgagct cgtacttgac 2700 ccatcggcct ttagtcccaa gcacctcaaa tctcttctgt ctatcgctga caacgtactg 2760 cgtcgaatgc agctcgactt gtaccagtta gagaagcaca acagtacccc gcccggggct 2820 gagettaaaa eetaeettgt agaeetttet catateecaa eactattaaa aaaceattat 2880 ctacaaatcc cttttctcta atctccttgc cgttgccctc gtcaaacagc aatcacgtca 2940 cggtctttgg cgttccaaag agaacaagaa cctggtcgat caagtggctt cctagatcaa 3000 atagcattee tgeteeeggg acacegetag ceaagegeea ettettegat tegategeeg 3060 tccgcgagtt cggcgcgcag tcaaaatggg accgaagccg gactatcgag ccaagtaagt 3120 tggttgggct agcgagcaga gcgcgcaggg tcaggaagtc tgagtcccat cttctgtctg 3180 ctcttgtcag ctgcggatgg tactgaatca tgattatcag cagaatccac tgtggtaaac 3240 cgcaagetgg agacetgtte teteagegag aceggegage tetategeet cagegtagtt 3300 tgttgtaaac ggtttctcga cgatcactgc gccacaatct atcagttaca gctctcgtct 3360 3373 cttgtccgag cat

<210> 2380 <211> 2232 <212> DNA

<213> Aspergillus nidulans

<400> 2380

gccaggaga cttgatagaa agaaatcagt ccgcccgatc taccatcgat gccccgaatc 60
acaaacctgt tcatcgtccg caagaggatc gatacttgac tggagatcat tcggatgctc 120
gatgtacttc agaaaatgtt ccttcagtgc aacataagtg ctacgcgcct ccgagatttt 180
gtccggccat tgcttccgat taaggtcttc aaatagcaga aatgcctaga tctaagtaag 240
catagaatcc gagcgcatac gagaggatat gtgccttcca acatattgat ctcagcccat 300
cgttgcatat actatattct tgttccgact tgagggcctt tcggaggtct gagggtgtat 360
cacggccgtc gagtaggcta ttccaacgct gtctggagaa atcgtcaact acaaaaacgt 420

tgtaacagaa aaagcgcact ctgaaaatat acctagaatc ttcaacaccc ctcatttctc 540 catgtggatg tgatgcgatt gatgatggtc ccagggagcg agggtaaagt gaatcaatag 600 agattaagag atactgcgga ggtacaaatg acgaaggtca tgataagggc gggatcgtca 660 teggttttet eteegeegae aggateeaae tgteaaetea caeggaaeae atgtttegat 720 cagacatacg cctaccaaaa gcgagggttc acaaattcta tctccaatcc gatttgaaag 780 aaatagttaa gtgattacag gctgaaattt agctgatcaa atcgaaaatc gtcgcaaatt 840 ttatacccag taaaccaacg cacgacttgg tctccctacg agcccttccg aatttcttaa 900 tggtgcgtgg ttcggttttc gatgtcggca gacttgttcg cagagttcgg atatgcagca tctgctagcc agccttcaca agctgcatgt cagcaaqcag ttttaactca ggatgcaaca 960 ctggtacccg gcctggattc attcgaagac gctacaccgt cccaactctc tcctcgccat 1020 ccgcacgage tcaagcagec gtcateccag ccaagettee agaatcaget caagcaatta 1080 gacgatttcg gagattttga gctaccacag ggcgggaata ataatgatgt gctcttcgac 1140 gccaccctcg agaggtgttc ggataacggc agcgatgatt ggggtgattt tgagtccgca 1200 gaagttactg ttgggcaact cgcccaaaat ccgacttccg agtcagttaa gagtgaaaaa 1260 gctgtgagca agccggtgcc caaggctcca ccaaaccaca attcagcttc acgatcgtta 1320 ggaacaccgg atctcttggg gcccatggaa tcaattacaa tacagaacaa gccgatggct 1380 agtggtcatc aaggcaataa aaagcctggg ggtacaataa atcgcagtaa cgtacagtac 1440 accaaaccaa gactgcccgt ggaagacgaa cccttcgaag actggggaga tttctctgat 1500 ggacctacgg aggctagtca aaactccaac ttggaggtcc ctgagtccca agtctccggc 1560 aagaggaaaa acttggcgca gccatcaaaa gccactgcaa gcctaagagc gcagactagc 1620 aaacagtcgt catcgacggt acaagttcgc ccaacgaata ttccacctcc gtcgatttta 1680 ttagagetat ttecteaget ttttgagege etgegeeaag agggeaceaa agegaagaga 1740 aatetgeaac agaaggatac tetaaattea atagetgagt etateaettg caetetaaag 1800 actgttgcga ggattgttgc aggccggact ctacgatgga aaagggattc aatactgagt 1860 cagagtatgc gaatcggccc cgcgcgttcg ggcaaagcag gggggatgaa attaagcagt 1920 gtcaatagga atgaagacat caaggagcaa caagaggccg tggatatcat taacatgtgg 1980 cgggatcgtg cttccttatt caactccgtc gttcaggcag cagggaggcg accagtgcag 2040

gttatcccca acaacactcg tgtcataatc gctacagcca gtcagggagc cttaaaggcc 2100 ccacacgcgt gtgccctttg tggactaaaa agggacgaaa ggataccgaa ggtggacgag 2160 aacgtggagg atagctttgg cgagtggtgg acagaacatt ggggtcatac tgaatgcaga 2220 2232 caattctggg ag <210> 2381 <211> 516 <212> DNA <213> Aspergillus nidulans <400> 2381 acatcagaat tcgcggccgc ataatacgac tcactattag ggatcaactt ggagaagagc 60 atgagctatc aggtcgacca caggcaggcg agtgtctgag aacagcggcc gtcttgcgcg 120 180 gtgcatatat gtccgaaggg actggtcgaa tctttaattg acctcacagg cgacgagcgt aagcagaacc ctggccaggt tggagctcga acggctggga aaagtcaagg cccctggggg 240 agaaaatgga ttgctcccgg cgctagggac tggttttttt tccctcatcc tggtaggtca 300 360 acageegttt tteategtga attattaatt eggatteaag gteeaateee gaegagegea gcacggcaat tccagaatgt tggtgccgac gtcaaaccca catggcgaac gaaacggcaa 420 ctgtggttcg cctcatgctt gcgctcaacc ttttcgaacc aagaatctga tggaactctg 480 atggcgaggc cctgacagcc acagcgacgg ccggaa 516 <210> 2382 <211> 1563 <212> DNA <213> Aspergillus nidulans <400> 2382 gcacagacag acttgttccc atgacaatgc acaggtccgc cgtctcggac agtgttcggt 60 tgtcaaagaa ggccgagggc aaagcttccc cgaagaaaac gatatctggc ttcactagcc 120 180 cttgacactc ggcacaattc ggcacctccc cctttgcgat tgcttctttc atcaggtcgt ccggatacgc tgttttgcac tcaatgcagc gctgagtcgc gaagcttcca tgagcttcaa 240 tgatcatatc gcccggcacg cctgccaacc gctccaaaca atcgatattc tgtgtgaagt 300 gcttcaaaag ctttcccttg tcataaagta gctttacgaa tgaatgcgcg agagtaggtc 360

tgtactgtcc tggagctagt cccgcgccag agcgtagaac ggcttgggat tctgcctgaa 480 gaagctaatg tcaaacactg cttcaggatt gggcagatcc aaatgaacga gattcgcgta aatgccagta tctggtgatc gaaaatcagg gataccggcg gctgtactga tgccagctcc 540 600 gacctagtat ttttagcgat ggatgtgggg gaggggcagg taagacgcag acataccatt 660 acaaccaccc gccgcactgg cttctccttg acatattttg cgactgcctc cacagtgcga gcttctaaga ccgacggagg agtcttctcg tctacgagtg tagacgattc attgcccatg 720 780 atgeggegae gaccagatet gggeetggeg tgetggtgte tgtetetgeg eeggegeeet 840 attttgaccg aaactgtagc aatacgaaac gctaatatac cagtagtgag cgttcagaat 900 ctgctttcca acagttcgtg ttgctagaga cttgggagaa gatagatgat cgcctgtatg acgttttatt ttgccaaaat ggctgtgtgt gcctaaggca tcaaggagtt tttatatttt gaccatggat ttcccgggtt gccagcattt ctagttgcgg actcgtatgc tctcaagatt 1020 tgcaatatct catcttgagt tcactgcctt ctgatcaagt caattggcca gaaagttgaa 1080 gttgcttcag agatgcaagc aaagagctcg ctccatcctc accgccctcc gtttctgcca 1140 caccagegat ttgttgtete tteetgeegt atacetttae eccataggat tteatttgtt 1200 gacgtagact gtctcggatg ctgcgactgc cgggagaatg ttcaattcca cagtcaatgt 1260 tgtcaacgga tactcggaga cagagctaac tacgcaatct tegaactcgt tttcctccga 1320 tatetaeaat getageteeg tegeegagat taaggeeace ttgaceeaac tgeaegagea 1380 ggaggcggca gttacagctc gcctagatgc cctcgtcgcc tcacagaagg atttctcgcg 1440 tgaattaggt cgattggacc ttctccgcgc ccaccttggc tcccaaacaa gcaccacacg 1500 agcgatcage aatggcatge tegtggggge egeegeaace geagacegea tetecagtge 1560 1563 tgt

<210> 2383 <211> 2781 <212> DNA

<213> Aspergillus nidulans

<400> 2383

tggtcgtcgg attggatatg aagggatttt gaacggggga gtcttctttc ttaacggtct 60 tatgcagtcc gccttctttg aatactggag gcaggaatcc tggtgtgccg gcgtactgtt 120

tcaaccaagg gttggcctcg acacacttgt agcatatgaa ggtctcgaaa tcatcctcgg caggaaattg gggaggcaga ggcggctcat cttcgtcttc agcttgttcg ttcgagtcat 240 cgttatctag cttctccttc ctgattgaat tcttgtacca gtctcgtggg agcccgataa 300 360 ggcactgaaa cattgtaccc ttctcttcat gtgcgttgta gtcttcacca cagccgcaaa 420 acttgttctg gaagttccta ttgtatcgat tgccagggtg tggcttctcc gaccgaaccc 480 cetttgtgcc agtattggga tegetaegea gagtgcaegg ggtggaggaa gtgataegag 540 tggttccgca gtcgcacaca aagtttcttt tgttgaaaag ttcgacaagg gtatgttcgc 600 660 catggcagga tattgagcag gaatagcaga cgccggcagc agtgtagggt gaatcaggag 720 tcgggggggg aggattgcag gtcaaacaag catatagtgt ctgccgtagc ggtcctagat gttgtgtaca cgaatcaaat gactatatag ttagttgcgc gcaatttgat tgcagagagt 780 ggattgcacg gcatagactc acatatggga ggacttcacg ggcatctgcc tcgaggcgca 840 900 tctgagattc gatgaatctg tgatacacat tagcatacaa catgataagt actagagcaa cgcaatgtcg ggcccaagta acaccaattt ctcactcact ctttcgcagt ctgcgagttc teegagetge agetttgaeg geggetgaeg gtatgttgee categetegt eggageaace 1020 ggaggggatg cgacggtctc ctcgttgctc atcttccttg acagtaatcg caacctattt 1080 gcaaacggat tcacaggaat tggagagatg aaatagtcaa tatcagtgag agttcgatgg 1140 ctcacttgcg atcagttact ccagatggaa gccaacgcgg aacgcgagac acttgtttgt 1200 cctgtttgca ctttctgtat tcaaagttcc gcaaggtgac tgagggtaac agttctctta 1260 ttgatgactg ctgagtttca gaagctgtac tttccagaca gttaggtata cttcaagaca 1320 tegteceaca gttttgcagg ctagagtggt tgggaaateg tagtgteeeg getecaggeg 1380 tcaaaagcta tatgtccaaa tctggtataa ttggaaaacg cgtgtctcgc gctaaaacgc 1440 gtcaggtcgt gttgccaagc aaaactcgca ccctcgctgt tcgtctcttg caaacccaga 1500 actogacaat acgttttgtt ccaactoata gcatogagac ctagetetea tattetttea 1560 aataccaaag tacacacaca atgaggtatg ccccagacct aatttccatc tttattctag 1620 tttctaagaa gaaaaaaaaa agttcaccgc tccgtcagag cacatcggct gcaaaccgcg 1680 gtttgggaaa tctgaatcgg cgaaagcgat ccagagagcc tgatgacgat gcttcgtccg 1740

tggttccccc ttcaagccgt aagttctgga aggtcaatta gagggaaatg tcgcagttag 1800 gctaactgaa acataagcgc ccccttcttc ccctcctatg ttgcccttcg acgaagacga 1860 ggacgagcca gatgaggaag cagaacttga cattgatgac attgaggaga tggcagagga 1920 tgaggatggc attgaccttt tcggagatac attcgagcgc gactatcggg gcggaaaaga 1980 tgaccgctac cgcggacgat acattgacga cgatgagcaa gaagaaatcg acattggtgc 2040 ccgacgagag ttgcgaggct cgcctaggat cgaagagatc gagaacttgc tcggcgccgc 2100 caagtgcccg cagccttctt gcaagatgac gaggacggtg atatcgattt gactgcacag 2160 ccacgccgtc gcaggcacgc ctacgacgag gaccgcgatg acatcgaaat ggctgacgac 2220 ggcctcgaag agctttccct ggaggagcta gtcgatatca aatcatctaa tatcacggac 2280 tgggtgacac agectcaagt getgegetet atttacegag agttcaagge etttttgaeg 2340 gagttcactg accccactgg tagctctgtc tacggaaaca agatcaagac tcttggtgag 2400 gttaactctg cctcgctcga ggtttcatat acacacttga gcagcaccaa ggctgttctt 2460 gggtacttcc ttgccaacga gcccacagaa gttctcaagg tttttgacca ggttgctctg 2520 gacgttacct tgttccacta ccctcaatac catgatatcc acaatgaaat tcacgtccgg 2580 atcactgate tteccattgt ttacaccete egecaattge gecagteeca cetgaactgt 2640 cttgttcgtg tcagtggagt cgtcacccgc cggacgggtg tcttcccaca gcttaaatat 2700 gtgatgttca tctgccaaaa gtgtaacatg acgatgggcc cttaccagca ggagagcagc 2760 2781 tctgaagtga aggtcacaat g

<210> 2384 <211> 3037

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2384

aaaataagcg atcggaacag agatcagcga aaggtccaac agatcacaga aatagaagca 60
agtattaaaa agaagctctg actgagagaa gaaggagagg aaggccgagg aaagtgaagt 120
tgcgttgaat tggcgaggtg aaggtctgga gtcgttcgaa aggacacgat cacagttcac 180
tggtcgtatg gtcacgtatt gtcatatttc aattccccgg ccagattagc cagccacgac 240

acttgttccc gcttctaqtg agtaacgata tttcactgcc actggactcg cccgaagcga attatagctt tgaagtttgt cggtccttaa caagtcccga tagcaagtcc aagtaaaaat 360 420 taatgtgcaa gcaagctagc aggtggttac tacttgaaaa tatgtagtca taattatttg 480 acqtaaatqt tqataqctaa qataqqaqqc aataqaatqt tcatcaaqcq qcqctatgqq 540 tactttgaac tgacatatgg acaatagagc aaaaatgtaa gcaacccaga ctttataatg 600 aaaagccgta acaaacccca ataacgtagg aaaggtatca tagtgtaaat attcgaaaga 660 cgcctcaatt caatattcag tcgagacatg gccaggtggg cgcatatata ttgtctcatg 720 tacagcaccg gcgaaggaaa caagcatacg agatgttttt agtcgatcat cattcgqgtq ggcacctgac cggcaacgtt cgacagctcc gtagagccct tttccccatc cttgcccttc 780 tttttcttgt tgatgtgagg cttcagcccc ctgtggaagt tgtgcatgca cacgcaggca 840 900 ttgataattg tcatcacgat caatatcagt gtaatgatgg caaagaatgt cagagatcgt cgggcagttg aatagtcatt ggcggttgct ggttgataca tacgaaccag cttgaagagg 960 aagtacgcca tggctgcgaa ataaagaagc tatcaagtgt taggataatc caacatcaaa 1020 tgaacccagt gacatacaat aatggcgatc attectateg ageteteacg etteacgaat 1080 aatgctgcac agaggaggat aaggattgta accggtatgg cggcaatggt aagggcaaat 1140 tctgtgtctt ttctgttcgt aacaatgaca aggaattgga tcgtgaaacc gaggaagaag 1200 aaaaggtega aettaageag egegatgtaa atetggeaag aegttaatae tteaettgaa 1260 tccaagggca agagcaaatc cacgcacctg gtacgttaga taacgacgct tcatgcgcag 1320 atcagcgctg atgtgcttgt agatggacca tgcgaattca tcataaagct tccaggcgac 1380 gatcatcatc agcacactac ccatggccac aacgatcgga ataatgataa ggaacggttg 1440 agtttcggcc cagatgtcag ggctgactgc atcattatcc gttaggactg tcacagcttc 1500 cttgatctgc tgaacctgaa ctgcgccata aaccaacagt ccaatattgc acaaacacaa 1560 tccaataacc tgaatggtat ttttgaggcg caaagcgtcg tacacgagga atagttcgta 1620 gagaaatccg aaactgtaca gtgcaaggaa agttgggatt gttttagagg aggtcacaag 1680 tteggetteg getgtgagtt ggagetggaa qtttgegaag atatagetge aagteggeeg 1740 ttagaaagca cgggggataa gatgtccaga cgcaaacata ccattgcaga qcaaqqqtga 1800 tgacggtttg aactaatgtg acgatggcaa aggaccacgt ccaaagggaa ttcgqtttgt 1860

acattttgcg tcgtttaggg gccggggaca catttgtata gccttctctc ccgcggaaac 1920 ccccgtgatc tcgtctgaac gaaggatcaa aggatccgcc gaacagggac gctcgtgatg 1980 atgtgtggga ataaatettg acaaagtget eegtgaegga getggtateg tetaagtatt 2040 cqqqctqtgq gtacaatatg gcggtttacc accgacgcgg tggtaagcag gcggaacgcg 2100 gttcgtgaac ggtcaggagg cgtggtatac tttgtttcga cagtccggcc ctgtttgtca 2160 cacggcgtcc tagacactgt ttcgtctcaa ggccgtttaa gtattcagga ggtgaccgat 2220 ctcgaccgga gtcaataagc agcgacacca aacttctcaa ctatcataca acctccgaca 2280 gaaaccccca ggttgtagac cggtggactg gggtaaaccg gacgagagga gatcgcggtc 2340 gcagcgtaga aagcttggtg ggtgatggct tggatctcca gaaaggtggt gccaagccgc 2400 ctgtgatacg ctgtagtttg tcgggcgggg aggctcacat cgattgttcg ggcgaggtcg 2460 aaggetgage tgeaggetgg agggagtegg ggatggetaa ggateggtgg agggtgaaag 2520 cgagtgactg ggaacgaaag aatcacaagg tttggaaaga atgaaaagag atcgacagac 2580 tcgactcgga aatgagggct gggacaagag gacaacggga ggagtggaag aaaaatgcag 2640 acaataatta gagagattet gggggacgeg aaacageggg agagteeggt aattteeagg 2700 ccagcgagac ttgctgggtg cagagccgtg gttgaaggcc gtttaagggg aggatcggtg 2760 ggactggctg actggtacgg ctcacgcctt acgtggttca tttgccaaga ggncagattt 2820 tacggccttt tcctgacagt taacgcgcca cttacctttt tctgtacgtt accagactat 2880 ccaccttttt caattaatga agttttggcc gaaagttcac tctttaacaa tggaccccgc 2940 tgaaattagt titgactigt teegteetta eegaaaaaaa tigeeaaaeg giaggiaaat 3000 3037 tttttacgcc ttccctttta ttggggcatt tctgccg

<210> 2385 <211> 1752 <212> DNA

<213> Aspergillus nidulans

<400> 2385

cgtttaggaa attaacaaaa gattggaaaa tgagccgtcc gtctggactc cggatcttgg 60 gtccattctt aaaaggccag ggccttcccc ccatgtaatt gccatcgaac tgccggcagt 120 gaagatcggc taagggctct gccgccacta cgccgaaaca ttgggggaga tgtggggaag 180

agtcaagact agctgtcggt ccgaaatcga ggtcctaaat aggtctgagc gatatttgag agagcatcat ttagacgatt attattattg ttgtttcaga aaatgggtgc tgaaatcaaa 300 atgtctcttc aactgttaag cacttttcga aaacgtggtc cgccgcggga tctcgaggac 360 tacagaagta ccagtatact ctgtagcgtg agccgcatca ctgatccgac atcagattat 420 gtcagcaggt ttcgggaatg cttcggaaga gctcggagtt tctatgaagt actccgtaca 480 tagtgtattc taagcttatg gtagtggttc gaaacagtaa gcgaagtgcc gaacgcttgt 540 aaactaaaac tgggggtcat agggtatcta gtcatgttaa aagtatcatg cactatttct 600 ctgcttatat tcatcagtaa tattaataag tgacagaatg tgccaaagct cctggttccc atccataaat taacagacca aacaggaccg aactcataac gcccatgcac ctgtgccatg 720 catccataga aattgcgcca aacgatatga cagaagacct ccgttgaaac cttgaaacca 780 gcaggaatgt gacatggaaa gtgaatcagg acttcacgat atcttgcagg atgtggctat 840 aatggccagg cactctattt cgacatctat cgcagtcggc acgataaccc attgaaaata 900 ccagcttttt ggccggcttg attgatctga ctgaacttgg cgtttctgtc gagacagacg ttccatgatt tggtgccttc gatcttagac aatgaatcgt gtcgataact tcagctggtg 1020 gttctggagt cggtcccttc gatgtcggga tgcttgaatc aatagtgaac ggtgtttctg 1080 tatttgggtt tggctcctct ggtgataagc tgtcgggcac atccacatcc attaatgcat 1140 cagggccgta tgcacgcaga cagtgcaaga ctcgttggtt cgctgtagtc ggattatcaa 1200 acagctcaat gtcgtcgggt tcgccttcaa gcccagcagg ctccaaggat gggtatgcat 1260 atcccttcac ggccgtatgc gggtccttgt cgcctgttgg ccagtccctg ccctgcttgc 1320 gggggcttcg tacgggaagt ggccggtgtt tctagggtac tggttagctt aggagttgag 1380 ataagaaaaa tottgtagaa tatgaacott gttgtototg gcgctatoac otttatgaac 1440 ggacagatcc tcctgctccc gctgccgctt ggcggaggag caggccataa ttaggctaac 1500 cgatgactgc aaatataatg agtgtattca cgtgagttaa cgaaaacgat attacgactc 1560 aactgagtca aagcatacaa aaatgcaaat gactgtgctt gtgtagtaag tactggatgg 1620 tctggggtcg aaagccacat ctgaagctgg tccaaataat taaaaatacg ggcggtatag 1680 cacaaaacag gcaaccatgg ctggggccgg gacacgggtc cggggacctg ccatgtgagc 1740 1752 catgtaaaga gg

<210> 2386 <211> 1768 <212> DNA <213> Aspergillus nidulans

<400> 2386

60 cccgactgtg tgtttcttat tacgtagaag gcttgtatag acagggtcct gttctcgacc ggtcaccacc aaggtgacca ggccccgatg ctgttccatc acatgaccta gtacctgaac 180 caagttgaag acttccaagg ttctttcccc tactcctcaa ccatcaacca gcatccatga 240 gtccagtcct actaggacca ccaatgagaa ggccagtttt tccagcttta atttcgatct 300 gttctgacaa cgcctctcgg catgtcgagc tcgacctccg cattaatgtc cttctcctcg gettattgag gegtettgtg agtececaga etggggagtt ceaeegeaac ecaeacetee 360 420 gcatggcctc caaatcttgg catatatcat ctcgaagaaa atgctggcat aggctcgttc 480 atcctcggca gttttggcct tagtactaat tatttctatg tcaaggactc taggttttga ttgattgaat cagccaagga gagactattg gcaaaatcgg ctggctatga gatcataatg 540 ctaagcaatt gcttaaacca tgctatgttc gacgttatta gtctcatttc cccgcttcct 600 ccccttattg gtgctccctc aaatctcagg ttataggctt gcaaggatgc tgcgcaactg 660 ttggcgtgcg gtgaacctcg gtgaaatgtc caagcaatgt ggtgggcgcc tcccggctta 720 tgcacagaca agatatctag gaacctctgc gctaaccttc cctttggcat agaggattgt 780 etgetgeggg tgaggeecta aataatgatg atattaatgt gtgtcaagtt tgecaaceeg 840 900 agactgettg gggtgatggt aggaattete catgtteece caagtttgeg geetttteeg ctcgttgtct tcgagatttg ctctctgggg tgttgggggc gggtcacgtt tttagcgagg 960 gagaagatca cetegeattt eggeategta eeceaatege egaettette ggetteteea 1020 atggggcaaa aacaagagtt tttgtggggc gcttgccaag atctaaccaa taccgaatat 1080 cacaattgcc gatcgcaaac tagtgtgagt acgaccagca attgccagtg gttgacgggc 1140 aatgcgcgac gcgttggcat tttgccagaa gcaacacaaa agcttccggc gaagaggaaa 1200 gtttcgatga acgtttgcta cttacatggg ggataccctt gtttactttc acatgcagcc 1260 gaaaagcgtg ccttcggtgg ttcgagctcg acagctgaag ttgcttaaca ttgtggagca 1320 actaaaaact aatttgtgag acacctggtg gtcccaccga ggcttcaagc cttcacaacc 1380 tacgattgtt gaccccattc tattgttcga tacaacgcga gatatcacaa gctcaagaat 1440 gctaccttgt cagtcaacgc acaaatttgt ggccagagac aagcttccta ttacctcacc 1500 gtgtgtctcc gatatgttgc cgactccgaa gaacgtagcc gaagccatag agccaacaac 1560 agtcacgctg aaagcaaaaa tttcagagta ggggtaatgc ttccactgcc aatgatcaca 1620 gtacttttac gcattgataa actaagcgta tagtgggttc catagctgga acatcaagct 1680 gtgaagtgtt gggctcggtg gctcagggct cgggcgagga gctgccaatc cttccctttt 1740 gttggtagcg tcaaactaga gcacaggg

<210> 2387 <211> 1929 <212> DNA

<213> Aspergillus nidulans

<400> 2387

tctaaaaggg ctttctgtag gactgagcgg agggcgcgtg catggaggtg gtgcggtggt 60 gtatctgcgc tcaagccgcc cataccgctt catcacaggc ttctcctcac tacaqqaaat aaattctgtc ccagactaat aagcaaccct cctgtcctcc cgtttggatg ctgcacggca 180 tgtgcctctt tgtccctaaa gatcccctct ggtcgtatat ccttcggcgc ccccaggaca 240 tcaagcatgc gccacgtgtt gagttgagtg ctgaggtctg tgccaatttc ctgcaggacg 300 gatatctttt cgtatattgt cacggaagcg gatgacaggg tttgttggag ggatattgcg 360 gtgttgaggc ctgtaggacc ggcgctttat tgcgatgccg aggcttgctc tgtcttcagg 420 tattgctttt cctgggtgtg acttgcttgg acgtattatg aaaggttgaa gcagatggaa 480 aggaagtgta agtattcatg gagtagatcg atggttagag gtgaaagtga gggttgttgt 540 cgcgcaatgg ggttattgat cttcgtacaa ctattgcgag cattttatac tgatacgtgt 600 acaggacatt caccataaag aagtagcgtg agaaaagccc tagaaatatt ccttgtaaag 660 acggcactgc tcctggacag acccagtctc gtagtcgaga ccattgggtc agtcaaactt 720 tggcacgcgc tcgaagaagc aatgttccta tgtaggaatc ggtgaagaaa cgttaaatca 780 ggaagaagga tagacatata tgtaagtcct gtccgaccag agtattgcaa ggtgacaaag 840 cgctgtagag caactgataa tactcattca tccgctagga gacaatattc gtactattat 900 ttgatataca taatcgtggc acctccatcc tcaacattac ttgcggcacg ctttactcct

tgtgggtagt agtcacctcc tgcttttcag acccaatgag ctcttcacca cgggtgacgt 1020 ggttggctcc accaaacaga gcatcaatct cttccagagg cacctgcttg gtctcgggta 1080 taaaaaagaa gacgaacacc gcaagcagga agttgatgcc cgcaaacatg taaaatgcgt 1140 agaatccgca gttgtccagg aagataggga agaactgctg gaagatggcg tttgcgacat 1200 tctgggtttg agaggccata ccgacagcct gggctcggac gttcatggag aagatctcgg 1260 atgtccagat ccatactgtt gcaccccaag agggtttgtc tagacggatg ttattagttg 1320 gtgggtgacg ggaagagctt agcgtactta cagaagaata tgaacaagaa gagtagaaac 1380 acgatcgata tgccaacggg cgtgctcttt gtatcgttgg gcgatggtgt ctcggtttcg 1440 acggcagaca cgatgatcat gcaaatgccc ataccgatgc ctccgacaat cagcaagaat 1500 ttgcgtccaa accggtcgat aatccacaca gcattgaggg taaagaggat tccgaaagtc 1560 gcgttgaggg cgttgatgag agcaatctgg cttgagctag ggaagacctt ctggtagatc 1620 ttggtcgagt aagagttcag acttccctgg ccggtgacct gctggccagc attgataatc 1680 aaggctagta ccatacgctt gcgcagagac ttatccttcc agagagcaga gtagttgcta 1740 gagatggctt ccttctcata ctcaagagct tcacggattc gcaaaagttc atcctccacc 1800 tettggtegg tttetegaac eettgeaage getgeaegag eettetegat attgttgeea 1860 cgctgaatgt acctgtttca tgctcagtga gaactatata ccggcgctaa gaaccttacc 1920 1929 attgtcggc

<210> 2388 <211> 1550 <212> DNA

<213> Aspergillus nidulans

<400> 2388

cgtcgcacgg tatcgtctga gggacactag acagtcccat aaggcgcttg aacacgacat 60 cctacagctt caaagcgcga ttcgcggctc aaaggccaga gttcaggcta acttcattcg 120 aactcaattg cgaagacaag aacttggaat caaacgaatc caagctgcca tcaggggcgc 180 gctccagcgt aatgtcgtgt acgaccttca cgataatgtc aaggatgcag aaggtggagt 240 acagctgctg caggctgcga tccggggtgc cttacagcgc tcgaagcttt cggaacaatt 300 tgaagagact cattctgagg aggacaaggt tcaaagattg caagcattga ttcgcggcgc 360

attqcttcqt caacqcataq gcqctcagtc gaaagaaata tcacaagctg aagaaagcat 480 agatattatt caggeggeca ttegaggaat gettgtaegt caaggtgteg ceaaaacaet 540 tgcttatctc agcgacgaga cggagtctgt tgtactcatt caagcacatg cccgtgcctt 600 qqctqtcaqa aaqtctcqqq caacqttqaq ggaqtctctt qtcaaggagc aacataagct 660 tgttgatete cagtecatgg teegtggegg tgetettegg aaggetetta ateteateeg agaggcattg geggagtata cacettettt tattgaeett cagagegeag caegagetaa 720 agctacgcga tccttcttgg tgtctcagcg aaaagctcta ttaaaagaga gcgagtctgt 780 840 gctcgagctt caatcaattg ctcgtggtgc cattctgagg aaaagactag aagaagatgc cgcgttgttg caacaagaga aagctgctat catcgatcta cagtcgctcg cccgggcagc 900 tgtgctacgt attcaggttg gtgatgtcct ggagcagctg gatgattgtg acgacgagat 960 cagcgaatta caagcgcata tcagagccat gattgtgcga gtcgatgtcg gtcagacatt 1020 ggctgatcta gcggctgaag aagacatcat tgcggaattc cagtcctata tcagaggcca 1080 cctagtacgg acaaggttcg aggaaaaacg tcgctactac caggagaaca tggagaaagt 1140 ggttaaggcg caaagtttca tacggggtag aatccaaggc caagcgtaca agagtcttac 1200 aagcgggaag aaccctcctg tgggaaccgt gaaaggettt gtacaccttc tcaatgacag 1260 cgaattcgat tttgatgaag aaatcgagtc cgagcgagcg cgaaagttag tggtgcagca 1320 ggttcggcag aacgagctcg ctgagcagta cattagtcaa ctggatatca agattgctct 1380 tctggtgaag aacaagatca cattagatga ggttgttaaa caccagaggc actttggtgg 1440 ccatgtaggg aatctccttt ctaacacgga gatttcctcc aaggacccgt ttgacctgaa 1500 agctctgaac aaaacttcga ggagaaagtt agagcactat caagttttct 1550

<210> 2389 <211> 1490 <212> DNA

<213> Aspergillus nidulans

<400> 2389

accttttcag tgggggatag cagagcatac atggggacgc agctcattct tattgtccat 60 ccagaccttc ccatcggctg ccagggggtg aacgaacgac gttagcagcc gataacacgg 120 ggatcgagct cgcaagagag gcgtactgcc aaataccgag tctccaaaca cgctggcaaa 180

aacctcgtgt gtaaatttcc cctttccaag tctgagaact aggggactta gggtcaaccc totttqcata qaqttqaqcc qtacqqcaac ctqqctqaac attattqcct tqacattctc 300 gcagtcgtcc gtcagcacca atctagcacc agccaggtgc aattcgacgg ttcgtccatt 360 420 ctcttcgagc acattttgcg tccattcaac aaagttatag ttcaagagct ggtagacggc 480 acggacggcg cagtcaatcc cttttgcact tagagcgtca atttgtcaat ctgggggttt 540 ggcaaatgca cgtaccgaat ggcagcctat atgacacaag agcggcggtt gtgctgagtc 600 gggtttgctt aatccttttc gaagagaaga gccaaactgc gaggacgatc gcaacggtca 660 gggacaaata gcttggtgca ggtgaatgag ccatcttcag tgctacggac aagcccatac ccgtcactac ccagggtcaa gcataagagt acgataaatt ctagctgcgt cagaaactac cacaggagaa aaaggaaggc aggataggtg tttgagtgaa gaatgtggta ttccccggac 780 ctgactatgt acttattgca ctctcagtcg ggtcccggtc taatccataa aaagatgcat 840 tgagttggcc aaacatgctt cccatggcat gatacttact gatttctaat tactaaaagt 900 aaaagaatgt gcttgttctg gtgataggag gatttgcaaa taactcttta ttttaccctc taatctgtct ctctcttttt tttttaacct ttctaataga tagttctatc cctctcccta 1020 ccctagtata ttgtcactga acgcactaat aagaacaaat ttatcagcag gcgaacagat 1080 tatatcaaac caaagagggc agatttacca acaatagtca gtaatagagg ctgctagcaa 1140 ggctggcaag ttaattaggc taaatcctag cagtggtttg cctcttgata acttccctta 1200 tegttqeett qqqcatqata actaaqqtqt ttattetact aqaaaqatqg egetactett 1260 aacagacctg aaaagtaata geeetttgte aagactettg etactaaact tggttggtta 1320 atagttgaaa acttcaggct gggacttaat cctgcttact tgtatatctt tagccttatc 1380 aggatgetgt cagacteett ttgetggeee agtteatgat ggaageeegt ggeatgtete 1440 1490 gccagtggat cgtaagttct gacggacacc tgtgaaggaa taggtctggg

<210> 2390 <211> 2086

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2390

ttgcaaagcc tcggcattga tggacatgta ggggacgcag cattaaaaga ataaatgggt 60

aaccctgggg gaggtagttg aatgatccga cccattctct cgagcggtgg gtgtacggcc 180 agaagaccag aagtgatagt aacagaggaa aggtcagaag gccggcgagt cggtaagcaa aaacgtgagg gggtcgctgg ttaacagatt gacgagtatg ataccggatc aaagcgagaa 240 300 tqtcctqtqa aqaqttaqtq qttqcttccc tqaaccctct qttqacaagt ataaggcacg aggagccaac gcacaatatt gttctgttgg agatactgaa gattggcacc ccaaccccag 360 420 aageetegaa agegttaate gaatgagtee teatggeeta gaggaagtae teacetgeta ataataagac ggccacacga gaggggaagg gaagaaagag actgaagcca tccaattgag 480 catgctgatc aggacccatt ttccattgaa aggagcggcg ccaggctcct agcacttcca 540 caggagggga actaatacga gattaagaag ccaaggtata ataagagaac cgctccgcag 600 aaagggaaga aataaagaga agagaaacgg tgagggcact caacacgcaa atgagcgact 660 aggggtgagt ctgacctgtg ggataattga atcttcagaa ggtctgggct gcacacagac 720 tctaaaggct aagaagctca gggatgctgt cgcaagcggc cagcgaggct tccggggggg 780 gtgaagcgct tgcccgcatt cggattagct gcggtctagg ccttgtgttc cgcaattaga 840 900 tgcgcatatc atcacgtggc tttccacgtg attacagccg aggcataggc ccggcgtctt atctacatat ceggggaaac atcecagget tetteceace catgatetgt etgeggatgt 960 gactgtggag tatctcctgc cggaataact aactgtcttc tccattgctg tcgaatatta 1020 ttctggtctg gaataccttt agctttcgac aatggcggac caggatettt cectetcaac 1080 cacagcacct ccggcaagac cttcggccaa attctatccc ttcgcgacct caccggacat 1140 tateegttea catgagaaag atgegtteet eaeggeeaat ttggeeaaeg aageeeagte 1200 tatcateegg acaettegag gegeeeggta egegeatace tatteagaag egateaagea 1260 tctgacggag ctcctatact tttcgctcac gacactcact ggaaaccgaa cgctaggaga 1320 agagtattgt gacctcgttc agttagaaga tgacacacta cgactaccat caattggaag 1380 acgtgtegga tatatectea geageataat ggtaceatgg acaetteage gaateettee 1440 tggcttccgg caacgtctcc gcgccaaact ggagcgcagc attgccaggc aacaattgaa 1500 ggcacagcag gcgaaggatt cgacaaaact ccgttaagaa caagtcgaac agccccttt 1560 cttacgaact acgaattcag aatacattct agagcatcta gattcgatca cttctctgtc 1620 gccaatatat gccctaagca tagcgacctt ctacttcacc ggctcatatt accatctgtc 1680

aaaacgtttc tggggactcc gctatgttt cacgaaaaaa ttagaagaga acgaacagcg 1740
cgtggggtat gaagtgttgg gagtcttact cgtcctacaa atagcagttc agagtattct 1800
tcacgtcaag aaggtcagcc acagcctgca gtcggaggac caagacgtac actccgaaac 1860
ctctggatcc agcagtaaag aagatacttt gacccgctcg atcgaacatc cagccttcct 1920
tcctgtcctc cccgtgtcta ccgcgagata tgacctctcg gaagatccga acgcaatccc 1980
ttggatttca gatggacagc aggcaagtgt acactctggc ttgagtcatt caggacccga 2040
gtgtactact tgtgncacgt gttttgctgg catgcttgtg tgactg

<210> 2391 <211> 1311

<212> DNA

<213> Aspergillus nidulans

<400> 2391

accgctccgt caggagtgac cggataagaa cattctcata gtccaacaga agcattgtta 60 cagtcacage aaagagttgt gaattaagte tgagtteett eteetetee etgeetaata 120 gacagagtga cgtttcttgg tggttggtcc gccagctcgg gggcacaacg aggcggtggg 180 240 gagtggcagg tetggteget gttgegegee gtaatatttt atggeegett tteegeaeet 300 atcgatagca gtgcaccaga ttttttctca aagcaccggc gattcaccat ggtgaaatca tatctgtgag ttctggagtt ggttatttct tatatgcaag gtatattagc tgacattaag 360 420 gccttcagaa aattcgagca ctcgaaaact ttcggggtta tcacctccgc atcgtcgaat gcgatctggg tgcgggacga tgcaatcgcc gggatttcac gtcaaacagg cgctggacgt 480 agtgtggttg gcgcaggaga ggaggttttg tgctgggata taaagaaggg cgaattgctg 540 gggagatgga aagattetge gtgeagggeg caagteactg teattaceca gageaagaeg 600 gatgaggata ttttcgccgt tgggtaaggg ctcaccaagt gcatctggat ccggagcaat 660 actgacatca cttttctctc tgatttagct acgaagatgg cagtattcga ttatgggatt 720 caaggaccga gacggtgatg atctctttca atggccacaa atccgctatt acccaactag 780 840 egttegacaa tgeeggagtt egeettgeaa gtggetegeg ggataceaat ateattettt gggatctaat ttcagaagtt ggattgttta aactgegegg geacacagae caaatcaect 900 ctcttcattt cctcgtccca acactcgagc tgttgaatga agctggattg agcgaacatg 960

ceggtttctt aatcacgacc ggaaaggacg cattgatcaa ggtttgggat ttggcatcac 1020
aacattgcat tgaaacccat attgcacagt caaacgggga atgctggagc ctgggtcttg 1080
ccccagatca gagcggctgt ataacgggcg gaaatgatgg cgagctgaag gcctggtcca 1140
tcgacgaggg tgcgatgatt gaaatctcca aagagaaaac cggttcggag aatcgcagga 1200
tcttgcctga taggggatca ttctaccgca acggaaagga tcgaacgact ggaatcagct 1260
ttcaccccg agcagactat gtggctttcc atggcatcag aaaaggccgt a 1311

<210> 2392

<211> 1157

<212> DNA

<213> Aspergillus nidulans

<400> 2392

gtgtctagta gcagagggct cctctacgca tcaatqcatt ctcgcacgaa agaaggctta 60 tctagccgag atcaacgaaa gttgcaatat cacaggtagc acaccccca tatgttccac 120 cgcttggtac gggcctcaaa ctccgccctt tgccttgtgg atcgacggtt cagaccagct 180 240 agtcgatgga cgcaaactct tgcatcgcct gtagagtggg cgtgagccgc atgtccacgt ggttcattca aaggttatca aggagtacga gcatcttgat gtcctctggg cgatggatat 300 gattgagcag gtcgcacggg aggtccggca gatcctttgg gagactatgc ctgcggatga 360 420 gagggtgttg agtgtgacac cgaggggggt ggaatgaatc acacaaggac aaattgtata 480 tgctcatttc tcttcatgta tttagctttg tacatatata cttatagata gatagaacat gacaacgatc gggatatgag tgcaagacag agaattcagt gacggattca catggaaggc 540 agttaattaa tottaagtaa taggaaagat gtottaatta aagattaato tagttataaa 600 acatgcgttg agctgatcct tccctttctt accaagtttg ctattgagat atgcagtcag 660 cacccatcaa tcqttccacc agggccqtat ttqtcttcta qttqatcact attatttata 720 tggataggca tgcatcgaat ctcageggca ctcctgtggc tcccataagc cacatattcc 780 aagggettae caaacgggtt taatataact agcacaaate cagetgeeta gteteteate 840 caataggagt cttcttcctg tctcaaatcc ctcaaatcct cccacctcag taacattaag 900 cccgacaagg atatacgaat ctttggagca aacattttca attacctcac ctaccaggct 960 cactcactaa atcacaaggc cacgggggta taaactgaaa ggtgcaacaa caggtacatc 1020

agtcagcaac cctaaccaca tttcaagtgg ccaagcatca agccgtcagg atcttcctac 1080
accagcaggc caaggctgtc atcgcagatg caaaagcaac cccaccgtaa gcctcaagga 1140
cagaagtagg atttacc 1157

<210> 2393 <211> 1461 <212> DNA

<213> Aspergillus nidulans

<400> 2393

qctqtatttt caqqqaactq qcqaaqcaaa ctttcqacaa cggaatgcgt ctgggagggg 60 ttaqaaqcta cctctagaac catggagaac atgaaagaag ttatcaattt tatcagaaag 120 180 ttctgaatct attgatcttg agattgacct caaggtgtcg tttcagccat acagacgcaa acaatagagc agactacagg aaggtctctc cgagccgaag atcaaaataa agcttacggt 240 gctgaagcct cttccggtaa aggttgcatt cggcctaaac gatatataag tcgatgtcga 300 agaagcaccc agctgttttg tgcatcgggg cttgttaagg gtaaagcaag aaaggtgcct 360 cgaaaatctc aggagtcgct ggatacaact ctgaatgaga caggctctct taggggctcg 420 agageegtaa teaacegtge tgagetegaa getgtettae tetgteegtg caeceggtag 480 atggtttatt tgcctcaggc tcttccgccg ttacgtatgc gtaagtctaa agcggcggct 540 ggaggaccgt ggggaatcat cacgatttcg ataatctaat agctcacgga agacatgtcc 600 aggtgcaaga acaggagcaa gtccaagcgt ttaaggccaa aatcctagag atcagcctaa 660 cageegacee gttecagace gttacgeate teatetteat tageeegtte caagtgtaat 720 aaacgttete tgteeceege ttagegttte teatactget gatateeeat aegteeaaag 780 gtctctttcg ttccctggcc caggtaccaa ctctgaggta tcatctgcca aagatgtcga 840 tcaagtatgt ggatgagccc cacttcatta ctcgataacc tccagactgt tcgtcctttg aacgcattcg gcgacgccat aactctggct tgcttcttat cactatcatg ctgctgatgc gateacetae tigecatiti atactacieg aetiggetag caecatieta aeggatgate 1020 tagttgggta atgctcaatg agcgcagagg ctttgttcac ctgccgaacg aacgattgct 1080 atacaccagt ccccctcgaa caggettege ettacaacca ccccetteat acactggeaa 1140 cgacaagcta tcactacgaa gcagttccgg tcaaatcttt ctcacaaacc agcgggtaat 1200

tctcctttca ttccgttcaa aaaattttt tttcttttt ctttttgc tagaatgtgc 1260
cttttgacaa tcctctaggt aatctatatt ccagcccaac gggtagatga actagaatca 1320
ttttcagccc ctctgctcaa tctgcatgat tctcacgttt cttcaccctt tttcggaccc 1380
aatgaatgga acgccgttgt tcaaccggta cctggaaacg gaaatccccc gtcgcaggtt 1440
caggtacatt taaagtactt c 1461

<210> 2394 <211> 1585 <212> DNA

<213> Aspergillus nidulans

<400> 2394

60 cgtgcgacca cggcgaccgg ttgtcttcgt gtgctgacca cggacacgga gaccccagta 120 gtgacggaga ccacggtgag agcggttctt cttgaggcgc tcgagatcct cacggtactt gctgtcgaga ccgttggaaa ggacctggta gtccttgccg tcaacgatat cgcgctgtct 180 gttcaggaac caggtgggga tcttgtactg ggtggggttc tggaggatgg tgacaatgcg 240 300 ctcgagttct tcggtggtaa gttcaccggc actatgagag aagttcgtta gatggatatc tcaaaaattg aatgcgtttg cggctgtcat ggggtagaag cgctgtgtgc gtttcttcca 360 420 agggagetge aggaaaattg cccacatacc gettgttgag gtcaacatcg geettettge 480 agaccaagtt ggagtaacgg cgaccgacac ccttgacctg ggtcaaggcg tacatgatct 540 tctccttgcc gtcaacattg gtgttgagca gacgaaggat gtactggaag ttcgtcttct 600 cgccggacac gagcgctgtg aaagaaaccc agtcagccta atttccttgc catctagtgg tgttcgatga acagatgggt gaaatccaaa tcatctcgct gtctgttctg ttctgttccc 660 gctgctattc gtgaaaaccg tcctccgaag tcaccaaatt ctatcctcag agaacaatcg 720 agcagagcga gcaaagcagt cgagtgggca aatagagcag gaaagggatt ccagatgtag 780 cacgtacaca tgatgggcga tgggcgcgaa cgggatcgcg agttgattgt cgacagcgag 840 900 aggtgtgaaa gaagaggtta aatcgagggc tctggcggct tcaactttgc tcacccgttg tgggatcgga ttaaccgagt cgggaatggt cgcttggagg gctcgcttga cgaggtgcta 960 gagcagatcg ggttagccta tcacgtgtat ccgacagtca aagtcagatt cattaatgac 1020 taaccttttt tatgtccgac ataaagtgga actgacaaca cctccggcac acgatctgac 1080

tacttccata tgaactacca atgcgcttga atgtcttgca tatttcgctg tcattcaatc 1140
tccatcttta agcattgact cactacgcat ttgcttctaa gaattcgccg agattgattt 1200
tgactgattg gaatgatact acaaacggaa tgcttaaaat agtaccccgg agtctcttac 1260
ctgcttggcc ggagacttgt gtactggttt cccagaaagt gtcctgcctt ttataggtgt 1320
ctttgccagg gcccaatatc gcggtcgatg cagtattgat acagtaatga ccaagaagcc 1380
ggccctggac aaagcatgcc acaacctctc accatgcggt gtatacctgg gacttgccat 1440
tgtccagtca tgccacagtc tctgcctaag ttgtgggaag agaactatca ggaatcgcac 1500
ttgcaacctt tctttcagtt caacaagcga ggtgcgacta caggtacaca aatgctggtt 1560
cttcggcggt ggacattctt tgtgg

<210> 2395 <211> 832 <212> DNA

<213> Aspergillus nidulans

<400> 2395

actggagctg tttaggcgag gcagctaaag aagctgctgc cttggagaaa cataaacatg 60 ttgagaacaa atttttact gctgagagca tttggactga agagaatgag gtgggtggta aatgagctgt taagtgaata acaagtgtga cacttagata ccaaagcacg tgcccagcaa 180 ccttagatct ctaataaata atagatgtgt ttatcttacg agatttgttt tttgctcgtt 240 ctctgctgta atagtgcatt gtattcctcc caataccttt atatcttgta ccagaaacga 300 ggtgttgaga gtacgtttca taacaccaca tttctacagt agccttcctg acagactaca 360 tagatgtagc taagataaag agcttatatg gctttaaaagt aacatttgat tctgcatgaa 420 480 aagctcttga tcctgcccat aggtgccgaa atctttgaag tttgccttga acatttgaaa atttgctaat agctcgaaaa aatgtcctgg gcaaggaatc ctagcataat aacagatgca 540 gcgtaatgag cacaaacatg tcacaatgtc ctgaggcact ggcagctgtt agctactata 600 taacgcgagc catttgactt catagtctac agaaggagtg tgatgcttgg ggcatcttaa 660 taagcagtgg cagatgataa acacctttac atggtaagga agatactaca gccagtgcca 720 caatcagaag ctattgatcc tctcttatgt gcatgcgatg atggagtgta aaccctcact 780 ccgaaatcga tgccttgctg ccttgataac ttaccttgcc agcatgcatg ca 832

<210> 2396 <211> 4153 <212> DNA <213> Aspergillus nidulans

<400> 2396

gcatcettgt aatetegeet teeceegtgg tettatgate ggtacegatt etcacaetee 60 taacgctggt ggttttgcta ttgctgctat tggtgttggt ggtgccgatg ccgtcgatgt 120 catggctggc cttccttggg aattgaaggc tcccaaggtc atcggtgtta ggctcactgg 180 tgagatgtcc ggctggaccg ctcccaaggg taagtatcat tatttacatc tgacccaagg 240 300 cttgagggga attgtgcact aatactctct tagatatcat cctcaaggtc gctggtctcc tgactgtcaa gggtggtact ggtgccatca ttgaatacca cggtcctggt gtcaactccc 360 tctctgccac tggtatggcc accatctgta acatgggtgc tgagattggt gccaccacct 420 480 ttctcttccc cttcaagcga cggtatgtac gactatctga aggctaccaa gcgtcagcag attggtgact ttgcccgctc ctacgccaag gacctacgcg aggatgaggg tgctgagtac 540 600 gaccagctga tcgagatcaa cctgtccgag ctcgagcccc acatcaacgg tcccttcacc cctgacttgg ctactcccat ctctcagttc aaggaggctg tcaaggccaa cggctggccc 660 720 gaggagetea aggteggttt gattggetet tgeaceaact ettettaega ggaeatgtet egtgetgett ceategeeca ggatgetete gaccaeggte tgaaggeeaa gtetatette 780 actgttactc ctggttccga gcagattcgc gctaccattg agcgtgacgg tcagctcaag 840 accettgagg agtteggtgg tgteateetg gecaaegeet geggteettg cattggaeag 900 tgggaccgca aggatgtcaa gaagggtact cccaactcca ttgtctcttc ttacaaccgt aacttcactg gtcgtaacga tgccaaccct gctactcacg ctttcgtcac ttcccccgac 1020 cttgtcgttg ctctgagcat tgctggtact ctcaacttca acccctcac cgacactctc 1080 aaggacaagg atggcaagga gttcaagctt aaggccccta ctggtgacgg tctccccagc 1140 cgtggctacg accccggccg cgacacctac caggctcctc ccaccgaccg cagcagtgtc 1200 gatgttgctg tttccccctc cagtgaccgt cttcagctcc tcgctggatt ccagccttgg 1260 gacggcaagg atgccactgg cattcctatc ctgatcaagt gccagggcaa gactactact 1320 gatcacatct ccatggctgg cccatggctc aagtaccgtg gtcaccttga caacatctct 1380

aacaacatgc tgatcggtgc cgtcaacgct gagaacggcg aggccaacaa gatcaagaac 1440 gttttcactg gcgagtatgg tgctgtcccc gccacggctc gtgactacaa ggctcgtggt 1500 gttaagtggg ttgttatcgg tgactggaac tacggtgagg gtagctctcg tgagcacgct 1560 gcccttgage ceegecaect tggeggtete gccateatea eeegcagett tgeccgtatt 1620 gtaagtetea tgegteteat teagaetaag tagtatttgg aetaacaaat atteteeage 1680 acgaaaccaa cettaagaag cagggtatge tteeceteae etteteegae eetgeegaet 1740 acgaccgcat cccccccgac gccaccgtcg acctcctctg cacggaactc gccgttgaca 1800 ageceatgae ceteegtgtt caceceaagg atggtgeete ettegaegte aageteagee 1860 acaccttcaa cgagtcccag attgagtggt tcaaggacgg ttccgccctc aacaccatgg 1920 cccgcaagtc tggcaactaa acgacatcct gtaaattatg tcttgtgctt tgatcagtta 1980 gcagcgagca agaaaaggca gtactagagc tgctaatggt ctttctatga ttgatatcac 2040 ggagtgaggt ttcgaaaaat tttatgaatc gctttctgct caggggatgt atcggcaacc 2100 tttgggegga ctacatggat atateaectg tttttgttae ategteeatt gtatgttagg 2160 gattggatgc ataccatata ctatttcgta ttaactgctt ccttcgtgac tacttcctta 2220 tactgtaaac tcttatcaat taggaagctc tcagtgggcg atgacataag atcgcgtgct 2280 ctgcggtgcc gactggccga ggccaaccct ttccgcgcct gccccgcctc ggccgtttag 2340 caatgagcat gtcagcgtaa ccgggcgtat atgatgggcc ttcctctcaa cataatggca 2400 tetecettaa aetagatetg taatttaaat eggeteatae tteggetteg aeeetgeteg 2460 gtgaggagaa atatagaatc ccgctccggg aacagtgctg accacgtatc atagctcaaa 2520 tcaaactgaa gggcattaag ctatcacgat aaatggctca tctagtccca ttacctgagg 2580 tegaaagget eagtgegteg gtggtgeggg ttetgggagg gaateeeggg aaggtgtgtt 2640 catctagcca atttttcccc tttctcttac tatggggctt tggcgtgttc ttgatattcg 2700 agttcgaagc attactattt tgattactga cagagcgaca cttgaggata gtttactcta 2760 caaggtttgt ttcacttatg tcatagcagg gagaaaccat agcaaatcta acacctgcag 2820 gaacaaacac ttatctgatc ggacaagggc ctcgtcgtat ccttattgac accggcgaag 2880 gcaagcaatc ctgggccgcg catctaaaaa aagtgctgtc ggatgaaaat gcgacagtcc 2940 accaggetet tataaegeae tggeaecaeg accatgttgg tggtatteea gaettaetea 3000

gactgtgccc tgaagtaaca atctacaagc atcagcccgg agaagggcag gtagatattc 3060 aggatgggca agtettteag gttgaaggag caacgetaag ageegeecat aegeeaggee 3120 atacagtiga tcatatggtg titgtatitg aggaagagaa tgccattitc acgggtgata 3180 gtgagtggtc atactccttg gtgatgattc ttacatccaa ggcgctgatt cggtaatata 3240 tagatgttet aggecatgga acageagtgt ttgaggacet aaagacetae etegatagee 3300 tgaagcgaat gcaaaatcgg gtctcaggtc gaggataccc cggtcatgga gcagttgtcg 3360 agaatgetae ageaaagate geagagtata taeggeaceg acageagegg gaggaegagg 3420 tgateegegt getgeggtae ggaaaactag acgteggega teaegagege teteeggage 3480 ggaagtcgtg gtggactcct ctcgagatag tgaagatcat ctacacagat gttcctgaaa 3540 acctccatct ccccgctgca aatggggtcg tacaggtgct aagcaagttg gaagccgaag 3600 ggaaggtcat tcacgatacg gactccgacc gctggaccct taacacgggc aaatcagctt 3660 tgtgatttaa catgcggatg tccgtacagt ctctgcttat cgctgggata tagtcaggca 3720 gattggatag gtgcccaagt ggtaaccttg gcataatcat gcaaatccca cctagaagcc 3780 aagegettgg actagaaaga cagaagtttt ctgggcactg ggcgccettt tttctttttt 3840 gacaagggtt ggaaateetg geaaaaaggt tagggaatat tteeatgaac aaceeeggge 3900 cgggggtttt gcgccccaac ttaatggttg gtcaaggccc cacgactttt tttgatttaa 3960 tggtaccgga ccaatttgtt cctccccggt tggggattcg aataactaaa aattctggag 4020 gcctgggtgc cacaaaaaaa ggtgggctaa caccctttct tattttgttt aaaggcttta 4080 gaaagctgga attatttttt cgtcaaacaa gaaaagaatt tgcccttggg cctccccccc 4140 cccaaaaata aaa 4153

<210> 2397 <211> 706 <212> DNA

<213> Aspergillus nidulans

<400> 2397

ctttggacta attgtccgac ttgcggccag gcgccggggt cgcagtctca ccccgcagaa 60
cccacgcggc gccgggtgaa ggagttggaa ggccaggtac agtttctgaa tgagcaggct 120
gcgaaaatgt gtaagtttgc ttctatctgg atcaagatta ccgcgggaac ctgctccgct 180

aactcttatg tttacagcag agaaactgct cgaatacgaa gcggaattac gacgactccg 300 tgcgcaaagc ccaaaccaag gccagaacca gccgtctagc ttcacctcgc gaaacggctt 360 ctegatateg tetaceteaa ceteetegea etegeegteg aactegeagt eteaateace 420 cctgcaagtc cagcagaccc agagccggct ctcatccctt gcctcgctcc tcccctaccg 480 cogtoccago acagogtoot occagoogca qtogcagtoa caaccacogg catogcoggg agegeaacaa tgccagetgg etccgttcac tcaatccccg cetccgetet cacaaccgcg 540 600 caccgacact ccaacaccac gecetectt tgaagaaacc etegagette agaacgeget 660 gaaccgcqaq caqaqcctcc gcaaggcaqc aqaqaccaac ttacgcaggc aagcaccgag 706 ctggaagaat tgacggcgca cgtgtttagc caggcgaatg aaatgg

<210> 2398 <211> 2001 <212> DNA

212

<213> Aspergillus nidulans

<400> 2398

60 gctattgcgc tgctggagta gcaaactctc cggtccatat cgttcgtcag tgtcgtttgg ctcataaaag tctccatttg ttgctggtaa tgttgaggat gggtgcgagt tatcaagggg 120 180 cccagcggct ggtccggtga gacgttgctc aactgacctg tgattattag acgatgcttg 240 ttagaatctg aattccctct tacattctga aagtagctag aaccgttgaa taacagcact 300 gcagtatcag atacgaacga gtctaatgat acggtaggta gtctgatcga ctgagcagca 360 gcagcataaa aactagcaca tggcttcatg acgctgccat cggcaagtca accccaaaaa tgcctcacaa gagatggaca gacaaagatg agtgatgagg tggttcatat ttctgaattc 420 tctttctttc aatggeggte atteceegea ecaaagegeg eggetgateg tgaetaggat 480 cagaccgctg cccaccttga gtatgggctc aggccttaga atagtcagtt tctttggtgt 540 cttgagccta cgcataaacg caacgtagtt tgtgacggtt aatggatcga tttcttgagg 600 tttgaactta gaagatagca gcagtettge ggegetgeaa gegeaagetg tgeeteeetg 660 tegeegtgee etetgtggea tatgetgtee agttetgace etgteagact ggattaactg 720 gatataattt tgttatgaac aagtgtctac tcattcaggc cagagggtgt acatcgcgaa 780 ataccactet acetteatgt cateacatat atetagetga tatactetga ttgtgtteta 840 tacagacaga gctttaacga ggtcacaaaa gacgacgcgt gaaggaggta gaacaaaagg aggtgtatcg ccaaaaacac ttgccagccc aatgcttcct gaatttggcg cattaacctc 960 cgaatgctgt ggtttcccag ataattggcg cccaaacaaa ccctcccatc caaagtcggc 1020 gatctcaatc aagctgtcca tgcgattgac ctccaaggcc ttgcttgtac aaccaatttg 1080 ttgtacatgg gccccagcat ccacaataat ataattggct gaatgcgagt ttgaaagcaa 1140 ggccacgggc tctttggcga gtttttggcg ggaaagcagt ctcacagtgt ctatgtcaaa 1200 tatctgtacc ataaacccag acttgcgaga ctttcttgaa gtagtcttct tctgcgttcg 1260 tgaagccgta gcgaacgtcc gcgttctgga attcacagct agcagctggc gactgtgttg 1320 catgtctgga gactctattg tccttacagc atcattgact gtatcccata tgaacagcga 1380 acgactagta gcaacaatca gatggcagcc cagaaaagca gccgcgcaaa tgtcgccagt 1440 ataaagtcca accttgctac atctgacact gcaacttcgt acatcgacaa ggagagtgag 1500 gctaggattt gtggacgttg gccgcagaga caccgcgagg actgatccat cctcagagaa 1560 gcagactgag gcagacctca agagacagtc agcaggcaga taacctttca aatcgagcgt 1620 atttcgacac ttccaggtct ccgcaggctt ttttggaaga ctaacatgac gccaaagacg 1680 cagcagtcca tctgatccag tagtcgcaaa ctcgtgactg tctggtcgtg aagcaatatt 1740 gagaacagtc gcgggttcac ctgtgggttg atgtggactg tcaatgcggg tgactaattg 1800 ccaaagtaag gatggctcat cccagcgcca gaatttcagg taaacctcat gcatttggtt 1860 cgttgttatg tcgagagcct caacatcttc gggattagga ctccagctat cgatagtagc 1920 catccatttc ccatcttcaa aaatgctgag atgctttatg tcaggagtga ggatatggga 1980 2001 cccatcggga cccgatgtca t

<210> 2399 <211> 3149

<212> DNA

<213> Aspergillus nidulans

<400> 2399

tatctgctgt acaaattccg cctttataac cttgccttcg acatctgtca gctctcatcg 60 ccggcagagc acgcaaaagt atctgcacta gatacaagaa ttgtcaatga gcagcagtcc 120 cattttgttc gatttgctgc gcgacctatc acagatttag acccgtacca tcaagcccac 180

tactacatcc tegcaaacta caccaaccat etcaegetee teeteeateg acegtacatt 300 tcaacggcca attttagtac gcctttttcc caaagccccg agcgatgcga gcacgctgcg acgactatcc tctctaactt cgaaagactc gcctccgacc ccctcttcca gagctaccgg 360 tggtatgttg acggtttggg ctcattctac gctttcttct cgatcacgac gctgctaatc 420 cttcacggaa acgggcaact ggatatacag tccggctctc taatattgaa cctagttcgc 480 cgttgtgtgg atatccttat gcacagagca ccgagaagct cggtttgctc aaaagctgct gcaattettg agecgattge geagegtetg gateegetgg gaettagaae tggeeagget 600 660 aatgctgagc aaatgagtcc ggttattgag gaagagacga ttctctctgc gtttccagag 720 cttggagggc tgttctttga cgtcccgtgc gagcaatggc tgactccggc ggggttccct tgggtagcgt cttgagcttt ggcgggcccg accctgtata ctgatcacgc tggactcagc 780 840 tacaatcggt gctggacggc cgggtactac tgcaacagga cggtgtctca gcaaaaagca cacggtttca caggcgagct aagaccttgg aggaagctta ccacaaatct tactataact 900 tgatttacga cctttgtcat cacttgttct aacttatccg gtcttcaaat gttcagctcg gcaccgtagt gttctagtaa catcttcaac acagctccca accaccacgg catcagggta 1020 gagtctaaat cacaaatatc cccattatag gagcatgtga ttctccaaat caccaaagag 1080 acacctcaca ctcgcagcga ctccaatgaa aggctatcaa cttatgctct ggtcacttcc 1140 gccacgagcg cccagtacac ggctttcaca acctgacgtg gcgcagctac gcactgtctt 1200 cggctgaacg ctggccgtcg acgagaaacg tcaaagtgaa tgtttttaag ctggatattc 1260 ttaagaggca ttatttgacg aaatttcctc gaggagtagg agatgccatg atatgttatg 1320 tatgatatag gctaaggcaa ggctgctaag agggtgatct tgtatacatc gctgttttca 1380 gtaacgagga tactaagcaa tccactcaac gatccccttt caccctttct tcttcccctc 1440 tccgtcgcca aggtcattga ttgtatatgt atccgtaacc agatcgacct ccctcgagtt 1500 cacaaacgtc gtcctcttcc agaccttcca aacgataaac atgcccagca taatcggcaa 1560 ctcgagataa aagctcacga aactaacacc gtcaaatgtc gggctaaaac agctccaccc 1620 ctgtacaagc acgatgacta tattcaggat cacgcagacc cagggaccta ccgggtacgt 1680 gaagttgcga aacggcagca ggtgtgtctt gttttgctgt ttcagtgcgg cgcggaacct 1740 gatgctggtt ataccgatag agatccatga gagttgattg gagacgccga cgatgctgag 1800 gcagtggttt gtcagtatac cttgtgtagc atgaatgcga gggaatggga gcgtacttct 1860 gcaaccaagt ccagagctgc ccagctccga tcttactcga gccaaagcat agcccactca 1920 cggccccggt agctagaaca gcaatccatg gcacatggtt ccgattcagc ttcccaaaga 1980 agcccggcgc gtgcccagca acagagagtg tgtacagaag ccggacgccc gcgaagagcg 2040 cgtggttacc ggcagacaaa acagaagtga ggatcacggc gttcatgacg ctcccggcgg 2100 cetttgtgcc cgtcatttcg aagacgagcg tgaagggaga cgttttaacc gtgccgtcgt 2160 tgagcgaggg atagttgtgg ggaatgttga ggccgatgat cagggaggag aggatgctat 2220 tgtccatcag taaagcggca gaagacgatt aaagtgcgtg aaaaagacag actagaatat 2280 gagaatccgc cagaagacat tgagaacgac ttttggaata gtccgcgctg ggtccttggt 2340 ttctcctgcg gtgatggcga tggattctgt gccgccgtct aacaatctcg acttagcagc 2400 gatcctttag aaaaaggaac ggaaactctc acaggcaaac gctgccgtta caaagacaga 2460 agcgaacccc ccgatccctc caacgaacgg cgcatctgga atatgccaat tctcgccgcc 2520 gatatagegg ceagattegt tteegeegea gttgaceaeg atteetaaga egatgaagae 2580 ctatttccgc aatcaacact tgccgattct gctagatcag aggacaacgc ccactaacga 2640 tgatagtgat caccttgagc acgctcatcc agtactcaac ctgagggaaa caggattagc 2700 ggagggaaga tccgtggcgg gtggacaacg catacctcgc cataaacttt tacggcgaac 2760 aagttcagcc caatcagcac agcccagaag atcagactga acgcccagcc ggggaagttg 2820 tecgattegg tecagtactg cageacaate tgeagegeaa ecaaategga egeegtagat 2880 accgcgtcgt tgaaccagta gttccacgtt aaggcgaatc caaacgcatc atccacaaag 2940 cgactagttg catgttagcc cagtcccaga ttcagattca atgttcagct cgaaacgaag 3000 ttggttagga gccgtaagac atagggctgg ctcacccggc aaaagtacag aaactcccag 3060 cgacaggtat aaacgccgcc atttcaccaa gactcagcat cgtcagaaag acgattccgc 3120 3149 cagagatcgc gtatgcgatg agcatcgac

<210> 2400 <211> 2020

<212> DNA

<213> Aspergillus nidulans

<400> 2400

gactggaaac aagaccagca cgatcgatta tcatttgcga tctcagcggg ctggccactc 60 tectgegeag gagetategg caaccegttt geaegeetag teaaagtgge tgagtegtte 180 aatcgacctc acattgactt ataggcacag ttgcccaatg gcggtgtttt gggccattgg acgtgcctgg gacctggttt gggggccgtt cagttctagc agaacctgag gggttcgtca 240 300 tgaattgtgc acgagtacta gatcagaaga ggcaaggctc aaggcgtccg acgtctgagc acagggctaa gtcgctgcga ggagatagag tccgcccaag attgcttgtt ccgcatttcg 360 420 gagagtggag ccggctctgg cctaatgacc ataccactat acatcactat gttcacagtg gtctctctct acctctcgtg ttcccaggta cgccaacctg gccgaagcat gaacttcagc 480 gaaacgaaaa aggtcaattt cttgggtcag ccagttgttt atctggagtc aaaatactca 600 gtctcaatct tcaattagct tatcatgaac taaatatggg tgactaggaa ttgagacaaa tcttacgccg aggccacatg tattgcgacc aagaaaggtc gatgtcttgg ttcagcccta 660 catgggcgaa cccagtggcg caaatgctgg tcttgctagt gcatgaataa gaggctttgt tagtgagagc tgacgcaatg tgtctgagct taattcagaa ggtagatgtg ggactatatg 780 gtattcggac aacaacaaac gcaagatcca cagaacgaac gcatctgact cgagcaatca 840 gcatggtata agtaatcaac atagaaagaa gatgtgcaaa tcagaacgca gtatacacaa 900 tcatgaacat agcaggaacc atttgccggc ataatcaatt gaggatatgt ggtatggaca cgcagacaaa cgcaacgctg tttggacttt aaagagagaa acaaacgatc aagaataaca 1020 gaacçcaagc tagctggctt taccaagcat tgcggtccca gttcggatct atgccaacgt 1080 cagtcaaact gctcttctac ctgatggccc cggaacggag tgagatgcaa ctaaccttgt 1140 ataaaactag caagcacctt gctccctgtc tgcagaagcg ggtgtccagc gacaatctgc 1200 agaaaccgct gcagaccttc tcgacggtgc tcaatcacat catcgctgaa ccggtttgtg 1260 aacacctttc ctgggagcgg gggaatcgtg actcttgtgc tctcgcgctc tagtatgtcg 1320 cggaagtatt caaagtccga gtagcggcgg cgcacgaccg agtgtttcag cttgaaggct 1380 gggatgttgg tgcggcagac gatttcatac aaggtgtaca tgttgcgcga cgtgccatgg 1440 gtttgggggt tccggacctg tgggtttcca gagcgttagc tgagtctttg tataaatttc 1500 caagaccaat tgcgatatgg cgtcggaata ggtgtctgtt tgaggagttg atgagagcat 1560 gaagggagag cacgtggggt agagtatgcc agaataaagt tatacctcta tctcaaggaa 1620 attetegga ggteegtaga teteetegaa ggtttgetgt egegaeteag ggaeageetg 1680 cattttgagg aatttteget tgegaggttg gtegttacag ageeggggga geetgggagg 1740 tgggggggta tegeggggaa gtegggettg tetgtgetea ggaatgeagt ageggagttg 1800 atatatgatt gttggagee tgaaaegaet gtatgtggae taaaetegaa teteegtaat 1860 atatagtegg gaagetgaga aageeggttt getegtaggg acaaagtage gggettaege 1920 gggtaggagt tgeagtggge eactetegae tgtegaeaga aagaegegta ttaagttgeg 1980 ateaatacag aacaeegta gaetteattt ateatgaggt 2020

<210> 2401 <211> 3198 <212> DNA

<213> Aspergillus nidulans

<400> 2401

gtcttctggc catcgttgtg attgtgcttg tcatcccaca cttcttccac tgtctcggtg 60 tctatctcgg gcctctcgca atcagacggt acgggtatcg gactgtggac gagcgccatg 180 agccgattct taagctgacg cgagatcgcg aacacagcag atgatgcggg tggcacggcg 240 catcataaga gtgcagtcaa agggaggggc acgtagaaag gagttttccc taggatccgg 300 gggtctgagt agagaaagcc atcaaagggg cactgttggg aagtcaactc ttcacttgac 360 agttgatgca agcaccgaga gggatatcgc ttgtcggaca actcagaaaa gcagtgaatg 420 aggcacaaaa cactggcgtt gcccagtgct tatcatgtga taggtcacca cgaattgctt 480 tctctttgct ttttactaga ctgttctact agaatattgt cagcctttat ctagattttt tgtagtctat tcagcaaatc acacactttt aatcatataa ctattagtga ctgcactgta 600 ggagtaattg tgcccattta gcagccgaat gctcaagttt tccctcagtc cgaacctgag 660 ataagaatcg aattttcagg ccaacagtcc agggccaatc tagtgcctgt ctattgaatc 720 ccccactgta tatccccttg caatgccctt gcgcccttgc acaaccaggg tactgtcatt 780 ctcctcgtca tcatactcaa cattcgccgc actattgaaa tcgctcccca gccccgtcca 840 cgtccgctga gatcgcaaga attccgcccc tggcgagaaa gtgttgccga ccatagccag 900 gtcgcctttt gcccttcgag caagcgctcg tgctgcagac ggcccatcag ccgcacctgt 960 ctgcgcagat attgctgcag tggcgccttg ggaagcggag acgcggggcg cggaatcgcg 1020 catcggtcgc gagtaggaga cgtaccgacc ggtgcggagg tcgaactctg gtggtgcaga 1080 ttcgggttcc gacatagcat cctcgtcctc gtccctggca tgatccccga attcgggtcc 1140 ctcgtttgcc ttctggctgt ttccagggga attggaactt ggtggtggct ggtcaaggat 1200 gctctggaag tcgctctgcc aggcccctgt ccagacccgc tcctcgtccc ccttgagtgc 1260 aacttccaac tcaaacgggg tgatgacggg tttccagaaa tccttgctgt cgactagcga 1320 actttcccag cacccgatga caacccaacc accaatctcg ctgaagttgg ctaccttggc 1380 tgcgttcaac ttgcccacga cgaacatgta acttttcttc cctgcagctg cgatcttgtc 1440 tctgacatga tccacgatat ggaggtagtt ctttacgctc agtgtgttga ccaaaattcc 1500 gaaaataggc accgtgctta accgtgtcaa gatagcgtag cgacgacgca ggaccatcgc 1560 agtcgatgcg ggtagaggct ttacgtctgt gccagccggc ccatcagtag ggtagatgtg 1620 gattgctgcc acgcgagatg ctagcgtcag aagcagcgct gtaggcggtt cggagatgtg 1680 gaagagctgc caattcccta gcgactctgg agcctctttg accgagtctg gaacggtgcg 1740 gttaggtatg acagacgacg gatcgtgaac caacgccgtg gcaaacagac tgctgtaccc 1800 ctcctgcacc agccgcgagt atacttccgg gatatggtca gagtaggtta catcggcagc 1860 gaggatcacc tttgtttctg ggtccgggta ggtctctttg aacgccttga gaactgggtc 1920 gagaggcaac teettgtgeg tgaaaaegta gatgaetgga agtetageag teggggatag 1980 gcatgaacgt ccgtagtgca cgacaacgtc cgcgtcgaca tgttctgccg cgacctcgtc 2040 aacacagcaa gtcccgtaag atgtgtcggc cagaatatag agcttcggtg accactcgtc 2100 cgcatcttta aggtcaaggc gagacgcgaa tccactaagc ggcgggtagg ctcagtctcg 2160 gtgtttgcct tcggaacccc atcccacaat atcccgtgcc tccaggcccc gactcagcag 2220 ctgaaacacc cttggtgcat ctggaagcat ctcatccgga aactgaagcg caatccgctt 2280 gtaccgcgcc tggcggattt ccttcaacgt gcgttcgatg tcatacgtga tggcgagttc 2340 ctcttccgag agaatgcggt tggtttgtgg tacaaccggg tcggtctctt cgaggatgcg 2400 atcatctggg gttgagagaa cgggcgccgc cgctaattct gtggtcattt tgactgtcaa 2460 tctagagagg cgttgatcgt gttgtgagaa ggggcagttg tgggatgatt atttttctg 2520 cgagcaaact ccgtatcccc acctaccccg cggccaatta ctgaggggcc atttaagcaa 2580 gcaacaactc gtgaaatgcg atgaactgct gacctatgta gacttctaaa tttacgggtt 2640 tatatcaact tatgtacagg cataaccagc tctacaaatc agctttcgct ggctctccgg 2700 cccacactcg tcgaatcaat tcccgaatgg gctcgcgctc gatctccetc gggttccaat 2760 aaggattgcc aacagcaata tcagccgct tatcgatatc ctcctccttc ataccaaagg 2820 ccttaacacc acgcttaacc ttcagcttag tgagcaagac attcaagccc tggatcgcat 2880 cgccgttgct ctcaggcagc acctcagcca acttcttcat cgcctcaggg atcttcggcg 2940 cattgtatga tatcgcatgc ggcaagacgg ccgtgtgct ctccgcatgc ggaaggttga 3000 agctaccgcc aagggtggg cagagctgt ggtggataga catgcccacg ctgcccaggc 3060 aggttccgca gagccaggcg ccgtagagg cgagcgagcg agcggattgg gaggagggt 3120 tctcgacaat ctcgggtagg gctgaggcca gcgcgagt gccttcgaca gccataaggt 3180 tgattacggg gttggtt

<210> 2402 <211> 1282 <212> DNA

<213> Aspergillus nidulans

<400> 2402

60 ctattccaat ttgtactagg gcgtccggag ctctatacgc agggcgtcac ggcgatgaac tattttaccc agttacgcga ggataagcgt cctgattctg tagaaacaga agtccagtat 120 agtccactgt gctctcttta gattcagcat cgataacaag gtctcgttat ttcatgtata 180 ctttcacagt tctcaatcgt gcctcaacaa tgcctgctcc ccacttgatt agtggaagca 240 cgtgatttcg cggctccttt tttgtttctt tcgtgcgctt caattttctc ctcgcttttt 300 ctcaaacatc gttttgtcct cggaccaggc agccaccaca aatgggttgc aggactctac 360 420 aaaggcgcca atcactaagc ctgcctacgt gatgatagcg gggccatcta tactgcgcag caagetacae taaaategge eetgataeta ggeetegaeg agtageeagt acaatggagt 480 540 ctctggagga aacacagtgg gatgtgacca tctccggcac tggggttgcc cagtcacttc tagctttgta tgtttattcc ctgacttcat gctgctcctt attctaatat ataagcagag 600 ccctttctcg gtcaggtaaa aaggtcctcc atgttgataa gaatccttat tacggaggtt 660 cagaagccgc gctgagtctt caggaagctg tagagtgggc ttcagaagta aataaaggtg 720 ggaacacagt tggccggtga ttccgaacct ccccgctgac tcatgttcct ccaaggtaga 780
gaccgcttgt cttccttttg aggacgccac ggtgcttact ccgggctctt ctgagtctgg 840
atctgatcta gcaccttcca gggcctatac gctgtccttg tcaccgcaac tcatctactc 900
caggtcccaa ctattgccaa ccttggtatc atccaaggtc taccggcagc ttgaatttca 960
ggcagttggg agctggtgga tatataaatc agccactggc ggagacaagg aactatacag 1020
ggttccaagc agtcgtgagg atgttttcgc tgatgacttc ataagtatga aatccaagag 1080
aaccctcatg aggtttcttc gtcacctgag tcagaacgct gcgactcaag aggcatcagg 1140
tgaactgagt tcaaagcttg aggaggaaga ttcagccaag cctcttccag aataccttac 1200
cgccaagttc cacgtcccac ctgagctcta taaccctctt ctatcactt ctctgtcgca 1260
ggcgcctgct cagagcacca tg

<210> 2403 <211> 1226 <212> DNA

<213> Aspergillus nidulans

<400> 2403

tgattttccg acagtgagca agagggcgaa gattgctcgg gaggcgagag acgcgagagc 60 aagggcaaaa ttgtcggaga ttgcagtcta gcttacttag cgagtatgcc tatgctagtc 120 tatgaaagaa gctcaaggat tggttttagt ataaaaacat acgttggtgg tcggtgaacc 180 tagatatata tacataacag acccaaatac tgactgette atetgecaeg aaataggaag 240 tcaagtataa agataaaaga aaagaaataa agggatgatc gcgctgtata attggcaaaa 300 aaattettgt taactcacce tgtaacaaag cgtatgtata teatttaaca agaaaggaaa 360 aaggccgtct taatttctaa tgaacagttg aagattgaaa gggactagta gtaaggagct 420 gatcatcgaa gagctgcaag acttcctggc ccaggttact gaatctcttc agattccgca 480 tggcctcggt gatatcctga agttgcttcg taaagacgtc tccaggcttg tgatacagga 540 tcaagaactc gacacagagc gaaagaggaa tgggcgttag agggtgcacc tggagataac 600 aaagcacaga ttaagacgag gactgggaac tatatatgta acgcattggg tgcacttacc 660 ttcaacgagt tcaaatgcga taatttgttt gtcaagtcca caatttcctg cgcggctgcg 720 gatgatcgct tcttatattc cgtgacaaga tccctcttct cgtcgtgtga cgggattaca

caagccattg tctggtaaag gtgtagaatg attgtccgcc acatgagact aataaagagg agcatgggat cggtctgctg ctgcatgtct aaggggtatt tcgctgagaa ggcctccatg 900 cgttgtgtta ggatggcgtt gatccattga tggcgattcc aaaaatcatc gacggcactg aaatataaat ccccagctag acactggttt cgatgggaca gcgcccggcc gctgatcgtt 1020 gcaacgacga tgcactctgt gaaagtggat gtgatggaag tgtcaqcqqc qaqqqcqtcq 1080 gaaagaaatc ccatcaaaat gggctggtca ttttgaaagt tggcttcagg acaaggaagc 1140 cggatcgcta cctgtggcta gctatcagca agacgttaga tccaattact agggaagaca 1200 ggcataccct ctcgctgaaa gttggc 1226 <210> 2404 <211> 1044

<212> DNA <213> Aspergillus nidulans

<400> 2404

gacaccgaag ggcatactgc gtttcatgcg tgtcatttga ctgtatgaag gaaactgatg 60 taaactgatg tggctcgtac gcctgtactt aatttagtta ggattaccat ctgctatacg ctactcgtac cgtagtccaa tcctgctgcc tggtggctgt gcatttccac ttccaaqtct tcactccctg cggccagcgg ctctgtccgc aagtgcaggc ctggtagtct aacggagcca gaaaccacgg gcaatttcaa ggtacatcgc tcgctcttct cggacagctg gcaaggtttq 300 getegetege titecegeaa taggtgtgtg catggatgee eggtettget gteegatate 360 gctggcctga ggcctttcca taccaactgc ctccgccttt tcaggggtgt cagattgcct gccaagattc aaccgcttga ggcccgggag ccgcagggta gggtcaaagt tgatgaggac 480 aatcgcttgg tcagtggaat tgcgatcatc ctggttgaca gaatatacaa ttgaacqatc 540 gtcagcatag gcgtgaacct ggccggtccg tttcgaagga cagagtaagt ggttcagctc 600 ttgtggagcg tcatccgggg gccagagatg gatgcctcga gtttcaaagc gctcttcgct 660 gttctctact aagcgtccgt ctggttcgct gagttcacgc ttgaacagga gccccqqttt 720 ctcctcaaga ccttcctcgt cgatgggaca ctttcgcttc cgagatacca cgcgtaccct 780 tattcgatcc cgaggtacaa ggccgccgcc gccaacgctt ctggggagcg ggtcatttac 840 gaggtcaata tagctggatg cggagatatt gtatgaacgg aatttcgttt tggctagtat 900

gaaatcgcgc ctcggtttcg gttcaacacc tccgtcgtac tctgagtgat agtgtctgcg 960 gagtcgtttc cgtggaggct catagttagg cttggatgac gggtcctaga gttttggtga 1020 ggggctcgtc aggtagaggc gttt 1044

<210> 2405 <211> 2220 <212> DNA

<213> Aspergillus nidulans

<400> 2405

60 atggaggaaa agagagataa tgcggaggca cacgccccgt actgtcaaca aatgcaagtt ctggatgacg gggcatatac gacagtttcc cccaaaacta ttggaattag cgtgaacgaa 120 ccaacagega caacaacaac agggcaatat ggaagcacta etcaaaegge aaaggegeaa 180 240 tatcaaagca tttgttattg tgtttcattg accgactagt ctggcttgtc cgaaataaac 300 atcaaccaac aacggettat atcgtggcgt cggcgttatc aaggcatact tacctatgag 360 cgatggcctc ttctcgtgtg gtctacatga tttctctttc ggcgtgatgg ttttgttcct 420 tgtccattaa gaatggcatg tattttgtct gattgactac tacctttgtt ttggcttttc 480 agtttatgat atcacttgtt ttcatccttg tgacgctctg ccatgcctcg gttggatctc 540 gactctcgtt tactgttatt tgtctagtta cgcgtacggc gttcagtggt atatcacggt gcatatggtc ctcggattcc gcccagtcgc ttcttatttc tgctcgactt tggatcttac 600 cacatcattt cgatagctat gtgcccggtg tgaatgatgt ccttgggcat gaagacaacc 660 ctatgttcag acatcttgag aaatcaatac aattactgat gtacattctg ggaaaatatc 720 780 actecqtqac aqaacqacct aaactaqtaq cttctcactq cttcgtaaat ttagatqtct ccctcgcctt aggagcgaag atccggaagt atgacggcca acaacgtcat atgctcgtcg 840 900 acaaccaacc atacttttat gcacgccttc atataaattg gacgaggttt atccgtcgtc tccaaacttt ttgatttagt cacatacccg cgtatatctt gattcaaaaa cataagcatt gccagccatg acctccctcc tccgctacag ccgctcaatc agagccgtca accctaggac 1020 ctcccgattc cctgtcttcc ttcaacaacg attctacggg cagagcacct acggagatgg 1080 tgaaacaaac cctggagaag acaggaacgc accgacccgt gacatggagc atccaggtgc 1140 gtgcaatttg tcagctctgc cacccactgc taacacttac taggagcacc acccccaaac 1200 gtcagcaaag agaactccac caagtcccaa ccttcataca agcaggacga atccaggagc 1260 ggcgtgctcg aagaggatat tccaaagaaa cagtccgaca aggctagacc ggtcatcaat 1320 gatggccgtc agacatcgaa tgtgaaagaa gacggaaaca cgaagtctga cgtgcccgag 1380 gatgtgaaaa agcataatga agagattgat cagaggcacg acaagcctta taatcgaatt 1440 gacgatgggg gaaaggttgg gaagggattc tgggggaagc tggatggggc agagggttat 1500 taatccagta tatgtgtcct cacttctatc atgatcgccg gttttaaaat cgatagaagt 1560 cggcttatct tgtattatat tatatgttaa gatgaatata aaatgagaat ataaagcgat 1620 tgacttttta aatgcgtaga ttgctgtagg ttgactgcag gaatcgcgaa ccagccagat 1680 ttaccetgaa getetttage gaccaetgeg gatetetegt gtettgaage aacgtaacce 1740 cgacttgagc tetegateaa eteegtetee aegttetgea attgegtege ategeaaaac 1800 aaatcagtca ctcatttaaa attctggact tcaaaatggc caaggacaat aaatactccg 1860 tcatccttcc gacctacaat gaacggagga acctccctat catatgttgg ctcctggaac 1920 ggacatttcg cgagaagtga gcggcgtcca tacccataca gttactgatc aaatgaatca 1980 aacagtttga aaaaggaggg gaaaaaaaag ctaatatgtt gttaaacagc aagctggact 2040 gggaagtaat catcgtcgac gactgctccc cggacggtac gctcgacgtc gccaaacagc 2100 tccagaatgt ctggggcgcc gaccatatcg tcttaaaacc tagcgctgga aagctcggcc 2160 teggaactga etaegtgeae aggetgetet taacaacegg acacettatg atcateatga 2220

<210> 2406 <211> 1027

<212> DNA

<213> Aspergillus nidulans

<400> 2406

gactgcgtgc aggctcttct agcaaagaaa ggaagttatg aagatgctct agaatgccta 60 gccagcaccg aggatcaaaa tggccatgct gactcttcag aggatgagct aagcacgatt 120 aagaagacgt cgccagtggc cccagcgaag caaaatatca aggcccgggg gagaatccag 180 gataaatgga cggcaccaaa cctgccgaaa agtacattac aaaagcagcc agaagaggat 240 tcaagaccgc ggaaacggtt gattcgagga ccaaaaaaccc gggtgtcccc gataccgtca 300 agccccactc agaacgaac acctccaaag aagagcttcg gtcggctggt ccaagggcgc 360

aggcgccctt cacctacacg atcagagtct cctgaggctc ctcttgtgac ctccgatgat tetgactetg catttgatge geaagatgge geggatetgg agacgaaagt tettggttte 480 tttaacggat gcaccgcacc ggctcttgcg gacctagccg cgattactga ggaccttgct 540 gagtacataa ttgcaaggcg gccattctca tcccttgatg aagtccgcgt gattcctgct 600 ccggaaaccg aacaaactgc aaccaagact ggaaggaaac gcaaggcacc caagccggtc ggagaccgta tcgttgacaa atgtcttgat atgtgggtag gctacgaagc cgtggattcg 720 ttagtcgctc gatgcgaggc gctaggaaag ccggttgcga ccgagatgaa gaaatgggga 780 gttgacatat ttggcaagcg agagggtgaa ctggacctag tttcgatgga gccttcagga 840 tctcacgact ctggtatagg aactcccgct agtcaaccat ctgatgaaga tagtgatggt 900 cctgggtcaa ggtctcgaaa agctcggttc atttcgcagc ctggaataat ggctgaggat ctcaaaatga agaattatca gattgttggt attaactggc tgtctttgct ttttgagaat 1020 gaactaa 1027

<210> 2407 <211> 3180 <212> DNA

<213> Aspergillus nidulans

<400> 2407

gctccacact tgtgctatcc tggtcactga agaagcaaaa atttgctgga caqctqtcat 60 gatgtagatg gccaaagcta cggccatgta attggtttag ttcttcgttg ccagcttgtc 120 gtaaaaggat aggtatgtct ttaacgtagc ctgtagcaac tgacaggttc cagagacgat 180 tttcgcaaat ccccagagaa cgcgctgtcc ccaaggcctc gaagactgcg ttgtcaggta aatttctcct tatatcgata ctctgcacct ggtcgacctg tgcaagccag ctgagaacat 300 catagatttc tgattctagt tcggtcaaag gttcctttct tgactggagg gcaaagttag 360 taaagttgag tgccatcgta attgctgtgg agttgtcgct ctttgttttg gatggtgcca 420 atcgacaagt gagtattgtg agagcccatt cccggaagct cgcccagtta cacgtagggg 480 cgtttttcgc cttagccttc atagcataac aatcttcgtt tgagcacctc ttgacattag 540 cgtcgagaca aacccgttgc aacccctcca agaatgggcc agtgggccac ctgtatgtaa 600 gtgcctccga tccgaacgca aacaagagcc caggctcagg tgtggtcgta tgtgactcgt 660

tcttagccag actatcacgt tgcgaaagaa cattactgag accttcccac tggtcagctc taaagtgtga aacatttaaa ttacaggctt attttacctt tacaatcgtt agtggcagtg 780 agetgaattg tteteegtga aacacageaa egactetgtt aagteeagag agtgtgteea 840 gttggacatt gcgatatttg tcacactttg gttgtgaaat attctataga agtggatatc 900 ctgaacatag atcaaaagat tttcatatca gatataccgt tgacaatgag cacggtattt 960 gaggggccag aggatgcgtg cccaacaagt gaggcgaaag cagccaatcc gaaagcgctg 1020 tgtttattct caagatatac gaaattatcc catctagatc agacgtgtgt cccaaacttt 1080 tgaaaggtga tatctcttgt ctgctactgt gctcaccggt tggttatcct catactcacc 1140 gaccgggagc caatcatgat ggagccttca aaggttattt catattggat acaggctggt 1200 caggettata ggetgeacet tgatatetta etaatgagta gagteeaaga acaettaeta 1260 tctatgtcgt ttgggtcact gtttgcagcc tgtaaagccg ttgctaggtc atcattcccg 1320 gttaggaaca tggtccacgt aactgaaaga ctggatgata aggccaagtc gtcaatccgg 1380 tettaaatte cacaatatae aatgetaett gacatgaaat gttteaegae aategagtet 1440 tcaaccgact ttgtggaaga aaaatctcga gaaacacgag ccctttattt gagcttttca 1500 ccagtcttcc ccatggtctc aataagtcgt ccccgaatat gctccccgac aatcgtttcc 1560 accecegace egteaagtge agtgeactte aactteaget ggeeattgag gaaaaaaggg 1620 acgetgtace tatgettete ggtgaaggtg atcaceegat gaegggeget geggtagtat 1680 ccacccgtga acttttggat catgtcgccg atgttgatca cataggcatt ttcctgtgga 1740 gggactggaa tecaggttte cgtgggtgga taccagacet etagaceete ggtgeecatt 1800 tettgtagga ggatggtgat geatecaaaa teagtgtgat egeegaetge tgacagttag 1860 gattggtttt ccctttgtct atgaggggtc tagggataga agaggactca ccaccaaact 1920 gtctctcgtc tctgactggc tgaggagcgt aatgcagaag tcgcatagga atcgagggct 1980 cgttctcagc cagcgcgtcc agcgcgtccg gcgggcaatt ccactctgag ggtaaacccc 2040 ttgcaaggat tttgagcagc actttcacca gctggaccat gcgagcttgg tatttcataa 2100 tggggatccg gaactggtcc tccgggagtg acttcggcca cagattggga cccgtggaga 2160 acgtaccgct gtcaggatgg tcctcgggca cctcatggcc gataatgaag cacttcccaa 2220 tateteaaca teageacate acetetetag ageaaaagaa ettaceteet tggtatetgg 2280

aaggagacct teetggtgga eetggatgee gggaggetea tateegegga aegaceteee 2340 ettaetetta eegateeata egteeatett eteeteeteg gacagggtga agaagggett 2400 egegeagtee ategeetget titgetette tagegagaet eeatggeeta egaggeteag 2460 gaateegtaa gtagtacatg egtggegeat egegttgaeg acattetgge ggteeteete 2520 egetgaagae ggateaagee aggegetgat gtegaeggtt gggategtet egacaetgee 2580 eattitgatt taetgaagtt tigatgetgt aaaeggtgata gtattggeaa agetaettge 2640 tgateatta etgettgaa gactggagag etatitata aaagtgatet eataetggag 2700 attatggatg atggtatggt eagaetetgg geeageetea teetgaetat etggeateee 2760 gaagetaeca ateeaateaa tgeteaagte tgteetatet ggetgagtee atgeagaega 2820 gtggaaagte egattaegt getgattgeg agtategeeg agtaattgeg geggeacegt 2880 teeagttgta ggegtgaaae teegggeega gggeatggtg teagaagae eecatgtee 2940 eegattaage ettgttate titeaataea eeatgaeagt tietgtgtea aeeggetgae 3000 ageagtteta atteeteatag gateggagta tegtatatg ttageaagtg ttagtatgeg 3060 gagtateteg eegtegttge tgeateggea tgetegeea gaacaaeag acaaagaaca 3120 atggattatg ataateaage eaaaacaaa aaatataatg agaacgatta gacgaagggt 3180

<210> 2408 <211> 1291 <212> DNA

<213> Aspergillus nidulans

<400> 2408

60 aacccctgag actggtttaa gaatagagag cacatgtcga gccaaatagg aagtggatct tgaagcetca cgtctggage aacaccgget ctttcttaac gcaacacate ttccaccgaa 120 ctgtctcatc caaaataacc atgattagcc actcttcggt tagatcctga tactccaata 180 gtegetgtea gggtagagtt geatgtgate tggggtegea ceaeteagee teataaagte 240 tatccccaac cacttttcta ccgccctata caaaggacaa cgatcagagt ttccacccag 300 tcaccccacc ccgtctggcg aaatggataa acaggcggga tactgatgca atgcgatgat 360 tgtctggagc atggggcgta taaaccgggt gagcagccag cactttctca ttgtcttcaa 420 480 ccacatccag ttttgactgt aggagaacaa gcagaatggc tcctttcatg cagaatggct

ccgatgctga cgatctctcc tcctctaagt ccaaacagtc cacgcttacc tcactcctta gctccgtgca cgcagatctt ctaagccaag ctcaccgtat ccccgctgac attcgcaccc 600 tgcgcgagct ctcccaagct gggctgcagg gcggtctgat cgatgacaag aagtaccttg 660 tatgtcttga gcctggtgct taatgggaga tcgataagta ttgtaggact gatctttgta 720 tetgeaagae egagaacate ateeagetee tegeaageet geecaacace teeacaetga 780 ggaccaaaat cacagatacg tttgtcaaga cgctctggga taacttgcag catccgccct 840 tgtcttatat aggagatgaa ttccggtata ggagggctga cggaagtctc aatgtgaccc 900 gctctcttga aaagaaagaa gagaaaagag acatacacta acggtccgta gaacatcatg taccctcatc ttggggcatc gggaagccac tatgcgcgga cagtgactcc gaagcatcca 1020 cgacctgcgg tettgccaga eccggggete atattegact gtatgteatt geactettet 1080 agtcatcccg ttcagttgct gatacagtga atgcagcgct actggcccgt gaaggtcccg 1140 caaaggaaca tecageegag atetegagea atttgtteta ttttgccate ateateatae 1200 acggtgactt tcagttccgc tcctatagtg tgcagtaaaa ctcatgtgcg tatagatctc 1260 ttccgcaccg acgaggcgga cccaacgcgc a 1291

<210> 2409 <211> 1021 <212> DNA

<213> Aspergillus nidulans

<400> 2409

teccaegggt actgatattt geaaccatgg ggtteagtag ceagaagetq geataettta 60 acgcacgctc cgcgctcatc ccatgcgtta gggtcagcga tttcgcgaca agccaqcctq ccacaacatc ggacagegeg aagagtgeet tgccaaagga gaagaateet gggatgqeee 180 aggtcgtggg gaggagcatc cacgctagca atggtgtgta gcggtaagtg tctcgggcgt 240 aaggggagtc cccttgagat acgtagcgcg aggcgtcagt gaagaccatg tagtcgatat 300 ctgtgtattt gacagctgag tgggcatctt gccaggcccc gtaaaagaga agaactgtgc 360 ggaggccagc agccaagccg tagaccatga atggtctttt gaagagtgat tccattgttt 420 tcaaattgaa tttttcttgt aaataagcct tttggtgatt ttgatggacc gggtcagtca 480 tetgagaett gteecaetge eegeetgaat tggtaacaag egggtteage agttgggaaa 540

tccaatcact agcgaagaag cttccttaaa tattaaatga gcacatttag acattcgcgc 600 ccaaagtttc actcaaacag gggtcgggta ttgccgtcgt gtagttgtta gaaatgcagg 660 aaactcgggg tatcttggca tcttcaaact attgatgact cagcaatcat gqctqatcag 720 cgttccccaa tcgatgcaat atcgggtata gttctactgc agctggcgat atgacagact 780 gttcatcatc atgatgtctg gtcaaagacc acaggaatgq attqctattq qcttttataq 840 taggtttcag aagaccaact gaaatagcgg acatagtagt ccgggtatag aaacaaaaaa 900 caatatatat atatatcaaa gcgagggttt acgcctcgtg agacgaaggg gtattacatg 960 agaagtaggg aagccaagcg gttgtcaaaa taaaaagata tggtatccac ataagcctga 1020 С 1021

<210> 2410 <211> 2569 <212> DNA

<213> Aspergillus nidulans

<400> 2410

atatoggggg gtatagaggg gccgctctga gcggttccca tgtctcgagg gcctagtggt 60 cgtctagaag gtgaacttag tgttgaccca tgtgttggcc catgagagat ataagaggat 120 ggccggggag atcggttttc aacgtgtcct agttcattgt caccccaact qqctqaacct 180 gaactgacgc catttgctgt aggtgatgtt gtcttcagct tggcaaggcg ctgcqcaaqt 240 gcatctggag gtgccgaata tctattgggt tggtcttgca agccgaagga ctggaactgc 300 gaaggactag gcattcgcgt tgacgagtct cccgcattgc tctggcggcc gcgttgactt 360 gaaggtaaat atgttccagc aggtaatatc tgcgatactg gtcgtcgaga gattggtgag 420 gattggcccg ccggcttggc catactettg agattattet ccacaatttg ttgcttgatt 480 gagteegegg teceetgett ggttegtaeg geetagegaa agatatagtt agegaagaga 540 agcgcgatcg caaaacaggt ccgccgagaa ggacttgcca tcatcaagtc cgaaaactqc 600 ttatgccaac cagggatctg cgtggaggcg gaccgatagt cagggtgatt agggataaga 660 tttatggtga tttccgaagc gcgaacatat tgtacgtatg ccctatcgat ttgatcactg 720 tetgegaace etegaaactt egtaattgeg tettgageeg tggeeaacaa ateggtgate 780 tatattccaa actaatggtc aggacggtcg ttttcagcat agcacaagcc acaagccact

taccgtcgtg gattcgttca catctaatgc tgctgcctcg tcctgaaggg cttttatatt 900 tggaaagcgc ggcgagagcc catcetgatg ccccccaccc ggagccgtgc cacctaggtt 960 gtgccggctg ggagcatcct ccggagcgaa actcggcggt gaaggaagcg ccgcagcatc 1020 tggggccatt gtacaattct agcgctagga attcatcgaa gttgaaggac ggtcaagcaa 1080 ggcggaggaa aggccgatgg cgggactcga tgtggcggca acagagcagg cagccgtaaa 1140 aaggaatccg acaacgaatg aattgagggg atacaaggac tcggagtaaa agagcatcta 1200 tgtgcaactg aaagagggac agcatgcagg ggcggatgga ggatatagag agagcaggtc 1260 aataatcagc gcatcctgtc gctgtctgac agacaggttt gcgggataat tctggggtaa 1320 aattatgtat gaatttatgc aacgtataca tgccacttgg tgattattga ccgctctata 1380 ttctgcctgc actactgggc ggttctgcag acgaccgcct ttgcctatga cgccacacgg 1440 cacatgettt ggtgctgagt caaccagtgg ttaggcatec aggccaatgg ggcgcatege 1500 aagcaataca tggaaacctg ggagctcaag tcaaccttgg agctctcttg ctgtttactg 1560 ctgtctctcg cttgattcac cctcgccaac ttctcctgtg ctgttcctgc gtgtcatctg 1620 ttaataagca attttattcc tcaactgacg ctgtacactt gtcccctccg tgcgtcttat 1680 tecteccege atecateatg gegggetggt tetectetge etcacegete gatgageaga 1740 tcgagcgcgc taccgcgtct tctcttgaag atatcgctct gaatctcgaa atatctgatc 1800 ttattcgatc aaagggtgta cagccgaaag atgctatgcg atctttgaag cgacgattag 1860 agaacaagaa ccctaacatt cagatagcga ctttgaaggt ttgtttcctt ggtctgtcct 1920 ttactcgact gttctgacaa aattaatctc ttagctaacg gatacctgtg tcaaaaatgg 1980 cggaacccat ttcctggccg agattttatc aaaagagttc atggacaacc ttgtctcgct 2040 cctgaaagcg gaaggtgtcc cgctgaactc gagtgtgagg gacttgatgt tagcgctgat 2100 acaggactgg gctatggctg cgcaaggacg catggacttg agctatcttg gggagacata 2160 ccggaagetg caaatggaag gettecagtt eeegeecaag agtgegatta gtgggagtat 2220 gctggaaagc agtgcggtag gccggaacag taccgttcca tctcaagcta gtctaacgtg 2280 atttttatag cctccggaat ggatcgactc cgacgtttgt atgcgctgcc ggacgccctt 2340 cagttttatg aatcgcaaac accactgcag gaactgcgga aacgtctttg atgcgcaatg 2400 ttccagcaag accetgecat taccecatet tggaatecta cageeegtte gegtegatga 2460

cgggtgctac gcgaagctaa cttcaaagcc gtttaatcaa ggctctttgg cggatcgatc 2520 gactttcaag aacaactcga tcacaaaatc caatgtgttg gaaccccgt 2569

<210> 2411 <211> 3318 <212> DNA <213> Aspergillus nidulans <223> unsure at all n locations

2411

<400>

cgtagatctt tcaacaggga cagcttgacc ggagacttat ctcccatctc tttctcagct tccagcaaaa ctgaatacaa aggctagcgg attcttccat caacatcagg ggcatcataa agcgttccca gctcctactt gccaggaaag atgtttcccc caactggaca ccaggctccq 180 tcaccttcag ccggcagcaa cgccgacggc gccgctgttg actaacaagg cacccgatca 240 tctaaaagaa gattctactc agctcgctag tctcagtatc ccaactgcaa aggatgaaaa 300 tctcactgca accgtccgag gcactgacat accaacaca gatgcacaat ttgccgtttg 360 ttagcgatgt ctaggtttcc gtatcatcac atccgtggag atctcacgca gaaagtggca 420 agtaggtgct ttgataaggg tcagttctgg aataggacat gggacatgta agatctcccg 480 cacgtcagcc ctgaagtcta gcaactacca acgcactaag atactatatc tatgtgcctc 540 aacgtttagg cgggtgtcct ctgctgctta tccctccgac ccaggtccgg actctgttcc 600 gtcaaatcaa caaggcgctt gactgctcct tacatcttcc aaccgaggaa ctcaggggca 660 tagttctcaa tttcaaccgc gagggctttc ctcaacctac cttcctacga caatcggaca 720 gccgtaacat gaaagaccgc ttggaggcaa ctattccccc aaaactagat attcgagatg 780 gttccggaga tatggacaag caggagatga ttgtctctga aaagatgatg gaagcagctg 840 tatcatcgac aaaatttcaa gtccaaagcc aagaagcagc gtctccgtat tcagcgtaaa 900 aaggatacta gtgatgccat cagacgttca ttgtgctacc ttggtctgct tgctgacttg acggaccata tcgacaacga atggtataaa cagctggagt ccaaacagcc ccgtgtcgat 1020 gtcaacaagc ccgttcctta tccattctgg aacgaggccg ttttcattag cgttgatgtc 1080 taggtgcacg aagtcagcca ttcgcaggtc acggaaatcg gtatctcagc gctggatact 1140 cgcgatctta tcggcgttgc accagacacg aacggcgaag agtggcaatc gcgcattaag 1200

tetegecace taegagtgaa agaataegga aateatgeea aacatetgta egteeggggg 1260 tgtccagcca actgtgaatt cggcactagt gaatgggttg catcggatga cctatcaagc 1320 gcagtccaag cctgcttcac ccttccttca tccctctatg gagccgacaa gaaacaactt 1380 cgccccgtta gtgtttgttg gacacagtct agactccgac attcagtatc tcaagcttgc 1440 gaacgtccna cttcaggggc actctggaat ctctcagttc gttgatcgta ttgacgtagc 1500 agcatectte cagettetee ggggegaaaa ggageaacge teaetgggea cagtegteeg 1560 ggagatggga atgactgggt ggaatctgca caatgccgga aatgacgccc gctacacctt 1620 gcaggctctg gtagccatgc tgataaacca cggcgttggc gggctaacag gcggatcgaa 1680 cgttggagaa acgcctcata tctgtgtcga aatgggtgat taagtgcacc gttcatcatt 1740 cagcacctgt gtactgtcag ggattctaag gaataaggcg gaatttgcag gtgtggctgt 1800 tctatgctcg gcaagagctc gagaataagg gcagttgcct gttacgtaca atgatccata 1860 tctgatctta gcattaccaa acggataaat tcaccgcagc ccaagccaga taacatcttt 1920 gcatagtata cccataatcc atggagattt gaacatggga gacagattat ggcaacataa 1980 ataggagccc aagctgctgg caaggcggaa aaaaaactat ttctccattt acggagcaga 2040 atacaaaagc acgccattgc gaaaccaacc gtcacgggca cgtaataata attccgctgt 2100 tcagcccaag agaagagtct tagctgagat catccagaag cggcccggaa aagtgcaaag 2160 ctgactcaga tctgagccaa gcacaaccgg tacatgactt cggccaaaac ggataaactc 2220 aaggcacatc tgacggacta ggacggcccg ttatggggcg tttaggatat tttgaatgac 2280 aaggtggcca acaaagtatg attgagcatg gcctcatagt aaccctactc ggtcctacct 2340 gagttgaagc caagcataga aatacgcaga gatttcagtg cgcaaccgtc gcgccatcac 2400 ttgacattcc tttgttccga atctcgcatt gatggcaccc ccgaccgtgg tctcgcagaa 2460 cgcaggacca tatagcgcca atatcgcggg gcttggctga tgcttgaacg aatggagtat 2520 cgcacagcac cctcggggtg ttgagttcga ccagagccgg acacgagcag gccaggcagc 2580 atgatttagc taacaacggc taagcgaagg gctcttgggc ttggactgcg gatgaatggg 2640 ttatctgact aagataagat ggtttgcctg cctgggcatt accaagagcc aagagcggac 2700 gggctgggct gccaagttca gtttcgacgc tgagtgatac agaccttggc tgtggggaat 2760 gatataatgt ctgttatcta gctaaggaag gaggcatatt ttctcgtccc tcatgagaag 2820

aatgtgatct aggagtgtg tecaaggaag caaaggeeag taegateggg gattgaaeet 2880 ettteagtte aggtaetegt aeggtaataa ttggtatgge eggaatgttt ggeegteegae 2940 tttegaaagg gttegeggee eeetatgege tteagettaa eaagettaet tteeteetat 3000 getgagaeetg ggtgaaeetg aggtgeggaa taatagaeaa gggeaaeeteg ggetetgaat 3060 aagateaggt geaegttegt aetegaaaee gttgtaggat ttggagtaag eeggeggeta 3120 eagaeagagt aegtggtee ggetgeeata eetgatagga geeagtggtt getteateet 3180 tggegttatt tegttgtaat aeettegtea egtgaaatag aggttgtaea eatagtaeet 3240 tgeecaatee agetgetee taeateeta gggataaaea eateataata ageagtagge 33300 aagaggeett egagetgt

<210> 2412 <211> 1172 <212> DNA

<213> Aspergillus nidulans

<400> 2412

gtaaagaggt ctaagcctcg ctcgtatact ttgaatgact cttcaaagta tttgtgctcc 60 tcgaggagat tggcatagtt gactacagtc tgaggagtcg caatgcgtag ctcgaaaatc ctttcataca ctttcttagt ctcctcgatc gatgagacac tttccaccag atcgacgtag aaactccaca gcttccaact cttgtggatg cgctgttgag gagaaagagt ctcatcgaaa 240 tagtcaactg ttgacttctt gggggcctgc gttgctttgg ccatgatctc aaccgcttta 300 tegaagtttt caetgegeaa etecatetet geccaeteae accatgttte ggeaagetea 360 ttcactgatt tgaaaggaac cttaacagct ttctcgaaaa tgatacgtgc agtgtccaag 420 tctcctccgc gctcgtagaa cttcgcatag tttacccaga gctcagaaaa tttgccaacg 480 gccttctttg ggtttatagc tgcaatcgca gctgtgtatg tattgacaat ttcgacgttg 540 ttgtcacccc agagagccac tctcttctcc cattcgatga cattattggg attctgcctg 600 agcaatacgt cattgacgag gaatggccgc cggtccatga gttgctcaaa cctaagcatc 660 cgcaaatcaa ggtcgaaatc ggcttcctcg tcggctttgc cattatcggc tcgaacggct 720 gcagcctcca tcaagctgcc tataatagat tcttcgaatt cgacatagga gtcgaatata 780 agagtgaaat cacgaactgt catgactgtc gtaatgccct cctcgaaaac atctcgtgct 840

ttetegaagt tgeetttggt gateeagtat gttgeeaate cageecataa tttgeetett 900
tggteggeaa ategateaat geegetgega aggatageat ceacateaat geeagtetga 960
ggaeetgttt egatettett tgeetttgaa aetaataagt caaceatete agteeacage 1020
tggaagttge tettteette eegagaetga aategeggat tgtegagaat eteetatgat 1080
egettgatgg eateggtgta atggeeet teeacaagea ggttgatgta etettetgea 1140
tteteeggat gtaetegeat gtagegegee ea 1172

<210> 2413 <211> 1710

<212> DNA

<213> Aspergillus nidulans

<400> 2413

60 ctacccaatg cgacggggat cccggatgac ttcaccccgt atggaccagt ggtgtaactc ttgtcgactt aaacgacctg atgacttagt aacctggcga cctggggatt atcctttgtg 120 180 gcttcaacca aatggttagt gttcctgcgc ctctgccctg cggaagttga aactaataaa 240 catttaggaa tettgatatg gaccetgage getacetegg acgeatgatt tettgttett tctgtcgttt tgcgcttttg atgtagattt actgactcgg cattcgttct agtcgctgca 300 tttctcccag cacactggat cacaaactta caatggcctc aggcgccaag accgactcgg 360 420 agcacctttc tctatcccaa acaatgcttc acatggacca ctcacaatca aggcatatcc aaggacattt ggcctcaaga tcccaggatg atgaactttt gagccaggat agcttctcct 480 tgtgttcaag tactgcccaa agcgacaagc cgtggtcgat gaatgatgtg gactgccttg 540 atagcaactc tattgcgtca agcaaacccg actctccagc agtccagatg ctttcttttt 600 cattatcaca acatgccctg ctccactccg gggtaggcgc cagcgacatc atgtactcgg 660 ccqqttccqa atttcatqqt ctqcctqacq ttqqcqaaca aqccqaaatq qatttctcca 720 agcaggattt taacccttac aattccctgt ttgatttttc tgcctttgag aatgatgtca 780 acqqccaqaa tqqqactcat ccatcatqca ctcctqatca cqqctctcct qccgqaqaca 840 actggaaccc tattgtctcg gacagccgat ataaccaggg atccatggaa catttctctg 900 gcaatgtttt taacatgcct gtttcccctc cactgacgga agcgagcaat gatatcgccg ttacctcttc ctgctcccaa tctggatacc ccgcttttat gtcgcatgag gatgccatgt 1020 tgaaagacat cacgacgacc ccagttggaa cccacgggat aaacctagga gacccgattt 1080
tcccgttgac accgcctctc aatgagcagg accccaacag gttagttaca ctcggcagcc 1140
taggtcgtcc aagctacatt ctgacctgca gcaggacaat ccgcccttcg aaaggtgcac 1200
gcaggccagc actgcaggtg tccccaaccc gaccacaggt taaacaggat gccgagtttt 1260
tcccacctct tcccgtcaaa gagccactca gatcgaggtc caaggatggt agtgaatcgc 1320
gcaacccgcg tgaccaccca tactactctc tgccaccgca ctctgattca aaatattact 1380
gcccatttgc cactggagac aagccgtgca atcaccctcc cactactcag aagtgtgctt 1440
accagtgagt caaacatggc ccggcatatc tgaatctaaa ctaatatcac cagcaaatac 1500
ctggattccc acttgaagcc atatcgttgc cgggtcccca gctgcatgga tgcccagctt 1560
cacttttcct caaatgcatg cctattccgt catgagcgcg aagcccacgg tcttcatggc 1620
cactgggaca acccccactt tgtctctttg aaggatgtga ccgttccatc ccaggatatg 1680
gattcccccg tcgctggaac ctttttgacc

<210> 2414 <211> 2120 <212> DNA

<213> Aspergillus nidulans

<400> 2414

gcacctcctc aaccgtgtta agaacgttta tattaatgct aaatgccact aactaggccc 60 taattaaacc tctccaattc ttgcgggata tctggatact caccctctat ctttatgctt 120 acacaccaca actctatata agaacaaata ctccgtctcc aggaaggttc ctgtcactgt 180 240 taccattata tgctacaaca tttcaaaccc taaatgaacc tttgaatatc ctacgaccaa gccgatgtcg ttataggtaa acagagataa atcttcctat ctaagcgtgc cgtatgaata 300 360 aggaatagct aagagacagg aagctaggag ggtcgaaagt cataaatagg gaaaggtggc 420 atgtgccagc cgaatgaact actcgcggag actacaagtt ccagcgaggc ctaccgagcc ccagccagta ggtttgtaga aggtaaactt gctaaaccta ccaccacccg ccaagcatta 480 540 ggttggttta ggcctttagg taatctattg attctggata ttatcgcccc catgggtagt 600 ttattcccaa gcaaccaccc cgtgaaacgc ccgggcccat cagctaagcc taaaacccgc cccaatctgt tgtgtaagtc tactgatgct agcaggccac tttgaaaatat tgcgggctta 660 tttaatatgt gaggtcagtt taagcataag attacttctg taaagactta aatcataagg cttgcatcaa tacttgacct attaataaac atcacataaa cccaagtccc tgggtactta 780 gggtgtagcg ccggatatta caatgattcg tcagagactg gactgcagag cttgatatac 840 900 aggatttacc agacctttga cgcttcctct gatcaggttg tgctgcagct gcttttatga aacctggcta gaaaagggct aggaaagcac tgaagaacat acctagctgt gggtttattc 960 tatcacagga atctacgaat gcagagagta aaataatttg gatagtctat gaaaaaattt 1020 agtgttataa agattgaagt tgtgaaagta gccgacctgt gaacagcagt tgttcatcct 1080 atgaaagtac gagcggccac tgggtactat gtgactagat ccggaagatt tgacactgac 1140 agctggcggg aaacggcaaa catgacagac ggactgaggg caatagctca gtgagtggca 1200 gatttgtgga cctgagcaga cgcgagacat cctgatatcg agcagcggag ctgcagggca 1260 cggcgaaggc ccaatgagta cggacaaagc cgaagtcgtg ggtaagaaag agtcagacgt 1320 ccgttgttcc tttccccttc ttttagccca actagctcac cgcagcccac tatttcggcc 1380 cacgccagag tctgccagaa gaattgaagc ggacaggctg accaaaagat tacccttagt 1440 gccagatcac ctcttgttcc ttttgtgcga ttgaaaccgt gcagaatcac cgccacaagg 1500 agccaggttc ttcctgcgca acccggtcct ccgcgactgg gtctccttca acctggatga 1560 ggtctgtaaa gccgatacga agctggtgga gaccctgaga acctgcgggg acagagagga 1620 qcctqccqac tcqqccattg ggcgtgcctt tggattcgcc cctggcaaga cctattggga 1680 ttttattgcc aacgatggcg agggcgagga caagggctgg cggcagagac ggtttgccca 1740 gggcataaag tgccgcgcgg ccgggaatcc ccagacgcac caccacttgc actcggcgtt 1800 tgactgggca gggctgggag aagctacggt cattgacgta agtattgtgc gctgtgtgtc 1860 tcgctttttg gatcaggcta actcgggcgt gcacaggtgg gtggctccgc gggcatgtat 1920 cgatcgagct ggccaaggcg ttcccggacc tggaattcgt cgtccaagac tttgagggcc 1980 tcaaqtcttt ccacgatggc gttccggatg agctcaagtc gcggattagc ttcgaagcgc 2040 aggatatect geageegaat gegeaeecta aegeegatgt etacettetg egetegattt 2100 2120 gcatgactgg tcagacaaat

<210> 2415 <211> 2041 <212> DNA <213> Aspergillus nidulans

<400> 2415

cgataccttt tgcctttgct ggtagtcata gataacttcc gaatatgctg acatagattg 60 ctcctaaatc gtctgaactg gatttcttgc tttcagggcc gagatttcgt atcgatgtgc 120 180 gcttagcaaa gctttcgata ttctctaaaa ctgcatcttt gtgcttctca cgctgttcgg tgatggtctg atgagtgatt tgagagaact ctttgaaaagc gaccaccatc aactcctgga 240 accgcgtgat agetetgage tttggattet eggacegtgg atgageegae tegteaagge 300 gtgaaaagta ggattttaag actgaaataa aagacccgtc atcctgaacg tcaagaagtt 360 cctccccgtt gatgcggaga attgctaatc cgacctggaa gagcactttc ggtccttcca 420 agaagaaaac atcgaggact ctaaaggcaa acaccagggg catggagttg atatacaaag 480 aaaqqaacca qqqaaqaqa accacagaca gctggacatc agatttgttc agatggtccc 540 600 aaaqaatcqq cataqtcttc tcaacaagcg actcaaacac cttctggtca agcaatgtgc catacatqqt qqtcqaqtaa tatcccqqca ctaaacqqtc qcacaqaaca qaqaqtaqaa 660 agaaggettg ggettetgae atgtatetag tetggttaga etteggtetg acaagggatg 720 cggcatctta catcaataat gctgcgacaa caatgttcat tgcttgacag tagccaatct 780 840 cagogttcgt ccaactgtag gcagtcaaga ctcttcgaag acgacctatg ccttcctcgc totgqaaqcc cqcatactcq qgtaaqctqc gattcaagtc tttctctatc tcgtcgatcg ccaacgactc ctggccttcg aatttcgcta aagtctgctc gtaaagtttc ggcgaccgca gccgcaggtt cagtgaaccg gaggccacct cccagatctc gccccgaagc cggttgggga 1020 gaccaacgcg tatgagttta tggaaggtag gttgccggat taacgtagca ttgcggccat 1080 tttctacaat cttagttcat gcccaagatg acacaaaagg acgcgtacct cggaaatatt 1140 ctccccagag cctcatcttg ctccgatccc tgagtttgcg ggcatcaccc ggatagcgaa 1200 acagcattcc cagtccggca tccgggggtg gcctcgcttc agggtcatca gctgactggg 1260 cctttgactt ggcgcccgac aggagatact cggaatagca gtcatttacc accaaacgca 1320 ggttctcaat ctccttcata gattcgcgta agttcttctt caaaccatcg cagaatcgtt 1380 cgcaggcctg cctgctcccg accagctcga tggtaaacct ctggggtgtg aatccaggcg 1440 cctgctgttt gcccagcgct ccattccagg tggtcaaggc tagagaaaaa atatggctct 1500 gactgttcaa ccgctccacc cggcgaatcg aacacagagg gattgtaaat ccattgccag 1560
acggcccggt accgttcgtc tggccagccc aatatgtcga agtggctaga gtggcagaag 1620
gaaggaagct ggtgggctgt gtcgaagac agaagaaatcg ttcgctcaga tgcagtctac 1680
ccgcatatcg attgccaccg cggtcgatgt tcttcgattg ggcgccggaa gcagaagacg 1740
atgtgtgcga tacagggagt atgagctcag ctgtaatttc ttgcaacgga ttttgcgagt 1800
caggaagtcg gaattgctgg cggaagaggg atgattcga agggtttcgg tcggaggatg 1860
aggtgaggtt tgggatggtg aagttggccg ggtcaatgaa ggactgagct ttctgaacca 1920
gcgacgtcca ctgcatcatc ttagcaggag tatggatacg gcgttggccg gtcagtagag 1980
agaacgcagg acatgcaagt aaactcagga tcgccgtaca aatgacgatc gtcattttt 2040
t

<210> 2416 <211> 1038 <212> DNA

<213> Aspergillus nidulans

<400> 2416

agatcatgca ttcgttgagt cattgatctg tgcctgtgag gcagcatcat tgtagcaaaa 60 120 accaqcaatc agtcgctcca ggtccatcag tctataaggc ttcgtcatgt aacccttcat gccgactttg gtggcgcgat taagcgcctc atctgtaacg tctgcgctga cggcgagaac 180 agtgggtggt tgcgataggg gaagtccggg acgatgcaac tgtgattgcg atggaatcgg 240 attctggtaa cgctcgttga tcatctcgaa tatctttgat gtggcttcgt acccgtccat 300 ttcgggcatc caaagatcca ttagtatgac atccactggc tttgctctct tctgtcggtg 360 cggtggcccg ggcacgagaa attcatccgc cgtggtctgg caatttaacg gcttttgttc 420 ttgtgcagcg tcatgctcag aattctgcgc gtcgagaata ttctgcatgg tgcgcacagc 480 540 ctctttcccq ttqccqqctt cataaatttc ttggtagccg agtcttttca acatatgaac 600 cagaacccgc cgattgatct tattgtcttc tgctaccagg aaggtaagag gatgtctttc cccaggettg acatetaaat tetgecettt egegagggtt gttttgggtg eegaaeggge 660 720 ggggatcggt gtggaagact catctgtaag agtcgacgtt ggctcttggg taggtgtcgg 780 tqtaqqtqqt agcacgggta tcagtggcga taataaagta gtgtctggag gtgtattgct

agecetgetg agtetegatg ggteattagt etttggtggg gttaactgea ttgataaage 840 cactgggega geggettegg gtgeggteac gggaaceeta atetegaatt etgageeacg 900 gteaggeeca gaegtegaeg agegaacgea aactaggtea eegeeeatet teettgetaa 960 geeetttget acaageagee etaateetag eeegteettg ettegggtaa ttgaegeate 1020 tteeegggea aacggttt

<210> 2417 <211> 8917

<212> DNA

<213> Aspergillus nidulans

<400> 2417

agtgatacgg cgtgtaaagc gacctacggt tgtataggca agatgagagc ccaacttgaa 60 tttaatcgaa cgccagcttc aaagccagtg gtgagttaga tatttaagcg tgtaatagct 120 gtgggaatga caagaaagag ggaattggac atccgagcca gtacgggttt caagaggatg 180 gaagggggca ggatttaaaa ggtggcactt acagaatagc ctgagatcat ggtcaattag 240 gggccttgat agggaggaaa ccagcctttc atccccgaga atgtggcgtt tggggaaggt 300 tgacggccta catgaatgcg cttgtctgga gtagagctaa attaagtatc cgcaacgcta 360 tggtatattt ccgatgtgca tgcatcatgt gactccagtc cgaatagaac tccagtacac 420 tgacttggga gagaggtgct cgcaattctg gttcaggctg tttagggaag ggatcaaggt 480 acccctagca tgtaaggtag atggacgaag tccaccaaaa gtggcgggca aatgagtagg 540 caaaacattc gagcttgcag ttactcttgt gcctactagc tgattaggtc tgaaacttat 600 tgataattca tgcaagggga ctttgaatat cgacctgtga tactggacaa taatgcagcc 660 tccaataaag acaggataat acaaagcagt tttcaattgt tccttatatt gatgccttat 720 tcagaacatg gttccagttt cctaggtact tccaggttaa ttaaacataa caaatccaag 780 ttgttcctcc aatattaaga acgctttcat acagggtatc tcaagacaac gttaagtgtg 840 aagcgcggca catccaagtt catccttcac gatgagctct ccatccatct tttgagcatc 900 agcttacagc caactgctgc acatacaata aacaaaaaaa gctgctcaat agttgcaaag gagcccctgc ttttgcatgg ccctctttgc tgccgctttc ttcttttcga taagatagtg 1020 catcttcttc tcttcctcag acggaaagag gacgacgggc gcctgaatct tcctaggcat 1080 caccttgtct tcaatagcca tccagttcag gccagctacg cccggtctat tcctcagctt 1140 caccatatgg caccaattct ctggcgtgat gcgctggaat gtcttcagaa caagagcaac 1200 cgtcttccag cccatgatac gctccgccgg cagaagcagc tcaagatgct gctcgaacca 1260 attgcaggaa tagaagtcat tgtacagtct actctcgagt cggttcggtg agaatccttg 1320 gtatttctcc ttgtacgtca tccgaccctt acccgtcgca gtgcagaacg aaggctgcat 1380 tcgaaaagac agaaggagtg aatcatcaga caggccctgc aagttcacga aatctatcat 1440 ctttgacttg agaagaaacg caatcgagta ggaggcttta gcgacggtag ggtccccgat 1500 cgtctctcgc agggtcaggc cgtttccaat aaggtcgaac acaacatcga gttgcgcgcc 1560 cacttggtca agtcgacggg actcttcagg ctttgagccc ctgatgacga gctcaagctt 1620 tgggaatggc ttttttgggc gtggatgaca gaggcatttg gggtcgtcgc tgtgttgcag 1680 cgccttcgtc agtgtccggg tgtaggtttg tggagctggg gcctcaccac aacatcttgc 1740 gaactctatt ccgaacggtt caataattgc accttcaact gcaactagta gaagctctcc 1800 tgcagcttcg aaagagcttg agagggagaa gctgaatcaa aatgaccctt tgctgtggtg 1860 aatggctggc tttcgcacat tcacttgagc aagtttcaac atcagaacat actcaactat 1920 accetegaga geeteettgt eagtitgaaa actaetttet eatgigtiat geetaattee 1980 tgatgtagtc aacaccgggc tatagagagc ttgagcaatg aacgtttcgt gagcttctat 2040 gtctacgaac atagattcaa tctctcggaa caaatagcct gacgtaagaa gatgggcctt 2100 tgactacctg gatgactcta attaggagac tctgcatttt tatggtttgg tttcctggaa 2160 tctactcctg cactggacca taaatagagc acacaagcta cttactttcc accatcaccc 2220 ttttcacggc ccttggttat gaacagtgga actcaggtgc atactcacta gctatttgtg 2280 cacattgcgt gtacttattt ctcaattgtt tactgctggg ggatgtcgta ggattatctt 2340 ttgtcttcag atactgtaac gtggattctg ctgtgttagg atggggaaga ttcaaatgat 2400 aactgacaat ataccctaca gaactgctgg ctgccactag tgttatctac ttcagaggca 2460 ggttccttgg gttaacgggc agcctagtgc aacatgtgtc ttgtataagg atcggtagcc 2520 tgggaccctt aaatagtcta tatcagtaac cagcatacca gaacaaccta ctacctctgt 2580 ctcgagacac aagataaaca atccatgata cgcttaggag tctaaatgca cacacatagc 2640 ctggaccttc agcccttagc cctttatttt atgcagacta tagtgttctt tttgatatgg 2700 aagataagtt gtggtctggt tatatccttg attatataat cacaccgaag cgggttgacc 2760 taactcaact ctcaatctat cgcgactcga cattcacaag ctttgccttg ccgccgattc 2820 cccgtcatct cttttttgcc gcgccccttt caacgaaaag gaatttgctt tctcatttgg 2880 cataatgtct ggagaaatgg aaatcgaccc tccggtctcg caagagcaag ccgagccgca 2940 gacaagcaac agtggcaccg atgctcgaac acacgacggc gctgttgccg tgcgcagtat 3000 cgaaggatgg attataatag cgacgaacat tcacgaagaa gcttccgaag aagacgtgac 3060 ggatctcttt gcggagtatg gcgagatcaa gaacttcagc ctaaaccttg accgccgaac 3120 gggttacgtg aaggtagact tatgcaaccc tctgtttctg aagcttttag cattttggtt 3180 tggttctgcc cgggtattaa tatttctctt gtatagggat atgcattgat tgaatattcg 3240 acgctaccag aagcagctga agctatcaag gaattgaacg gcaccaagtt gctcgatcag 3300 acaattgaag tcgactacgc atttgtccgg ccaccgccat ccaacaaagg gaagtccggt 3360 ggaaggggcg gtcgtggggg gagaaaccgc agcaggagcc gtgaccgaag ccgcagcccc 3420 ggagctgaga acgagaggga ttaagatacc atatatgttt ttttctattg tcgctctgga 3480 atgaactcgc cctgctgtcc ttttcgcatg tcactatcag caaatgaggc atggaacact 3540 ggtaggcgtt cagtacgata cagaggctct accgggaaca agcgatcatg gccggcagtg 3600 tcccttagct cccttgaaca ccatcgatat tccaactcgg aacgatgctc gggattacct 3660 gccggcgtcg ttttttatga ttggtgtggt atggacaacc cgacagaatc cttcactgct 3720 accyctgaca cagaactaga cyccaatatc tcaatatcyc cagatatcaa atcytycaca 3780 gattacaact attagttcac tagaggattc cgcgtgatat tctcgacaat acaaatgtcg 3840 tgtgaccagg aacatggctc tcactttcca aaccccgcac tctgcatata aactctatac 3900 cataaactct gtagtgcatc cgatgtaact ggtgattgtt ctacatttga tgcgtgtcat 3960 ggatgcacta cagcgcctgc gagcgaataa ggcaacgtac tggaataccc caatatttgc 4020 ggcgcacatg ggggactggg ggagctcccg cgtgatgtta tcgccatctg ccaagaatag 4080 tggttgtaaa gtgtagacaa tagagcgaac aggtctcgac gtctgaaatt gaacatggat 4140 ttaggtagaa tacagcctat aaggtcaatg aacatgcacc gtgcgtcgta tcaggcggag 4200 catttcctct gacgtcgggg aagggacggg gcgaccgtct ccccgcttct agcatttcga 4260 tectgeecae etcaeccaga caettgaatg caegaeggte ceaggggaat acaeteagtt 4320 atgtgagatt cccctgagct caccattgga ccgggttcct tctccatccc attacttatt 4380 atatccttta ccgaaccttt ttaagtccgt tcttatcgga ctaaggttct ctgatcctcg 4440 ctgacgacat tggtcttctt ccccagttgc aggtcagatt tggggagcaa agtcaccaca 4500 caatgccgtc tttactcctt acgctatgga gcgctctgtc gctaggttgt ctgctcgagg 4560 gatecgegeg egtgetegta caataegeae ageegeagae eeaggtetae eagtaeeagg 4620 acaaagacac gttgcaacag ccgcttgcca cgaataaata caaggagact ctacgcgatc 4680 tgatagacgc cctcgatgtc atgcaggaca gctacttcgt cctatacgag ggcacttggc 4740 cgaccggcaa tgattggact agggccgtcc atggaacgca cgtgtcagct actctagctg 4800 cgttgaccgc atatacggac gacaagctac ttggggtcct cttgagcaac agaggtgaaa 4860 acagtgatga acgtgggaag gatgacggag acgaagcaga agatgaagga gatgaaggag 4920 atgaaggaga tgaaggagat gaaggagatg aaggagacga ccccgaagaa gacgaagaag 4980 acgaagacga aggagataaa ggagataaag gagacgactc cgaagaagat gcacaggaca 5040 atatcattga gaactcccta gctctcgaga atcttgtcag ccatttcttc gggcaagtca 5100 cgacgtacta ctttggagaa aacgcactcg gcctcaggga tcaggcttac gacgatatgt 5160 tgtgggttgt gctggggtgg ttagagaata tcaagtttca gaggctgcat tctgatctgc 5220 attacgatac ggagagctcg tccaaaactg gtgggagacc gtggcatggg acacagtttc 5280 agactccggc cgcgcatcgg gcacggatat tctacgagct tgcgtcggaa ggttgggata 5340 cgattgtgtg tggaggcggc atgatctgga acccgcattt gggcgcgtat aaaaatgcca 5400 ttacgaatga gttatatata tcgtcgagta ttgggatgta cctttacttc cctggcgacc 5460 agattgacgc cccgtttgct ggtgccgaag agtcagagga cggtctgcct catgatcccg 5520 cctaccttaa aacggcgcag aaggcgtaca ggtggcttaa gaactcgaac atgacaggga 5580 tctatgacct gtatgccgac gggttccatg ttcgcgggta ccggggtcct aatcatccag 5640 gaacacgcaa gtgcgacgtg ctcaacacca tggtatacac ctacaaccag ggcgtgatcc 5700 tcagcggact ccgtggcctc tggctagcta ccggttccca agaataccta gccgacggac 5760 acgagettgt ccagaatgtt cagegggcaa ctgggtggcc gaatatttac gaccaacact 5820 ggaaaggeet aggtegegea ggaattatgg aagatgeatg egatteeaat ggtgaetget 5880 cccaagacgg ccagacettt aaaggaatat tetggcacca etttgeegag ttetgeegae 5940 cattacgtcc acaagaggag cgcttcctcc ggacccagtc gtaccacgac tcgagcttca 6000 aagacaccta cgattggcat caagagctat gcagcacgta ccgcccttgg atagagcaca 6060 acgccgaggc agcactcgtc acaaggaacg aagagggcaa attcggcatg tggtggggga 6120 gacgataccg cgtgattgac gaatctgcct ctaccagcga tacgtctctg ccggatggtg 6180 cagttgacta ccgcaaccat ccagaatcaa tgccgccgtc ctggtatgcg aacgagacga 6240 acccgattgc ctcgaaggcg gcagcgggcg ttgaggataa tggtccggaa tacaatgatc 6300 gtggcagggg gcggacggtg gaaacacagt cggggggtgt agcggtgctc agggctttat 6360 accagtggaa gatggcggag tctttggcga gtgatgtatg acagctgcaa cttcttgtac 6420 ccacatggta ctcgaaactg gcagtttgtg cgcaagtgta cagagtacta ctattattga 6480 tattgtttaa accaatatac ctagagaggt atccttaacc atcagtctat gactacacca 6540 gctgcactcc acaagctagt caacacagac actgccgttc ccgctcgcaa attccctaat 6600 gattaggtgc ggacgccatt acaataaatt cggctgccga ggtggattag atacccagac 6660 agacacatat attateetta ecaagtaeeg gegeategga ecaeggeaet actaeagtag 6720 cgcctaatct cacatactat taccagggcc gtatattagc ctcatcgaac tcctgaattt 6780 tcatctcctc gttgggccgg aattttcgtc caagcaatcc gcccagctgg ttggttgtct 6840 tegggegate ettegaceat atgetaggaa gaactggggt tagttataat aatgeggtet 6900 ttatgggggg ggggggggg gaactgcaga caggatatgt ggatccttgt cgttactccc 6960 tagactagta atacggagta actgtgctac tggtatgagt gtgctgtacg agggactggg 7020 ctgatttgca gtatatgaga actcgaagca tgggcaaaca tgggctacaa acccatgacc 7080 atcccagtct tagatattcc gcgtgatcgt ttagacccat cacgaacgct gcgggttgga 7140 gacgcgtata ccttgaaatt tcgtggcagt ttttaggtag accatagact ctgtatatat 7200 ataaagtgga tggcgtaggg cgagcattaa atgtaacagg ataggataag acatccttac 7260 gagaggaaca caggtcacaa ctacgatcaa tcggtgttgc actctttatt ggttcaatat 7320 ggaggteete ggaetgtatg ggagaegeet eeaateatee agtgtgggtg egtggeetgt 7380 cageegtege actgacattg ceatgeeatg teaateaegt teaegggeee acageataca 7440 gggtaatagc gccagcaact ctgcagactg gtggtcagac tgagaatgca gacaaacaat 7500 cagttcaatt actgaatcac tcagtcactc agtcgctcag tgagtctacc tcggcaccaa 7560 ctgacatcag cgacagetet tgtgetaete tgtaccatgg gegeaceget aatceaeggt 7620 tagtactcca taaaacaaca ccaagcattg cgggtagcga ctcgaggtcc ctcgagtcgg 7680 cttgttggtt gatcggtggt ggagggacca ggaaagggcg actgcatcta tcgcatccgg 7740 cttgggttcc gcaaggtacg cagccgaggc gatttgacag tgattttgat agtggactat 7800 tetgacaett tgteaggtet ateggtaeet gacgaeeetg cgaaggetea tteageeeae 7860 gaaggtctag catggcatct gctagtggag aatcaggatg agggcgagct agaagacggg 7920 agaaggaaaa ggagaatgat gtgaatccca cgctagaact ctcgagcttc cttggttggg 7980 tgggaatcga gcttgtaagg gccaatgata taagcctttt aagatgatat cgcttcgcgc 8040 gtcttagata tcttttgatt gcttgttcat tgtcagtgca ctttgatcaa agatcaggga 8100 tcattgtcta ggcggttttg ctttgtcttg tgctttttca cctgtgtgat gacggagtat 8160 ttcatccgca ggttccgtac tgttaccttg ataattcact aggatgatgg gttggatcga 8220 aggggatgtc tagtaaaagc gttgacggtc gccacttgcc cacagctagg acacaatatc 8280 gtagacacct gcttcttggt tttggggtta catcccgacc atgctgtaga tgacattata 8340 tgtactcaag agtatactac tcggtcgatc aagataagaa ccaagaagct gggcgttaaa 8400 actgaagagg aacaaagaaa ccatatgcgg cacagggagg ttgtgggagcc ctccttgagc 8460 ggttccaagg caatatcaca gtcctgagct ggttatctgt ggggttcgct gaatgcggcg 8520 tcttgtgact cagtgtttgt agtaatgtag tggatgtact tggtgaatta accttgtagg 8580 tgtatactta gacgtaggta gtgtaggctg agtaggctga gaggttgagt agttgagtag 8640 attgagtgaa tataagatat aaagatcgag attcgaccga aactcggtcg tttcacaaga 8700 tgcagactga ttaatgatta ttattgataa tatgcgcctg ctccagcctc cagctcaagc 8760 tgagatagag tactgccgcg ctcggagagc tccgtcgcac acatttcatt ggacggtcag 8820 ccttatgagc actgtatgca tggaagtcat ggacagttgg tcggacatgg gctgaagatt 8880 8917 gaacatgctt gcgatccaaa ctctccgctt tgtctgt

<210>	2418
<211>	5608
<212>	DNA
<213>	Aspergillus
000	

unsure at all n locations <223>

nidulans

2418 <400>

gctcgccgag ctccgctatc tctgtccaat gaccatggat gagcttgtct ggtcttcttc 60 aacaacttgt tctggctttg ctgccagaat actcgattat acgctcgata atcccgcagc 180 tatcgttcgc tggctgccgt cggcaaactt gtcttcaggg tagccatcgc cggtgctgat cgttcttcta tatctgacag gcttgaagat ggccttgcgg gactcaggag gctcatgcct 240 300 caaatgccga acaaggaagg tgcgctgtga tcgagctttg ccgcaatgct ctcagtgcaa gcagaggtct ctggactgct tctttcctga agcccatcca cgcctgcttt ggctccctgt cagaacacag gtggatttca gtttggatca ggagcaaatt gagctggata tgcatgttag 420 480 gcgacaacct ttgtttaaag gtctgttgat cactctgtgg ttgaagaagg ctcatcagat cgtggactaa taatttgctc aataggaaaa cagcaagctc gatatgctgc cgatttgctt 540 600 tccctaacat caggtcatca atcagagcta ctttggaaca gcttgactat tcagcggagg 660 gaatagatga tggaatgagc acctccagcg gacctttcca cgccttccgc tgtgaacgca 720 ccacgggcaa atcgaccctg tccacaacca catccccgaa tttcccaggg cttgagctgt 780 ggcggctgtt gtcagataac ttgggtgacg cactgaacga agaggacata attaccgcgc 840 cttggtcgaa agaactttgc ttcccggacg agctgctcga aatcaatcaa caaccagagg 900 aagcctatcc tcctcttcag ctgtctcagc aagagcagta cctgccagag tcatcgatat ccgggacact tttcacatca ggccatcagt catatcccca cctgacctcg aagagtttgc aatgtctact gcgaagctct tgctcgatca ctaccagaat attacggcaa cgctctatac 1020 accageetea gtegagteea aaacaeettg ggaagtetgt tatgtgeega atgttetaag 1080 cactctcggc gaaattgcgc ttaccggcac tagcagcgac gccaaagcat cattattgtt 1140 cgccgtcctc gctaatagtg cgtttagatt ggacattctc ggttatcctt gtcgccctcg 1200 agccaaagac tggcgctacg ccacgtatcc gctgggctac caaagaaaga gaagtacaag 1260 aatatactta tgcctctatt aagtatggta cgatatgtgc aagaacaaac tcgaaacgcg 1320 tattggctca cagactgaca ctgctgaacc agactgtcag cggagagatg aaaaatgcag 1380 cgcattacct gcgcgatatt aacagattat cgctctttat gggatcccca aagcgcagaa 1440 gtcgcgcaaa atccagatgt tgcacagtat atatgtctac ctgcgagtct taacagaagg 1500 tccccaagtt cataaaacaa gcctccgtca tgagacatgt gagaactacc aatccggcgc 1560 agattcttgg tcaagttcaa gtcataaaac gtggggtata ctgctacagg agctattcag 1620

cacatttgat acaatgaacc tggacattat gcaatgtttg gcaccgccaa agtccacttt 1680 cgaagagata tattcaatac cggattcgtt gtcaaattaa tactggagac gactcaactg 1740 gccaaagaag tagagcaact ttgccaccga agagcgaaga aaacaaacta cgacgaattt 1800 gcggaaaggg tcaaagagca tgaaaataaa atttgcgaat gggaccaatt ctataaggca 1860 accacctatc cagcagaccc cattggcact ccaccattga aggaacgctt ccctaatcat 1920 ctcacaagng ctgtatacac tngctttgat cattttattt ctaaccgctc tgtaggggac 1980 gtcaaccgtc ataacattgt aaccaatatg tttaacaaac tatataccac ctaacggagt 2040 atgacaagca taaaaaaagg cacaaagatc ggtcctcaga catatgttgg cctgcaatca 2100 tcgcaggctg cgaagccacg acacctcgat tcagacagca gatcaccgac tgactagaaa 2160 agtccaccaa ctcgagtggc atactcatgt tcagagtggc tctcaaaagcc atccaaaagg 2220 ttgggccgct cgagcgaccc caggcaacca gaatatttcc tggagtgtag tcctgggaga 2280 gttgagtgac atgagagtct tggtccttag ttagaaactg ggaattgaca acacgttaca 2340 aggeettata acceteatga gaategeege teteaaactg caagtagace tggaatteag 2400 catgcaaact ctcctagtcg aattcagtcg gcatgttgag caacaagtcg gtgtgtactc 2460 acagcttcgc tggtattttc gaatgtgaac ctagcgaatt cgtcgcagat gtagaccttc 2520 tcacggcctg cagcagcggc agcgtctgcc gcgagttgaa tttgacagct tttccacatc 2580 aacaaaaaca gatacgcggc ctcgtcgacg gtgctcccca cagtaagcag tccatggttc 2640 ttaagaatca tgcctatccc ttctttacca agagcacttg ctaaagctgc tgattcgtcc 2700 tettetagea egacaceace aaattettta tacacactet gageettgae gtagaatatt 2760 gcaacatett gatteageat tteaagggge tgeacaaagg tagaceaege ettgeegtag 2820 gtggaatgaa agtgacttgc agcattaacg tccggtcgag atttatggag cgcagaatga 2880 atcagaaatc cagctgcgtt ggcaggccgt gtcctgtttc ctccaacggc gatgcccgtc 2940 tcgtcgacta gaattatatc agacggcttg atgataccga aatgaaggcc gagactagac 3000 attaagatgg gctactcttg ccaactgaag tcagaacgcg aattgtgggc taccatacgg 3060 gttagtccaa aacctgtcag ggaaccctgg gtcccgcagt gagatatgac cactcattcc 3120 ttcgacaaag ccatgtctcg caaataccct gaattctccg gccatgtgat tcaacatgta 3180 ttgtctctgc agctcggtgt cggtggacct gggaattcca ggaggggagt gccctgagaa 3240 atcttctcca aagctgtccc ttttcgcttt tgctcgccat tctgtgcgag gatttggtga 3300 tcaattgaag gcacaattat gcgtgcttgc aagtattctt gaactcaagc tcacctgaat 3360 gtcgcttttt agctagagag atatacacga atgttgttga acgccaggcg aaagaagcag 3420 gtctctgtcc acctagcaca cctcggtgtt gccttctcga tatagaacaa gggaggcggc 3480 tetgaateag cagacetate acttgteteg gtaggeegtt tegatagtee ttetegtgga 3540 gaccccatct ccggaatgat aagacattcc acggcagctc tatcttatgc ccatccagcg 3600 ttccatcacc cggaagacat tcttatcact aaaagtagta tctatctggg atttcgcaga 3660 ttatataaca ttattcggca atggtcagtt cttgactatg ggtgcaagcc ataattcatc 3720 agtgaaccgt ctcgccttgg atcgaccatt ctcaagtctt ttcattggca tagatttcca 3780 taatgaatga cgagaagaag tcattgggcc cttccgaaag caatacagac ttggagccga 3840 catatagcct tggtgtgggc gttgtcaaga accatggaga tctacaccga tctttcaccc 3900 ctagacagat ccatgttagt atcaccgatc ctggaaccaa ggaagcccgc ttacattgac 3960 aggtcatcgc gctgggttcc aacgtcggaa gtggcttgtg tattggtaca ggcaaggcct 4020 ttgctaatgg agggccggca aatatgatat tgccatactc tactgtctgc atcgctatct 4080 gggctcatct acaaacattt agcggaaatg accatcgtct ctccaacttc gggaagctac 4140 atcgactacg ctgaccgatg ggtcgacccg gctctggctt ttggtgccgg tctagctgag 4200 tggctgggta tattcatcca accctattcc acaaagagct aatagttgga tctcaggttg 4260 gacggccgtc ttcgcatccg aggctacatt ctttgccttt ctggtagact actggacaaa 4320 agacgttata ccagaagctg ctttacgtat gtctttcccc gcacctatat gtgtaggtaa 4380 tctcacaccg gtctagtatc catcttcatc gtgatatgtc tagcggtatt ctttctgcca 4440 aacacctact tcgcctggct tcattatttt gggcccctgg taaaagttat tcttttcgtt 4500 ttcttcggta taatctctct ggccattagt ggggggtgca gggctaactg gctcggtcaa 4560 ggatggcagc acttggacgg acctcccagc attcaaaatg gcttcgaagt atgcacccgt 4620 atataaactc catttcagtg gaccggaaac ttagttattg cggtttaggg ctttgctagt 4680 gcagctcttc ttgccgtctg ggccgtcggt gatcatatct atattggcgt attgggtgga 4740 ggagcacggt cgccgcgcta ttcatggcac atgcggccaa tgcggttccc tggcgcgtga 4800 ctgtctttta tatggtcttg attacctttg tctctgtgat tgtgccatta tcagaagcca 4860 gactgctegg tggctetggc tegeagecte tecattegtg ategecateg acaatgcegg 4920 cateaaggtg geteeggace tggteaacge etgeatgate attegtateg tggteattge 4980 getagagtgt atetettga ettetegeat gttgegaaca atggeeetaa aaaageteat 5040 aceategtte ategeegagg tegataaaaag ggeegaceee getgggeget catgattaet 5100 ggegtggttg gagttgttt gacetacate ageetaageg gtaggtagte gageteacag 5160 caataaaaaeg gacagtgeta atetagagea gggaagggaa eegattget eaaetgattt 5220 ategetatta etagtgeate ettetteate aaetttgeea tegtagetet taceteette 5280 egetteegg cageegteaa ggeacagaaa ggggacette ttacagaga getacaget 5340 gaaateeeet etttggeeae tgaeteegat eattgteet gtgeteteeg eectacete 5400 tgteageeta etaacatea gtataaaaee agtggtatae etettetge tgatatett 5460 teettetaag gtacaacate ettggtatee tggteateet gaeteeggt 5520 acaatttett etcaaacate ettggtatee tggteataee gatacegaa gegetgtata 5580 gggttateat geggaceaaa tgggggga

<210> 2419 <211> 5058 <212> DNA <213> Aspergillus nidulans

<400> 2419

cgtttacctt catttcaacg cgatgaattg acccagcccg ggcgatgcaa cacctcaact 60 cgacaaagag actgctgggc tcagcgattc tgatcaatca gccacttttc tttttcctaa 120 atggattcca ctgtaatttc tttttctctg ctttgttggt ttgcgatgct aacgatcgaa 180 aaatttccct tcggaccgag gaacctgcat gggatattat ctgaccacaa aacgagttaa 240 300 catacaggta gacaagacca ttgtgagcag attacgagtc ttccgttctt tcatcttttc gtttttccaa ttttcctctt tgcatctacc tcaatttatg gaatggaggc tctagaagtt 360 tgaactcagg aaagctggtc agcgcactct atgcagaagg aagcaataaa gctgctcaac 420 agcagtggag gatgcttggt ccggatcaat cattgtaagg gattggcatg gtatcggtcc 480 agttggaaat gtctttcaaa taatgaataa tgaaataatg gattattgac ttacccctct 540 tgctccttac tctgtcagtt caaaaaactc ttaatcaggg cttaaagcta gaaatccatg

agaccgcgta atcgagatag caaacccgct gcgatgagaa tgcccagatc ctataccggg 660 tgtttgtgcc ccttttccag ctccagcccg tggtcgcttc ttcgtgttcg gcttctttgt 720 tgtcatttct tcgacactcc gccttggctt ggttccttcc ctcttcccac ttctctcctt 780 tecettteaa etecateeta atteceacaa actegetaet tetecetgte ettegtteaa 840 tgaagattcc atgctctgcg aattgatgta attactatcg acattggaag atcagaggat 900 gcacccaacg tggtggatcc gcaacgacgc catcctgcgc tcgagagtca aggatcgacc 960 gagegtaeat tagaetgeeg ttttaagtet eeteecaaga atatageeea gaeteggtet 1020 gtcatctcaa cctataagcg cccttcttcc ttgctgacag tttctacgtc cgcactagct 1080 tgctgttagc cgagttcgtt cctcgctagt tccattggtc tcttcggcac gttccgtgac 1140 ccccaatatg atgttccata gtcgcggtct agcttgaatt ccaacggata atgacacttc 1200 acaaatgggg gaggcgggtt gaaacatgca cgttcttctg ttatgacgct atccaatgga 1260 gagacagett egacgatgte gatgaacaac etceggteta ggtatagetg tetgateece 1320 accycttcag cattttattg attactactc cgtacgcgga tataccttcc acagcctgta 1380 cctggttggg catctcaccc tctgtctcct gatttcccgt ccaagctccc ctccaatgca 1440 ccctgaatcc tcaaagcagc tatcgccgag atttcgattc ttcgaactct attaggaaac 1500 gaggettegg eeggagttta egetttgtee getgagteee egaggeggeg eggeaaceea 1560 gtcgtatgcg cgtgggcatt gggcaaatta ctcgtttatc gctcatttgc caaccctgaa 1620 tctccacact agcacggcca ctaagcatgc gtttctgcgc ttggtggttc ttgccttgaa 1680 cagttcacct ctaatctgat ctatcgagtc tacaccttgc gcgcccatga cagttgtcac 1740 agtcaaccag tcagcggcta acatttgttt actactaggc aaaggagaga aacccgtgac 1800 gcagcatgct tctactaagt cagcccgtta tgcacgtcgt acaaggggac tgacaaagac 1860 ccaggtggaa gaatcaggcg cgcgactcgc agcccgccga ctgtcaaagg agagcattgc 1920 ttgatcaaat tggccaacag cgacacggca ctgccgttgg atgattttca aaccaaaccc 1980 aaccccagga atcgtcaacc tgctgtgtaa cggttcgatc cagtcgctgt ccattccggt 2040 acaccgaaag ttgattccaa cgccatgcct aaacaataac agagggccag tttcttacac 2100 atcttctaca agtggccagg cccaagctga gtgatctgac ccctagcagt gccccacccc 2160 tetactetet cetatetgeg aateagatte ageteteaet eegacgegae gagataetga 2220 cgcttgcgtc tcaagcggac gcagcctagg gggaggaagg atttagatcc cggaagaacc 2280 catctttcaa agtgtcaagt tgtcgatccc ggtctaagac gccttaagat cgtcatgaag 2340 gecegaacee egagetgtet ggeetaegga ageegatgeg egaagaeegg teaateaegt 2400 gaaggccttt cattgtagcc tgccgtatcg cagtaagggg tcatctgccg cctcgtcttg 2460 ctgtattttg aaattcagtt actgtattaa aatccttcgt attcatagtt atggggatcc 2520 gagggaatag caaaaatact tcgacggttc agttgtgatt cttcaaaaagc tctctgcgag 2580 attaggctac tttgtccgac aagtcgtgta tcctcagcct tctgttccac aaacggttat 2640 teceggaege tgtgttgege caacaatact eegattagge agggaeggeg gggggeaaag 2700 ctctccgcag aaccgggaca aaggacgacg acttcgcctt cctagagttt cagactgtca 2760 cctcgtgtcg attgctcgac aatccacctc cccattagcg agaaattcga gcaggtaggc 2820 tagetettag gegageegtt gaageegggt teteaaagae acetgtgata geetgeecat 2880 cacatettga gaccaageca gaaagtette ecaaatgaga tttgacaaac actgacceag 2940 catccaagct ccagagacac tttcatcatc ttccactcgc aagcagcagt agtctccccg 3000 tcaacccaca cttccctact ctctctttct tccttcccaa gattttatgt ccataacatg 3060 aaacccaacc caaccatctc agetcaactc tttcgcgagc ggeteetttg aeggteeegg 3120 agaaaatcag teteaateet teteeactet ggaaaceega ategeeaget teeggteaag 3180 cgccgccttc tcctcctccg taggaaccat tcccatcgcc tgctcgactt gggaggatgt 3240 ccaaagccca atcgacgccc acaccatgac tccgacacca aatatcgcgc gcgtcttggg 3300 cgagagggat ttgtaggagc tgtatataaa gttgctcaat cagtcagtcg aatcaataca 3360 agatttcttt tttgcaaagt gcttgttcgt actgagacac gcaagagcga gaggcgaatc 3420 ggaaattggg ggaaagtgcg ggagtcagct ggagcttgaa cagggcatac tgacttccag 3480 agagacatet tgtattgtgt aatcaggetg egteegeeag aaatettgta gteetaggtt 3540 ccagaaaaca gcccttgtag gggaatataa acctgaacgt acttcgtaat ccaggtgaaa 3600 geggettagg tegatgttee ttaategttg gttgtactea atagtgeegg teteeteege 3660 cttcttgtta gagcttgata caacatccca ttaccgactc atcctatgat tattatgatc 3720 gctgtatatg ctatgtgact ggctagctta cataaatgta aaagggttgt atagaggata 3780 tgtatatcaa tgctatcagc caaacaacct agcgtaccgc gtaaagaagg tacctaatct 3840 gatgtccaat ggacaagact gaactgggca taggttttat accgagacag cgcgacagga 3900 gtcatgatac tgagataaca atcatagcag tacaggggca tagcatacag agcgcaggaa 3960 acagagcagg acagtetega gaagaggata agaattggaa ceatacattg taactaatag 4020 gagaaataga caaagaggta tatcgaagac ggtaagcagg gatcagttca tggcgtgcgt 4080 gggcacatca tggcaacgtt agtaatcgtc aacatcaaca tatgctcgca cgctcactgt 4140 ttcgcttgct ggcatgatag gcaaatcgag ggtatattca acggaaagaa tcgccacaat 4200 tatttctttc cataagcacg gtcaatgtcc ttgtggtacc tgttgataat cttcttgcgt 4260 tggagctttt gagcggcggt catgaagccc tgttggatgt tagttacgtc ctgaaacaaa 4320 gcgagagaag aaaagacgta cgttctgagg agtccactcc tcatcagaaa ggacaacacc 4380 gttgataatc tcaatgccct tgaggccgct agcacgaccg gcagtctgga gctgcttgag 4440 gacaatagac ttgagcttct cgttgtgcac gagggtttct acagagtcac cctcaatacc 4500 gttctcgctc gcaatcttct tcaaagcaat ttccactgga acaatgatgg caataggctt 4560 gtcctggtct tcggctgcgt agacgcagat gttgccaacg ataggagaag atcggtagac 4620 ggactcgagc ttctcgagag caatgtactc gccattttgc gttttcacaa ggtttttctt 4680 geggtegatg attttgaggt ggeeattett gteaaattea eegatateac eggteatgaa 4740 ccatcctccc tcggcatatg ctgccttggt ctcctcctca ttcttgaaat agtgtgttga 4800 cacactgcct ccccggatcc agatctctcc ctgaggagga ttgttctttg tgaagtaccc 4860 ggcatccgcg aagtcaacca gtttgacttc aatgcaggcg gggatttcac caagagcatt 4920 cgggttccac gctccagggt cattcaaggc gcccatggcc gaagtctcag tcagaccata 4980 gccgctaatc ataggagcaa agaccatgga caggaacttc tgcgtctcct tggacacagg 5040 5058 accaccaggg gtcattcc

<210> 2420 <211> 1863 <212> DNA

<213> Aspergillus nidulans

<400> 2420

tctgaaaagt gggttcagcg acatacgtaa cgaggaagca ggacaaacgc tataagcgca 60 acgaatatgg tgcagacacc ctagaaactg ttagtagggt ctctaaaata gcgcataaga 120

ctctcgcata aatgataaaa gcccagcgcc atccagcccg acctaatgac tcgtcaagat tcgtggccaa cgacgcctgg atcgcaccgg acatcatcgc gtcagcaggt tgagcaatgt 300 tatataaact catacgcaga gctagctctt ccagtaggta ccattggcta tgctgtctat ttaqcaactt tcctacctgg ctcaaggqct ggcttcaggc aaaccgacct gataatagtg tagtagcctg gccaagtaac accttcgaaa aacccaatga ggaagcggcg ccgtagacct 420 480 atctgataag ctacccgcgt tggtcttgta caagagccca gtctacttac ctgcttctca ttcgtcacgg ttgacaagca acaggtaaac acgttccaga gaacctggtt cgttgttgag 540 600 atactggata taaattacat cccagcactt aactcgcacg caggcaacca tatagaagga ccgatatagg aaacaagaat gcaggacggg aagagcatga ccatataccc aatactatga 660 720 tccaggttaa cctgatttat tggacttcgc atggggacca tacttgaagt atgtcgtaaa gtaacctaat tcattgctat agagcttcaa gttgtcctgc atgccagaga catacgcgtt 780 gctctgaatc agcgttagca taaagagaga aagaatggat ataagctagg cacacaacgt acaatattga tttgatcgag atatttaaag acatagccca agaagccgat tgtcaggaat ccgagatcga gtctccttag ctgaaggctt ctttagttag acttatagag aggagaatgc gcttcatggt gcaaattctc tttctttcct ggcatcaatc gtgccattgc catcgtcact 1020 agcattggaa tcgccgtcga ccaaagccgt attcaccgtg ctgctggccg tcttgtccag 1080 aagcccattg atggtatctg cagttgtttt tgtcgttctc atcgtgactc gattctgggg 1140 tgcaatcaaa gaaacgactg gtggtagatg cagctttttg tattggagaa cgcttagctt 1200 gttataagta ttgcgccatg gaatggcgtc agctacagcg tatacgggtg cttatcatgg 1260 tgcttataaa atcatacaca atctctgaat ggcagaggaa ctcaaaaaagc tactcgtgct 1320 acttagcaga gcatcgagtg attagcatta accagagttt ttctgagttc taccttctcc 1380 agagtattat cagtggtcaa ggttaaatag tgcaatttat acaccttaat agtgcagttt 1440 ggctatttcc cctctcacga aatctatcca agagaaggcg tgatgcagct gatagccgtg 1500 gttggggtag gttggtaacc ctatctaqaa cgtttctacg tcaacqtcca gtaaqatccc 1560 aatttgcgtc attttagcca aggcttgata ttgtctaagt ctattagcta ggaagctatt 1620 ggaggaatat actactettt ageacaetta tettacatgt catgattttt gtetcaacte 1680 tttatgctgg ccccaaccgg cctctagacg ctgtgttgaa gagagtcatc aagtaggcga 1740 tgcggtactt ctgtgccatt atctggcacg cttgttccag aaaaaaaatg gcccgcgccc 1800 attcaaaact gtaggaacgg gcagccgaac ttgagtcctt tggcaaattg atattatagt 1860 ttg

<210> 2421 <211> 1564 <212> DNA

<213> Aspergillus nidulans

<400> 2421

60 aagggaaagg tggaagaaat caggtcctaa aagtacatgg gtatggactg taaacctaaa agccaaagag accccagcaa cagagccggg ttaaaggggg tttcaattca tgttggcaag 120 180 ggagaggaca agcctgttag cttaggcggt tcaaaagccc caagccctta aaaaggattg 240 gaggccggta aagctagacc ataacggtgg aaatcggatc ccgggtcaag ggaggatgcc 300 actggacctc caatagatgt cccatcaatc aaggggatcc agacacgccc tcaatagact ttgtacggtc ggcatggtgg cctgtccgca ggctggtgcc caggcaaagg cggcgctagt 360 420 tgagtcggta gacaaaatgc ggattttgaa cccttgggac ggaatgagcc aacagcacgg aactgatttg atggcgtgtc acacatcttg actgtaagat gtttgtctga cgctgacgtt 480 gactgatctg tgacacctac ctaatgaagc atagatctgt gttcaaacgt tatttgagtt 540 taagcaacga tatttatgtt acatatggct gtccatggcc tcggttatcc gccccaaagc 600 ctgcccgaca acgatataag aaatctaagc caacaaatga gttattacaa taaaacttta 660 agcgtcttca tgttttaggc agtattttag ctgataaggg gacttaatat tcacttctag 720 attatggtat acactettat aactaatacg gtactaagat atagtaatat aatatatat 780 taaagagtga gtattttagc cacatacagt aacttcacct atccagatct ctttcaaacc aacgggctgc cccgccgggc tttaagcagc caatcatcta tctccaaggg ccttatggac cattleatty tecaacycaa etgaattegy gyeggattgy gyegggttea geaagtetat cattgtggct gaaagcttcc tggtcacatt cggtaccacg tgattatatg taaagttggt 1020 gccatggcta gattctgttg tctagaaagt gaagatgcgg tccccagtgg accgtttaag 1080 cttgccaatg gatttaggtc tcagtaagtc cgatacatga attgaggctt ggtttgttgc 1140 tagtacagaa taccggcttt ctgggcggta aacgtggaga taaggttgca ttatacaata 1200 aagaggcagt gatctatatg cgtgcttaac agggtcggta gtacgcagta tagagacaaa 1260
aaaagtttct cgaaccaaga atttcttga gttgttaatg gtgcaggata agtagatcac 1320
accggctacc agggttgtaa tccttacttg cctgtttgag ttggcaaact ggccgctgat 1380
aagttttcc tgcaaatgaa aatgtacttg ggataattgg tccactttgc agggttccgc 1440
tggtacatta aacacctttt tgaggaggtt aattctcaa ctaccatcac ttattagaa 1500
ccgcttcgcc cttattgctt taactttat tacctgggaa agggcaaaac agttttaacg 1560
gccc

<210> 2422 <211> 712 <212> DNA

<213> Aspergillus nidulans

<400> 2422

cgagcggcca ttcgttggta tccgacacaa atccaaccac attcatgagt ttctggtttg 60 caacggggaa ggtgaggagg tgtgcgtttg gcccgccgta catgtgttgg ttcagcgcga 120 gggacttgcc gagtcgcgag atggcgagcg gcatggggat cagggcccga taggcgattt 180 tgtgggtgta atggggatat gagacgggat tgtctacgcc gaaaaggagc tggcgtacac 240 gggactttag cccgtcagtg ccaatcactg cccggtatgt tagagtcaat agaatatagg 300 acgttgcgta gagggttggg gagaggggta gccctaatta gggctagacg gggggaagac 360 caatgcatac caatatcagc ttcagcactc gaaccatcac tgaacatcat ctgcaatttc cettetece cettetettg etetagtaca etatacteet ecaategett teccageacg 480 actacatcat cattcaagtg ttccagcaca cccctcagaa actcctgccg atgacagccc 540 tcaaagcccc ttctcccagc atgcagccgg tacaccttct tgcccaccaa gtgcttgtcc tacttcgaca tcttcttggc gatgagtgta cccatccaca aattgcatat agttgtttgg 660 ccgttccgga tcctcaccgt tggctgttcc aacgctagtc gcacactcct cc 712

<210> 2423 <211> 1315 <212> DNA

<213> Aspergillus nidulans

<400> 2423

60 cttcggggta agagaaccac tcagggatgt gagcaccggt acggagacgg ttacggagtt cagttccgga gatgtcgagg gtcttggtgc ccgcaggaac ctcgtccttg ggcatgtact 120 catcggtgtc ggggaggtag gtgacttgct ggaattcaac gacctcgata ccgagctccg 180 cgcggtactt ctcgaccgcg tgctgagcat cgtaggggcc gtagaactcc tgacccttgg 240 agttcttacc aggaccggcg tggtcacggc caacaatgaa gtgggtggca ccgtggttct 300 tacggatgat agcgtgccag acagcctcac ggggaccgcc catgcgcata gcaaggggca agagagcaag agccgccatt ccgttggggt agcggggaag aagggcctgg taggcacgga 420 cacgggtgaa gtggtcaatg tcaccgggct tggtgagacc gacgacaggg tggataagga 480 cattagettg gegggegega eeggeaegga eggteaatte aeggtgaget etgtgeatag 540 ggttaattag gtctgttagc catgacatcc cagtctcgag tcaagtaacc agaacgaacc 600 660 gtgtctggaa ggcaacaact cgggtccagc cgagcttgtc gaagtgaata cggagttccg cgggggtgtc taaaatcgcg ttagatttat ctttcttgat ttatgcaggc tcctgttgtg 720 ttctcaaacg tacagcggag gccgacataa tcgtagtggt taagcttgtt gactgcctcg 780 agctttccac cgatgtagta ctcctcgacc ttggtgttca ggtacttgat ggcggggtgc tctgggtcac cgccgaagac gagcttggcc tccttctccc tggaataagc aaagatgtta gaaattgcgc aatcctcgtt tagataaatg ccacgtcctt ggcaaatccg cagcgcccgc tagtcccgcc atccggaaga ccaagcgaac gcggagtacc aatgacgagg cagttgccca 1020 aggtcatgaa aacaactcac ttgtcagggc ggtagatgtc gtcaattgta agaatagcaa 1080 ggttgcggtc gtcacggaag tcacgcaggg tgacacggga gccaggctta aggccggcct 1140 gttcaatgac tgccttggaa gcatccagag taatgggcat agagaagagg ttgccgtcgg 1200 caagacgaga ctcggcgacg acgctagaaa acccccacca ttagcaaaat tggcctattt 1260 gcgaatatca ttcccgttat gcactatttt cgcggtctgc ctcacaaaag cgaag 1315

ccccctgtgt ctcgaattcc ctgtattcac tcttacgaac aagcctgttg cacacggcct 60

<210> 2424 <211> 1101 <212> DNA

<213> Aspergillus nidulans

<400> 2424

ccagtctatt ataacagtca gtgcccgctt taaaggggca cacatttggt tgcacgactt ttgagtagac ttcaacctgc gagttagggt cccttctacg atgtcttgcc ttgggcttgt 180 agctcagctt taagatatcg gacggatact ctttcaggta gttactgtac ctgcatatga 240 300 acctgcaagg atgcttttag gaacggaaag gtcgctacgc cacccgtgcc catatgtact tggactacac agtaatgggc gatcacgtgc aagatgcgga gaacccgctt caactccgca 360 ggactgagct ggagggcaag tattaacatt ggaatcatcg agataaagca cgatggaccc 420 480 ggaagccgcc agtccagttt cagaccaacc tccagttttc aactacattc tctcgtttct 540 acttgtcggc gtggcctggg gtttcaccac acctttcatc cgtcgcgccg ctgcggactt 600 tcaagegege caggagaage agcaacaget tcagcagace gaactecage ctacaggage acaatctcga gcccacgatg acgacaatgc ggacgatagt gctactggga gcgacgagga 660 720 tcaaccctta ccttcccaac cttccgatcg ctcaacaacg cggcagccgg cctggatgaa ccaatccaca tcctcgtcct catggataag aacgaaagtc gtctctctat tttggacagt 780 tgtcaatctt ttgcgcacgc cggcatactc cgtgccacta ataattaacc tgacagggag 840 tgtctggttt tttctcctgg ttggaaagca tggtgcgccc accctccgcg gaatatatca 900 gtaagactga ggcagctaat agtctcgcag aactctcctt gactgtgccc ctagcgaact ctagtgcatt catcatcacg gtctgggaag agtggtccgt aggaacgacg gtcattgcgc 1020 ggcagacatg gctagtgatg gcactgttcc acggttgaat tgcgatttgc gtgcagtcga 1080 cctcgtagcg gtcaatctgt c 1101

<210> 2425 <211> 1516

<212> DNA

<213> Aspergillus nidulans

<400> 2425

aagatcaaag caaggcatta cccatgacca taacggcgct aagacgagag aggtaatgac 60 ctgggtgtt tcggatgtag gcaggtggta ctccgcttcc cctctcttct accatttctc 120 tttcttcctt ccttcgtgaa cagtgggagt caaagaatat cagttttctt gctcaggctt 180 tctgttctct agtattctcc gtgcttctta cctaaactgg cgtgcttttc gccctccaag 240 aacacatggc tctcgtcgca aagttggcct acgggctctg cgtgctcggg aacctatctc 300

gaggcattct ggctactcct ctgatgagcc tgacgaacga ggaatataac caagctccgc togotgaato toatgactog coggtagacg coccaagoga tgatgotgta ttogttaact 420 cggatgcaga gtcgatcctc ccgccttctt ggtggacctc aactcttatg gcacgacgac 480 ttctcgctct ctccacctcg ggcgtggcct caacaatatt ccccgaccac ttaccaccct 540 600 atageegtae tecagacaee gttgeeggee acteggtaag tetgaaagaa taettegeeg 660 actgtgacga agcactccct gccgggtctg gcaacggcgg cgacggcaat ccaaccttcc 720 ttgctctgca cgtcgcaacg actttccgca acaccgctgc tgggtccaac atctcgctat cgatcgactg gtgggatcat cttaaccaga caacgcccgt ctttcctggc ttcccgctca 780 gcgcagcggg tcttccgcgg gccacgctgt tcgggtatat tgagcccttc gagacgccga 840 tcccatcgga aacggagaaa gcactgacgg actgctatgt cgctgctcac ccagattcga 900 aggtetgget acetgggegg etggggtege egeattegag ettetgggee aagatggteg 960 ttacgcaggt atactggatt gggggttttg gtggtctgca gcagattggg tggatagata 1020 tggatcagtg gaaaggcatt cgacgtaagg ggagtctgcc tggcgttgga gatggacggg 1080 gatgggagga cgtgaggctt ccaggggaga attagcggag tactccgcaa tggcctgata 1140 cacttecagg tgaagtttgt gegaatggtg gegggtgget tgaacagegg ggattggeat 1200 atgctagcga ccaagaattt atttccactt gtctgtccgt atattatgat agacagttat 1260 agcaggaaat tecactgcac caggataacg agataaggcg tecaatggcc gtgggcgccg 1320 aatctcqtat ctqqaqqtct cctatctgtg cttatctctc cttatctcca tgcagtggca 1380 tacaatactg gtctgtcctt cactggattt cccatggctt ccagccgcaa ttgactgttt 1440 gcetgttget ggctcttcat cgagaaatac ccaagatgcg tttcggtcgc tttcacctcc 1500 1516 gcgttgagca gtccgg

<210> 2426 <211> 5047 <212> DNA

<213> Aspergillus nidulans

<400> 2426

ctagcatgtt accagcgatg tctggaactg gtatgcaggg ctctctatca ttcctcacaa 60 tctaattgcc atacaacagc attcagcaag acaatccatc ctgaggctga cgatacaaat 120

agcactgccc gcgagaactc ggagtgtaga agtcggaccg gcctattctt aatgatgaca 240 cgtagcggtc ggccacgttt ataccaacag cagctaccgg ttcatgcagc tgacctttta 300 agcttggtac tgccacactt atggcagtat acggtcacca ccttactttt gagtccttat attcaagagt tgatcgctcg gcttagaact caatccctca gtctccgagt tgttcttcac 360 420 gaccaagete aaaaatatag ggtatattga agteggeetg gagecatgat etggeegeet 480 tcccatcaga ggcgaaggcc tgtattcaga aaaccttttc aagccttatc ttgatatgca 540 aatctgcaac tgacttctgt tcagaaacgg acattttttc atctttatcg gtcatagcat 600 caagacctcc ctgatcatcg tgccgttcaa acacgtccgt cgtcgccatc cacgctgctc 660 acctgeettg tgeagggate gtgaactatg atagagetga aattagaata aaccaggegt 720 atttttaaga aaagccaata aatgcagccc tccaccttga tttcatgatc tcatcactgc 780 tgtggcacaa atcaggagcg ttgcatgaaa ttaagcaacc ccaccgttgc cgccaccggc 840 tttagcctcg gatggatcat aaagagtgcc ttcaaatccc aaagtttccg tgtgatcggc catgccagta agatactgta gaagtacaga aagctgaacc ttcccgcaaa cgagagcaag 900 ccacgcagcc aggataaaaa caagattgtt gtcttgacgg tccgcatctg acgtagaagg ggatttgtca agggctacag gtggctgcta tttctttttc ttctcccctg aacccgagtt 1020 gttgtgatcc gggttttggg aggtcctagg ccccgcatct tagaactgtc tagatagatg 1080 cagatgactg cttcactttg ataggattct aagggctcga gtctcggaga gtacgccaga 1140 acccaaaaaa ccaacacagt ctgccactgc cgacttgcat acgcaaagta aataggtaaa 1200 caggtegact agteggttgt ttactetggg agtetegtga acgtegetgt cagteggteg 1260 gccgtccagc ttccagcatc tagatcttga tcttgatctc cataattgat acatagcccc 1320 gttccatggt ctttaaatcc gcttgttttg caacggatcc gttgatggcg tggactccca 1380 cgtcaatcct ggccagacca ggaccactag tatattattg cgtatcactg tattgtttgc 1440 agaccgcaac cgtacactgt attattgagg tgctcggcct gattctcggt ggcgggtatc 1500 gcccgagtct acctagggat gccgacattc ttccgtcagc cagaatctac ctgacagcca 1560 tegecaggaa ettgteeett gagtteteag tgaegetete agacacaata eetgteaete 1620 aggeteatte gggttetggg tgaaagaceg ageacegtge gtacttaate caagagaate 1680 tgcaaatacg ctttccgggg taatccggcc tgtaagcaaa aaggcagagg gtgtgaaatt 1740 qaaqtqqtaa tqatcaqttq aqttcaqtgc tcattggcgg atcagggcat ttcattgttt 1800 catatgcaga ccttggacca gtcccgaaac gtgggtggcg ggctggtggc gtggactttg 1860 agtacgtaca taactaccgg tggtcgcgat ccatgggccg gctggaaagg ggctgcgaac 1920 agtaaacatc ccatgatact ggccaataat ggtaacagga cgtattttca agtcgcccta 1980 aaqataqctq cggttccaag gttcgaatgt agtcgcattg agaataaact aaaccatcta 2040 tgcctcgagc ggtattatca cgtgcttcat tcatgcataa catagaaaga cttatgcagc 2100 ggttgaattt gacagtcaca agtcgtggta tctcggcatg gtccatgttt aataacctcc 2160 caaqtacatq qqttattgaa tgtcacgggg atcctggtta tttggagccc cttttcgcgc 2220 tcatgcaggt cttaagcagt ttgagcgact gaagaccagt tgtacgtgaa acgatatgga 2280 atgattecce aaacaagete gteetgagtg gettaceteg eeggeeegge tgteeaagee 2340 attetetaaa etgtggtete ageegeagee aaattgeeat agggeetaae eetgaaggea 2400 cagacatgat tatggtgcag tctcaccagg aacaatggtg gggagccaac ttctgagtgg 2460 agcagetgga getgttteag gtegateeet gagtetggag teagggatge tacateaagg 2520 ctacaatgta tactctggag tactccaagt attcactgag agcagtcaag catcgaatgt 2580 cccgtctaga aaacgcggag cttttctcta cttcagatac caagagcgca tctggccggg 2640 tattgatgcc ataatgcatc gagcctgaga caggaagctg aaccaacagg tatcttgcgt 2700 tgcaattcac gtaaattcgc attcctgccc tcttatacca tcctgatcat cttgaacagt 2760 ccgatgattt tcctcctacg aggagtctag accttactgt ccagatggct atggacgcct 2820 ggagtegget gtgaaegega gageetaaeg geaateeeag teeegageet gegatgaaet 2880 gactatecea atgacetatt tatataegee agegaggata aataagettt gettggacee 2940 ttctcccctg aatctcgaag cccgtgggac cagcttgcgc gttgttgtgc ctcttgatat 3000 cagcgcatcc cgtcgtggag aagtctcacc gtggtttgcc aaatgataac ctccagagat 3060 gcacatcacc gaaaatccct tgcgatcaac ctcgcgaaat tccactacaa gcctacaagc 3120 acgcaagagt ggacatggct cacagtgatc tagcaaattc gccgtcgaat ggaqcqqcct 3180 cttgaggctt accetgtage etggggteet eegteeatga agtatgaatt ceetetetge 3240 cetggegeee ggteeegate tetetttet egceattete teaagaatea acatteatte 3300 ttttgctcgc ttgattgttc tatctgactt ttagtgctat tgcacctttt cactcacttc 3360

cgcttactgt ccttcgcacc ttccattcct ttgttagtaa agctggtctt gcgcgccact 3420 ctttccatca gttacaggca taccacaacg agttcggacc ctacggtcgc atcttcactt 3480 gagccttgca tgcttaacag tgtcccaaca tgaagttctc cagcatcctt gcgggcgctg 3540 ccttctttgc cagcagcgtt gtcaccgctg acctggaccc tatcgttatc aaggtacgag 3600 acggcagaat gccacgacaa actaagctag gatgaggcag tatctaacct tgtgcagggc 3660 tctaaattct tctacaagag caatgacacc caattgtacg atcttctttc catgagtatc 3720 gacggagact tgtactgacg tgaagcgcac gtatatccgc ggtgtcgcct accaacgtga 3780 gccctcctga cttggccgtt gatgccataa ccgagcttct atggctgacc tatacagagg 3840 aatattccgg tccaaagtct gatacaaaca actacaagga ccccctggcc gatgtggagg 3900 catgcaaacg tgatgtccct tacctccaga agctcaatgc caacactatc cgtgtctacg 3960 cagtcgaccc taaggcggac cacaaggagt gcatgagcct cctcagtgat gctggaatct 4020 acgtcattgc ggacttgtct tctccttcag agtctatcat ccgtaacgac cccaagtggg 4080 actttgatct ctaccagcgc tacgcatctg ttgtggacga actgtcccag tacagcaacg 4140 ttattggttt ctttgcaggc aacgaagtat ccaacgaccc cgagacaact gatgcgagtg 4200 cctttgtcaa ggccgctgtg cgtgacatga agcggtatat caaggccaag aactaccgcc 4260 cgatgggggt tggatatgct accaatgacg actcatctat tcgtgtggat atggccgatt 4320 acttcaactg cggtgaagag gaagacagca ttgacttttg gggttacaac gtttactcgt 4380 ggtgtggcga ctccaactac gagaagtctg gctacaagtc ccgcaccgag gagttcaagg 4440 actactccat tcctgtcttc ttcgccgaat atggttgcaa tgcagtcact ccgcgcaagt 4500 tcactgaagt cgaggcactc tatggcgaca agatggccga ggtctggtcc ggcggtattg 4560 tctacatgta cttccaggag gataacaact acggtatgtc cctctggcac atctgcatct 4620 actttctaac agaaactagg tctggtctct atcaacaacg gaaacgccaa gacccttgaa 4680 gacttcaget atetetecaa geaacttgee tetgeaacae eeteeggtae caagaaggee 4740 gactacaacc ccacaaacac cgcgcttgag tcttgcccaa ccaccggaaa gaaatggctc 4800 qccqccqcct ctcctctccc tccttcgccc aactcggatc tctgcagctg catggaaaag 4860 agcetetett gtgtegeeaa gtetgaeate tetggeaaga ageteteete cacetteage 4920 actgtctgcg gctaccaggg cggcaagttc tgtgaaggcg tttcgggcaa tgccaccaca 4980 ggcaaatatg gtgcttacag tgtctgcact cccaagcagc agctttcttt tgccatgaac 5040 5047 caatact <210> 2427 <211> 1851 <212> DNA <213> Aspergillus nidulans <400> 2427 aggagtgctg tctatagcat tatggtggtg tcggcgcca tcgtggccct cactagccga 60 cagetteegt ggatagttet ceteetegag eteetggaga accegateat gagaettetg actgcgctca aaactgcccc gttgctggcg gcctgcgttg tggcgaaggc aaactaccct gccatcccgg tagatacgac cactcctgtt cagcagcgcc ttgccatcta cggtcccaat 240 tgtaagataa cgcccctgct cgctcgttgg tcttttgtta atccctgcta gcaatttcga 300 tcgggtggaa cacgtacgaa aagctgaacg agtcctgtgt cgagtatgga acgtcgagcg 360 agaagettga eeggegggeg tgegeattgg tegageeaac caegtaeeca acatetegga 420 480 catacgagaa tgtggttatc ctgaccgatc tgacggctgg caccacatac tactacaaga ttqtqtcqac caactccacc gtagatcatt ttctgagccc tcgcgttccc ggcgatgaga 540 ccccgttcag catcaacgcg gtcatcgatc tcggtgtcta cggcgaggac ggctacacga 600 660 tcaaaggcga taagtccaag aaggacacta ttcccaccat caacccagcc ctgaaccaca 720 ccaccategg cegtetegee ageacegtag atgaetaega attegteate caccetggeg 780 atttcgccta tgcagatgac tggttcctct cactagacaa tctactggac ggcgagaacg cttatcagge cattettgag aacttetacg ageagetgge eeegatetee ggtegaaage 840 cgtacatggc cagtcccggc aaccacgagg cggcatgcca ggagataccc ttcacgacgg 900 gtctctgccc cgacgggcag aagaacttca ccgatttcat gcaccggttt ggccgaacca 960 tqccqtccaq tttcacctcq gtctccacca acgactcagc gaaagtgttc gccaaccaag 1020 egegegaact ggcgcageeg ceattetggt actettttga gtaeggeatg gegeacateg 1080 tcatgataaa caccgaaact gatttcgaag acgcgcccag cggaaaaggc ggttcggctc 1140

atctaaacgg cgggcctttc ggcgcaaaga accagcaact cgagttcctt gaagccgacc 1200

tggcgagtgt cgaccgcgat gttacaccgt gggtcatcgt cgccggccat cggccgtggt 1260

acacggccgg	cagcgcatgc	acaccgtgcc	aagaggcatt	cgaggatctg	ctgtatacct	1320
acggcgtcga	cctaggtgtc	ttcgggcacg	tacacaacgc	gcaacgcttc	ttgccggtct	1380
acaacagcgt	cgcggaccct	aacggaatgc	aggaccccaa	ggcgcccatg	tatattgtcg	1440
ctggaggcgc	ggggaatatc	gagggcttga	gctctataac	caagcagttg	gatttcaccg	1500
agttcgcaaa	tgatgaggat	tatacctatt	caacaatcag	gtttttggat	cggaatcacc	1560
tccaagtgga	ctttatcaac	tcggtctctg	gggaggtgtt	ggatacgagc	acgctgtata	1620
agagtcatga	ggcgcggttt	gtgaggcagt	gacgggccgg	gttctgtata	tagcagaaac	1680
atcactcggg	tatatacgct	tgtggattgt	acatagttgg	tgatgcggca	atggccttct	1740
cttgcgtttt	cagctctctg	cctggtctct	cagccccgcc	ggatatcccc	cagcttgttt	1800
agccggaccc	cgtgggggcc	tcactttcta	tctccaatcc	ccaccactct	t	1851
<210>	2428					

<210>	2428	
<211>	433	
<212>	DNA	
<213>	Aspergillus	nidulans

<400> 2428

aagcacaaat	tacatcaaga	acgtctattt	ctgtatcatc	catgtacgac	tcaactcgag	60
ctttaactca	ttgaggaaac	ggatcgtcag	cattatgcaa	tcttcttaat	accaagactg	120
cattgaaaat	aaccaagttt	tgtacatcgt	tcgggctcca	gcacataaac	gatgcgaata	180
aaacgaccac	aaaaccacct	aggtcttgcg	ccaatgcaga	aatctaggta	cgtccacacg	240
cgtcatgctc	tcccagcatc	tgttgaacta	cctcgggata	tccaatcgca	aagatccaga	300
ggcctcgcca	tctatgggtg	catctcgctt	gaatgatcgg	cactgagtat	ctatgctgca	360
gccaactatg	tcttgtctcg	gtagtcgagt	caagactgtc	cgtaccagat	attcggctct	420
ggaaccacat	tga					433

<210>	2429	
<211>	762	
<212>	DNA	
<213>	Aspergillus nidulan	S
<100×	2429	

aagatcgata gaatcgtgga cggggttcga gagagcttgg acttcatcaa gacactggac

60

ccqqccattg caagaatagt tcgcgactgc tatggatggg cgacaaacaa gggatttgct ttcttgattg gcgtggtgtt cctcgccttc gtgagcagct tattcattcg cgaacggagc 180 240 ttqtcacqct qaacacqcac ccttgtcaag gagtaggatg acatcgtcct ttgatatata 300 tggaaatacc tgtgtttagc gttattatat aaaaagtagt gtattctgta taaaatttca qtcacatqqa tqttgatttg ccttggctcc aatctcacct actacggaag gcggcgatcc 360 420 cqatcatctt catactgccg ccgattcgat gttctttgac caccaacact actcgtgctt 480 tctcagcgat tcttcctggc ttgttttctt ctgacaagtt gtaataatgg tgaatcattt 540 tgtctagtat ttccacatat cttcaccatg tccgactcgc aggctaagtt gaccttcgct 600 cgctaccgtc ctctcgttta ccttctctc ggtgttgctg cggcgtatgc gctcgttctt 660 cttcgaaacc atctcttctc gtcttccccg tcaccaatcc tctcttcgcc cggggaaagc 720 cqttccqccg tcaaagaaga aatgagcccg aagaagttgc agctggcgac acgccggcgg 762 tcttgccatc ggccattgga ggttctagaa cgccagaacg gg 2430 <210> <211> 4717 <212> DNA <213> Aspergillus nidulans <223> unsure at all n locations 2430 <400> accccagagt ctggaagaac ccttccccag tagactcgga aggcgtgacg gtccagttgt 60 120 ctgagagaat gtatttgtaa ccaaagccct ggccatctcg cgtctcgccg tgagggcgtc 180 taacqqaqac acqacatacq gagctggtga gtagctgcca cctccagtga tgaggtgtcc atcataqqta tcqcctqcqa agttaqaaaa gtccqactqc qqcqtcqgtc ccqtqqcqaq 240 300 attqqccqcq tctttqccaa agatccccag cgacatcggg ctgcggaggg ggagggtgtt gtttttgttc ttgagcagga cgattgactc ggacccggct ctgcggatga agtctttgct 360 gctggggtct cggacgttga ggtcggccgt ctcaacagga aatgcgtact cctcaggtgg 420 480 ctgaaggagg ttcaactgcg tggccacgat tctcaacgca tgttcagtca tgacgctttc 540 tgggatactt ccgttcttga cagcagccat gatctccgag acggagtacc ctgagttcca

600

gccaagcccc tccaagcagg ccggcagcct tgtccacagg cgcagtgaca tcagggacga

tqaaacctqt qatttcaqca gtqtccaqag tgaagaaata agaagactat cacaatgggg 660 taatacctct aaaaccqqtc tcattcttca aaatgccqtt cataatgtga tcattttcac 720 agccaatgat tecattgacg eggtteatga cacacataac ggaacccagt ecattegcaa 780 caccgtctat ccagggccag aggtagagct catgtagggt tcggtcgtct agattgctgg aggtccgcat cgcagggttg tcgctattgt acgaagtgcg attggtttct tgttcattcg ctactqtaqt caqctactat acttqaactc tgggggtatg agaaggcgtg caaacccaag taatgettge egeaagagat catatettgt teetgaatgg eggetaegee tagaeegaae 1020 ctgcgtcatg ttgagccatt atattcccca aaacttggaa tttcgagtct ttacattttc 1080 ccattcaggt acggatctga gccctaagcc tgagcgttag aggtgcggtc gccataatga 1140 tatatgcage egettaetag teetteecag ageettgaae egageggaet eetaecaaga 1200 ggtccagttg aaggcctag aagcatgttg tatccctttt tgcggaactc gacagccatt 1260 cgtgaatagt ggtccgcaat cagagatcgg ttccaggagc tggtgatcgt ctggccgcca 1320 acccagccag agacacettt ceetecagag agaceggttg gacetgaaag aetttageat 1380 cagtggtgga aggctgaaac gaagtgcaac tgcaagaggg ctggaaatac tcaccgtcac 1440 teggeteaaa eggeacaaag eeeggegeeg tgecateeet gacagagata ttggettget 1500 getetaatgt ceagggeage acaagtgtet etgetgette atatgeettt geceagteae 1560 gatacggctg ctggctctga ccttggacaa ggcctagcag cgtcgctacg ctagtcaaga 1620 cggggagaat atttgaatgc attctgaggt ttgatgagac gaaggccacg agatttccgc 1680 cactgcccag tgaactaaaa caatcaggag cggctacatc tgtcttttgt accctttatt 1740 tgctcctcgt gcccccgtcc ggcttctccg gatgtccaag cagaaactga atttgcagca 1800 ggcgttggca ccgtaggcga gctcacccag ctcgggcgaa catggcccga gttcagcagc 1860 tccaaccttg gcttgtataa gccattcatt atttcctcag ctctctgtga ggtgcccggg 1920 gagattaagt cttggctcct ttagcacgag tcctggggtg ttgccaggat tccccgtaca 1980 atgcggggtg gaggcgagga ctaagccgca gccacggcgt aggatatccc ggtttagggc 2040 cttccatctg gcctgctgag tggtcactta ttgatctagt ctggtcatga tcatgttgta 2100 aatgtcattg gacttttctt cagctagatg cggattgtat gatagagatc atcgactagt 2160 atagcactac acctttgacc gagggaattt ggtaattatg ggctgttgat cttgaaagac 2220 ctacagacac gattattgat agttctggag cattcctggt catagtggac tgaatatatg 2280 gcaaggcacc ggcactcgtt ctcatacctg cgttagggct atgcttcggc tgaacttcgg 2340 aacatcgaat tacagcgcaa gttcgccgct aagctaggga aaaacaggaa tagcatccgc 2400 agttcaattc tccaagatat tgacggagta gaaagtgcgg agtcgagggt gagtgatgtt 2460 taatatggcc tgacgagggt cttactggat ctccatgtcc aagaattcct gtacgacgaa 2520 tatctgcttg tctttgactc tagtcattcc tcagttatca ttatttagga ttcaaggccc 2580 gaaaaaagaa cagttccaaa tcaagttgtt aggctttcaa taccggattc agtataatta 2640 gcctgtttgg ccaggcagtc atcatggtgg cgcaaagttg tcaataagaa tccagtccca 2700 aactccttga acagccaaga aaccttcatt tcacaagtac ttcgacgcac tactcaagat 2760 atccaaaact catcagcagg ctcgccaaag acagtacgac taatctggct gtactcctat 2820 acctccaatg tcctgcaatg cggtatactc ccggagacgg aagaaccact actgtatatg 2880 ccgaaactcc tatttgtgac atagataggc gagtctagcg atatcaacgc cgaaccaatg 2940 ttcaccaaga gcgtctagcg tcttattaat cctctgagtc gctgcaggcg actgcaattt 3000 tcccagcctt tggaaagctg cgtagctacc gatgattgca gcagctcata agtcgctgtc 3060 aatctggcaa ggctgaatga gggagcgaga tttctggact gttgtctatt ggtgtcatgg 3120 aaagctgtac gttcggcaca tggtcagtct catatgttgc ctcatatgtg tccatcgaac 3180 atgtattege geetttgate caattaetea ggeggetagt tetageatta tetacegaca 3240 aactcgacgg tgatcgacgg acaaaaatac ctgactactg ataagaaggt cagcaggacg 3300 gccaacgaag ttgaagcgga caagttaacc acactgcatt attcggtgtc ggcagcgagc 3360 agagtgggaa aggacgagcg gtaaaggaat gaccagcttg agtagggctg tgtgactact 3420 agatcataga ggagtaacct gcctcgcacg tccatttgag atacgcacac ctagctcagg 3480 cttaggaggg actgtctgag gagccagtta caaagacggg gttatcctcc gtgttagaga 3540 gcgatgttca aatacgttag ggtctgaatt ctctagtgga ggcggcacaa gcaaaagagc 3600 aagcaaaaga gaagagagct gcacatcgtc ggacaaggtc ggatctagga caatgtcttc 3660 tactacttgg ttgtagtcaa gatatttaca atggtaactg ggaaacgaac tgcggaacta 3720 cagcaatgct gactgacgct tcagataata gatgggtatt tcctatatat aaccagaaac 3780 ccactattat tatctccata cgttgcgaca acatgcgaca actctccgtg ggtaaccaat 3840 qaaacaatat qqtatctctc atataaacca aatatctata ccggccgtta ttgcgacctg 3900 cgggagttcc gattcggtga tgccattaac cagaatatcc tccgggtatt tgcgatttta 3960 acqctqatqt aqcaqatqcq acttqgqcgt aaatactaga atagacaaag tgcggtgaca 4020 cgqtcgcagc aaagatgcat tatgtgcgcc aatgtcaaca gcctgcggaa ctcgggattt 4080 ctcaatgact ctgcgcggga gatcctcgtc ctgaggaaga ctgggtagta tcattcgagc 4140 tcaaqttqtq tccqqctttc tqqaqttcat cctccatqqa qactatgatt ggtggcgctg 4200 accttaaagg tgatggacca gggactagag gcgaatgggt cgacccgcgg ccgtgatcgc 4260 tcaagtttgt agtgctgatc gtgagcgcgt taatattgtg gctgggtcca gcggtcaacg 4320 cagggaacga gcgcccagcg tttaatccat gaggatgaac gtcgagactc tcaggaattt 4380 eggacgttte agggttagea acttgetgat aateacettg tegtettgga geagagtege 4440 attccgaatc cgagttcgga ttggagtccc aattgttgtg ttgggcttcc gctcgcattt 4500 tegatacett catgtagttg taagaggeaa taetgeeaat ggtgacaata agaceggtea 4560 cattgacggc cgtgagtttg tcgtggaaaa tcacgcccgc cgcagtaatt gtgactacct 4620 ccttgaatat gccgcaaata ctcaaggtaa caaccgagga tcgcttgagc aaagcgaatt 4680 4717 cggncgggat cgtgcagaat gctaaaacaa ctagaac

<210> 2431 <211> 2788 <212> DNA

<213> Aspergillus nidulans

<400> 2431

catceggatt gatgeeceag acatteacet geeegaegge aggeeactee gaggtgaaat 60 ggtactteea gtateegteg eegeeggege eegegteeag ettgatetgg ttgteeagae 120 egeegtegta eeegtaetgg ttgtagggee cattgaaaaa ggeatgtggg aagegaegtg 180 gegtettgta etteeageeg gaategeett eetggaegtg getaetgetg eeagteeage 240 gggaeeagta etegaegegg atgtgatgte eeteeeatte etgegeetta gtgeeattee 300 atggaageat ggtaategtg tegttaeete eettgtaegt ttteeagtea gagaaegtgg 360 tgeeceaatt egtegaatag eggtaettgt eageaeegge agegtggtgt tggatataga 420 aegtgeegte eteettetea tgeageaaac tgetggagta gttggeagag gtaaagaeea 480

540 tggggttgtc aatctgccca atccggaaga ggaagtggtc gactgcgtgg gtggagtcgt ccccgtcggc gttgctggcg ttgttgacag tgacccggtg gatgccgttg tacacccctc 600 660 tcagatctgc agcccactgc cacttaccgg ggatgtgccc ggtagcgttg ctgttggcga 720 cttcaqtqat qttcccacac tqqacqqtqq aggcgtcgat ggatggaatc ttgccggttt ccgtggaaga gttaaatgag atggagtctg tgacagaatc gcatcccatc gcctcagaaa 780 840 actgcagcgt cagtcgcacc gtctcggacg catctggtgc gacggtcgaa cgcagcgggc 900 tgtcggtgcg ttggcctcat cgtcgccggg ctggaacttg gtgatcatcg gccggggctt 960 tttccagagc tcgttcttga cataggcacg gaactcgtac cggctaagcg tcaggttcgg taagcageet accageteag tegagttgee atagaceatt teetttggee egtegeetag 1020 ggtcagcgtg tcgtacgggt gaaagaggtt cctgaccttg gtgcctgagg ggaaggcggc 1080 aatgagtgcc gtctcattgt cagagcaatc aaatgtgtag tcgtgcgtgc ggttcatgtt 1140 qctatagact agccagatgg gttcgttgtc gtcactcgag ccaaagtcct gggtctcttc 1200 gttccggtca cggcggaccg accacatgcc tgtctcggtc tcggtcccgt tggaaccggg 1260 gtagtagaca ggttccgtct ggttagaaag ggtctcgatg atgaacccat cgttgagcat 1320 tgggtactgc tcgcgcatct ggtacatgtg cttgatgatg ttgcgcaccg ggtggctcgg 1380 gtcccggtgg tcgtaggtga ccgtctcgtc gttgcaaccg tcgagtgcgg ccaccagggg 1440 ccactggtag tactggctcg attcgagtga gaagcagccg tgcgtcttcc acgcggtcgc 1500 agacgacatg gcctgtcgtc catatatgta gtttgacgcc gtcgcatcga gcacgtagaa 1560 cgcttgctcc tctccccaaa gcagcagcgg gatgcccggc agcatcagcg tggtgataaa 1620 cgagcccagc atctgcctct caacacccca ctcgattgcc ggccaacgga aaacatcctg 1680 gtttgtcacg ccgtacatgt gccggggatc gaacttgccc gtgttggcgt taatcaggtc 1740 gttggtcacg gtcatgtttc cccatgcctg cacccagtca agagggacgt cataaccggc 1800 ctccagctgc ccgtccattc ccaggaagcg ggtcagggca cggtaagtcg agtaatggaa 1860 ggcaccggcg tcgatagcct cgtggccgac ctcgcgcagg aaaagctgcg gatccgactc 1920 gtttgtcagt ttcatggcgt cgtagatatt ccccaccgaa tcgacctggt tcgactgccg 1980 tcctcgtccg agatagatag acccaaaagt attgcctcct gtgatctcac ccgcaatgaa 2040 aaagttetee ttgeegacag eeegegegea tteeegatae getttggaca tgteeeceaa 2100 cgcatcgaca gtcgcctggg tcgccttgtc gtaccgaata ccgtcgatat caaaggaggc 2160
aatgatcatg catgtgtgtc ggatcagccg ttcccgtaca ggtgggtacc attctctcaa 2220
ccgatcctgg acggacgcaa acttcgccag ttgacgcttc cagtctggcc agacaccgaa 2280
cgcttcgatg tcaccgtact ggtcaaagtc actatcataa cacccgacca ggcccgcggt 2340
cagggactca ttgactggca tcccgtcctc gtaccagaag cgcggataat cacaggtggc 2400
gttgtaggtg ttgccaatat cgaaatcgac gtaccgtctg ttggacttcc aaagggcctt 2460
gtgttctttc tcggagaagg gcgtggtgtc gttgagatga ccttcaaaac caatgagatc 2520
accgaggctg cagtaatcta gtgtcaggcc caagttttt acaaaccgat ggcaaaacgc 2580
agggaggcga ggtactcacg tagcgattgt attgtcgaac agaacgtaca tccccgttt 2640
gtgtcagcgc caatcccatc gagcccaggc tgttatgagc gagttcgcag gacgtcctat 2760
cgaatgtaga tcacttttt tccaaaat 1

<210> 2432 <211> 1076 <212> DNA

<213> Aspergillus nidulans

<400> 2432

ccctcgtctg gggcggtcct tccctggctg cgcacccaaa ggccgctgga gaggaccttg 60 caattgttgg gagcgtgatg tgtattcgcg ctggaagtga agaagaagtg cgcgagatga 120 ttcgcaatga tccctatgcg aaggttggtt tctggtatcc agagaaagcg gtgatcacgc 180 240 cgatgagatg cgtgattagg aagcctttgt agctattttt gatatcccgg ttatagcttg ggcaggtate aataagaatg teegtgaaat gatatgttae ttegtgaett aagattteee 300 360 gaagctgggt aatcatgccg aatatgaaaa gtatttgaga agtcactaca agacaaatat atctttattt agattcttta gacggctata caaatgctac attgcaaaat taggctgtct 420 cgtaaatata agggaaagaa gaaggctaga agctttcggt tcgtaatact gttcagtcta 480 tttggaacat caggaagcta acaaaatagc gaaatcaata tgaacttttt ccattaaaca 540 ctcgatcacg ccttcacttt gagcttgaat ccatacagac taactcgtag cccaacatac 600 ataaaacctg ctaccaggga agtcacgcct ccàtataccc agaggccagt ccagttggaa 660

<210> 2433 <211> 1946 <212> DNA

<213> Aspergillus nidulans

<400> 2433

ggctggaatc ggtgttctgt tggcccatga attgggatgg gacccacgga ttcaggatat 60 gaagttcagt ccgctttttg tgatgttact ctgtagggta cgtgtctacg tacgtaagtg 120 180 tacatagtct attatggttt aaggatgtaa ctacgccgtg gccggcaata tgatgatccc 240 caggatttga aaagcgataa taagatgagg cgcgtattct gaagaaattg ataggctgaa 300 ccaagtagta tagcgcgctt ggctcatcaa cgtgatactg aatggatagc gtagggctca agagatatca ataattaaga gaactettgg geteggetge gggagegaga cageegagat 420 gctcacacct ggaatcaata tcgatctgct gtgagaggct ggtggttgtcg acagcttctg tggttctccc tagtgtgagc gatgggtcaa gtacaaaggc ccgcccttgg cattaatttt 480 540 qqaccctttc cqtcagtcag attagggtaa taaacaagac gtcaggttgg ggtttgaaac 600 agaggegtte tettgetegg tgaatttgat geggaaatet geteaegegt egtatateet ggagggtaga gtacgcatta atgtccgggt acccagagta cttagtacgg tatacggcgt 660 attctgcgcg gcatcaaagt cactgcttca tttccatgac catcgtcgag gagattcaac 720 780 ggcacgcctc acgcgcaagc aagaattctg gacatgatcc atacgaagtt acgtatgtgg ctctgtgggc catgattgga tcgccggggt cgaacgtctt gcgcgtcgac agctgaacca 840 900 tgctgatcgc catcctatgg cacccactgc cggggaccgc ggagggtgac atttggcatc tgagtcagga gcaagcacca ccatctgacg gcctgaccct ggcgctgacc agatgataaa 960 catggagtct ggaaccctgg ctggttagga actctatgtg ttctgtctta acagaaccag 1020 cagcgtgtat ccatactata gaaaaaaggg cgagaagtag aacagtgtac gacatctgat 1080 gccgaggcgc ggacgcgctg ctgtccaaca agcctatact cacctcagtc caagtcacct 1140 cagtccaagg accaattcct tttgagcggt agtgtaagtg aggagtgcga atctagggca 1200 cggaaccccc ttcaacagtc aagaaagctt agaagagacg caatcgaacc ttgctggtga 1260 gatteggtea geagegttte gggttgattt egaeggegte teagetteag gaggegeeat 1320 gcagtcaggg acacgcggcc cgtggggatc gcagcgagct gactggccca accgggcgga 1380 aggeogeget gatecaactt caactttegt geteteaagg gtegeaceae caggtttteg 1440 cacctteett ttttttattt eggtattttt egettgeaga gategaatat eeggatgagt 1500 ctgacgctgt cgtagacctc tttagattaa ccgccccatc tccgttaatg gcaaacaaca 1560 aaaatagaag aagccgccac ttcactggag cattccatgg gcaataatag cgattgtctc 1620 tececaceae ettetegege tagtacgatt geogtaattt teatgeegtt tgeagttgga 1680 ggcatgacga tcatcggttt gaagagtctg aaacaagttc aacaatgaca tatctgagat 1740 gcatgcatac ctcacacaac tttgcaatat ctgtttgttg cctaaatgaa tgacaaaagc 1800 atgcgttgtc ctgcagttta cgcgcgagaa gaatttagtc tggggttgca gctgccctga 1860 tctggggtta ccttgagact tgtgccttgt gctcgacaat tactggatgt ctgagagcat 1920 atagtattgc gcacgctctg taggtt 1946

<210> 2434 <211> 956

<211> 956 <212> DNA

<213> Aspergillus nidulans

<400> 2434

aggcaggatg agcgacgccc gccatggaga ggattgaggg cgctagatcc atcaccgttg 60 cgaattgatc tgtgattgcc ccattagaag cctggggagc cgtcttcgtt gacgaaggga 120 accgtgctaa aaacggaacg cgaacgcccc cctccgttgt gtacgctttg tacaacctgc 180 tcggcgccgt ggcagcttgt gcccagcgtg gcccgtacca aatgaaacta tccccgttcc 240 cgagattctc gtagctgtta ttgtagtatt ttagtaggtg tggaagaaca ccgctctgca 300 cgaggggata tgcctcgtac gcagctcctt cagcgccgtt atcggacata aagcagacga 360

420 atgtgttgtc cagctcaccg atgctgtcca agtaatcgac gatcttgccc acgttggcgt caatacactc gaccatecct gcaaagactt ccategegeg gcaggagagt ttettttect 480 coggogtgag ttcttcccag ggtttacctt cgccttcgtc gacgacaacg ggatgaggct 540 gtacatcctc ccgaatcatg ccaagtttct tgaggcttgc aaggcgtttg agacgtagtg 600 cgtcgggtcc gtcgtcgtac acgccgcggt agtggtcgat atattcccgg ggtgcttgca 660 gcqqccaqtq cgqcqctgta aagggcaggt atgcgaagaa gggcttgtct tcgtcctctt 720 tettgttett gtgccagteg accagatact egegeatttt atceccatac ceattagagg 780 agtaccaccc gctccggcag actgcggaca tacttgtcgt cttccatatg cagcgctata 840 tagctagctt caaggaaagt tggcgtctca tcttgatcgc ggagctgcgg ctcgtacgca 900 956 taatggttcg agcaagcggg gagatgggca agagaacgat cgaatccccg cttata

- <210> 2435
- <211> 1523
- <212> DNA
- <213> Aspergillus nidulans

<400> 2435

atacaacctg ccccaaaatg ctcaggaatg gttcagcaag gtatcatgac tcaatggctt 60 ctaattgttc caggatactg attattattt gctctatagg ccattcacac caacgtccct 120 ggcggcaagc tcaaccgcgg tctctctgtc cccgacaccg gcgtggccct cctgcagaag 180 gaactgagcg aggagcaata caaggacctt gctacacttg ggtggctgac cgagctgctc 240 caggeettet teetegteag egatgacett atggatggtt caateaceeg tegeggeeag 300 ccctgctggt accgccacca gggggtcggt ctcattgcca tcaacgacgc tttcctcctt 360 gagtccggta tctacgttat cctgaagaag caattccgtt cacaccctgc ctacgtcgac 420 tttattgagc tgttccatga gaccacctgg cagacggaat tgggccagct gtgtgatctg 480 atcacggcgc ccgaggacaa ggtcgatctc aacaacttct ccatggagaa gtacatgttc 540 attgtcacct acaagaccgc ctactatagc ttctacctcc cggttgccct ggccctccac 600 tgccttcagc ttgctacccc cgaaaacctc cgtcaggctc acgacatcct cattccgctc 660 ggccaatact tccaggtcca ggatgactac ctcgatgcgt acggcgaccc ctaggtcatt 720 ggcaagatcg gaacagatat ccaggacaac aagtgctctt ggttagtgaa ccaggctctg 780 cagcgctgca gtgccgagca gcgcaaggtg ctcgacgctg cctatggtcg taaggacgct gagcaagagg ccaaggtcaa ggctattttc cgggaattgg acctcgaatc cgtctacaag 900 qaqtacqagg agaagatcgt gggtgagctg aagacgaaga tcgcggctgt caacgagtcg 960 gaggggttga agaaggaggt ttttgaggca ttcctcggga agatctacaa gcgcagtaaa 1020 taagcgatag gcagcatagt atgccatttt gagatacctc gcaatagact aaagacatta 1080 attcqqattc catqaatqtt tttgagcaaa aagtggattt gtacacagat tatgtatccc 1140 tccaagaatg agtcgtgata ttttgtagct tgaatttgcg cgcaaaaaat tatttctggt 1200 ttatcattaa aaaccaaagg ttctgaatgt ccaaagctta accccagggg cccaggcttt 1260 gcgccgtcca gggttcagga gtcgctggaa ggtttcacgt ttcaaccctg tcgatccct 1320 attetgtegg cettageaag tegetetaae taaaaaaaat egegttgaea teeegttaeg 1380 tatacttctg tgacaagtat atgaacctcc agcactcaat ccaatggcta aaattttctt 1440 tgctttgccc accettttgg ttcaccetaa atgtggtcca agttttataa tgtggccccc 1500 atttttagcc atagccactt ttc 1523

<210> 2436 <211> 5167 <212> DNA

<213> Aspergillus nidulans

<400> 2436

cccagcatga gagttcgcgg ccgcataata cgactcacta tagggatcta tgaaggcgtc 60 gatatttgcg ctgtggaggc tgtggaagga tattaaggac cctgagccca cgatggctag ccttcctaga aacgaagaga atgggggtat atacattcca taaatatgat cccgtaccat 180 cctttatata ttgcttcgag cattctctga tggggctatt ctcctctcaa cactctcagt 240 gcctaggtga aagttcgtcc ttgaccgaga aacaactaac gtcttatacc ctagtctctt 300 atgtatgcat agccaagtag ttaatagaga gatttaggtt aagtagcctg atatatccac 360 aataqcttga agatataatc tacatatctg ttctctgtca ctgaacatac ttggagtagt 420 accacttaaa gatgcacagc gataacctct gtaatcattt taaatttgaa gtaaatcata 480 acaactcctc ctttcaccta atactcactt cctcttatag gatatctagc ttccttgaag 540 aacatcaata ttatatatat tccatacgta tgagggttca aatctgaacg tagttggata 600 aattcctcct cccagtagcg tgtagggaag tctaaagcac aattcagtaa gagttctctc gtcaataata aaacgttttc cgtgcgtcaa gctattacat caaatccatc acaccgccac atgatagcga gatttcaagc ggatcctctt gccgtaagag tagattactg ctggcactgg 780 840 taacaaacca aggcgacaga cccaagcaat ggattccccc atcccaaccc tagtgtagca tacattgaag gaccagcaag cggcaagaag gctccgacaa tggaccgtac cactgtattg 900 gccgctatgg ccgaggcggc atatatgcca aaagcgtcaa agaggtacgc ttgaatgggg 960 agaagggtgg caatcatccc acagccaacc cagcccagtc tgatgatggg catcatccaa 1020 tgaacccgca tctgggcgga ccagccgtac taaaagagac ctatcgggat caggaggctt 1080 cctggaatga gtggcggaag tcgaaattcg ggctctgcct ggccgttatt tcttgcaata 1140 agcoggttct ggattttgtc ggagagagca ccaaagcaag atataccaat gagggctccg 1200 acgccaatgc cgatggaaac gaatccggtg gcactttgcc agaaataata ggtggcttcg 1260 tataattcgg tgacggtggt gaagagtaag taggggtatc cagaaaccac tcctattatt 1320 gacaaacaat tgttacaatc gtgtcttacc caagattgga gagctactta cctgtatagc 1380 gagaacaagg cgacatttga ggtgaagagg agaagcttcg tcggtctggt tattgcttgg 1440 gtggaaacct tccttgagtc tggctttagg gcttgtgcag cgttcacctg ggatctagtc 1500 tcgtgtctga tgcgattcgc ttttcgtcgc aatagaactg gttcatagga ttcagatagg 1560 acagagaaaa caagaatgac cgcgatcccg gactacgatg gtaaactagt gagcttgggg 1620 cacaggagag gcggattgaa ggggatacga accacaatgg ccagcagcta gaaaatctaa 1680 cgccagccct gtgcttcaga gaggtatcca cctgcgatcg gcccgacgac agggtcaagt 1740 agggggccca gcccatagat ggacatggcg actccacgct cctgtcgagc aaacatatcc 1800 gcaacagagc ctgccccag tgtgaccgga ctgctcccag aaatcccggc aaacaggcga 1860 aagaccagca gcgcgccgat gttaggggcg agagcaccgg cgatattaca gatcgtaaat 1920 gtcaacgtgc ccacctgata gatgcgcagt cgaccgaaca tttcggagaa tggcgcgaga 1980 aacagcggtc cgatgaggtg gatggagaca acgaaggagg ctagagtcct gttggctgac 2040 tggaagtctc ccatcacgag cccttgtgcc ggtgcgtcaa tggacgaggt caagggagta 2100 aggaaggtaa gatacgagat aatgcccata ttccaccatt ttttcttcct ccgccagttc 2160 gctggtcgcg caggatccat aggtccatcc cagcctacct cctcagtcaa tgtttctgat 2220 geetttteeg eegaacteee ttettgtteg tgeeegetgg gegttttgtg eagetgggeg 2280 ttttgtcgat ccgtgacagc tcttcctggt gatccatgtt cctatccggg atctataaat 2340 tctggcacat tagtcaggca aaatagcttc ggtgagtttg tttatcggag agacttactg 2400 aggccatagc ggatggttaa gggacttagg gctgtgttta gggggaaaca accggggaag 2460 tagccatcga tgacattcca cgtgcggcct gttagtgctc actcgcctcc ccctcttgct 2520 ttaaaaatag ataacaaacc aaacagagag agacaaagaa agccacttgg gccgtaagaa 2580 tttgtgaggt actgtgtatg aacctaacct gactacttgc ctattgtgca gtaatagagt 2640 aatcctatga agcaacatga cttttgcgtg catagcacaa atacgaagaa caatccagag 2700 actgaggata ggaatagtac taagtaagaa tgaatggcct gggtattttc ctttaagaag 2760 ctctcttaca cgaactgtaa ttccatacac cgtgtccccc cgattcagag tattgtttaa 2820 ggggaatcgt tccatgagta ccagactcca accattccgg acaccagaat atcctaaggt 2880 agaaatatga tcgaaggtac tacacaaatt accgttgagt ggcttcatat tttcaatata 2940 ggtctcagta agatcctcca tggtcgcagt ctccgaccct tgagcaacca tgaacatgca 3000 agccaaacac gctgttaagt gaacagggtc taggaattta gatgcacata ccagaccaca 3060 tgatcgaatt cttgcatgcc ctagttatga atcagtaata aagccaaaga agaaaacaga 3120 tgttcagcaa accaggaact ggtgaaccag aactagggag cgtactatga taagttcgtc 3180 cgtcggcccg atcaagagcg gtttctcgta gtgatcctga aagtacgaca atctggtcat 3240 ctcggagaca tacgggccaa tattgcggat tgctccaggt gaggtgcttt tcacctcgag 3300 tagtgcatgg gatgacatct atggtgcgcg gcccgggaag cccgagatgg acaaggttct 3360 acaagggtcc tattgctcct cactctatcg tggcggtgga tggcgagctt catcgcttct 3420 tgcgccgtct gcttgccagg gagttctcgg atgttaaatt gagagagcag gagccagtga 3480 accaacgcag catcaatcta ctgatcgaga agctgcatga tgaagtcgca gctggaaaga 3540 cacctgaaat gacggcaatg ttcaatctaa gtccatgtaa gctctctgcg tgactgaagc 3600 gcacctaatc tgagggttgt tccagtatgc gacattcgac ctgatcgggg agcttgcatt 3660 cggcgagacc tatggatgga gaactggcgt taccacccct gggtgaaaat gattttctat 3720 gtgatgaaac tgcgtgcctt gacgcatgct gttgggtact gttcatgggt cttccctatc 3780 ctatgttgtt cgtcctcagg ttttgcgcga ttaattcgtc gtacacagga agtacaccac 3840

ctatgacaaa gtacagcgtc gaaaggaccg aaaaatccac tactgggaat tgaccaccaa 3900 cttgttcgat ccacagaccg ggctcgaacg ttatgagatc caccgctctt agcgcgacgc 3960 tatacttctt gactcagaac gaagatgcca agcgcaaggt gatcggcgaa acctgacgcg 4020 ctttccaaag ctgttgggga cattaaatcg atcagcgtga ctcaagatga agtacctgca 4080 cacgcgtgtg aatgagacgc tccagatctt ccctccgcgc tcagccgtat tcccccgccg 4140 agtccctcta gggggtgatt ggatccttgg tggtaccaaa gtgggaagcg tgcactgctg 4200 catcagttgt tgccgctgga actttgtcga tccagacaag ttcattcctg aacgatggct 4260 tagtgccccc gcgtactaga acgacgatcg ccgcgccatg caggcgttta aatcctcaag 4320 cctgcatttc tcgtaatctc tccggctgaa gatgcgtctc gtcctggctc ggctgatctg 4380 cgagtttgat ttggagttag ctcctggatc ggagtgatgg gaaggggcgt tggtcttcaa 4440 tgtctggggt acgaagccat tcaagatcaa ttcaccccag tattatgctg aagtgaggag 4500 taatattgta tcatgtttgc tttgtgtgta ccgtatcaga aaccctaaat agtttctaag 4620 attacgtact gtagcgctag gatatgaacg atgtccgaat aacaggatag aagcttaatc 4680 gcaatgcctc gcctgacaag aatggaagga tacttggact tcaagaaagt atgaatcatt 4740 gcggaggaga tcgctactct tgcgacatcc cggttcacca gccgttcgac tacagcatcg 4800 tgtacaccct ctgqqqtqtc gttttactac cattccagca atatcaaggt gcccctgaag 4860 agttttaaag aatatatggt agcagtacat gatcgatcct gccaagagct cagattgcgc 4920 gagtggaact ccttgcatta gagcaaggta tcgaaccact tattcctggg ttgttctaag 4980 tgtgtctgta tctgtccgca tagctagttc agtatagttt gcagattcat ctaatttgct 5040 ttgggcctgc ctagtaagca ttgcgttcga ggtatttatg gccacatcct tgtggctttg 5100 tgccagcagc gccatcaaca gcgctcagcc aggtccgatt gacccgtgtt gcttttgcgt 5160 5167 aacgggg

2437

<400>

<210> 2437 <211> 2572 <212> DNA <213> Aspergillus nidulans

accgtcgcca ggcagtcgcg agggtggcag tggtgtctcg gtgcaatatg cacgcccctt 60 cgcqqacgac tcgccgcacg acttgattct tgagattggt ggcgaaaaca cagttattga 120 cctcgccacg atgcgcccaa catttttgaa ttccacacaa gcacgggtct cgagccttct 180 tcaggtaatc cttgacagga agaacagcca ggaccggagc agcagctcag cggtagcagt 240 300 aaccgcacat tcgatctgcg ctcaaatcga cgaggagaca gacctgacca tagacggcgc qcaacaggcc agcaaccacc aataccatat cccagacccg gcctcagcag ggccagcgcc 360 420 aaaacgcaga cgggtaaaag tagaagggcc ggaggcggcg tcgcaatatg aagaacagga 480 cgggagtagt aacggtttct gggttgtgcg caatggccag tggcgcattt caatacgccc tggggcaagt tcgggtgacg aggtgcagtt tgcgttcgtg ggtgttaagc tggatgttta 540 600 tactagggag agagtacgga atcggaagca ggcatttttg gggtcctaat tggactgaga taaagatgca ttgtacctac gtatatacgc agcatatcga attataaata caccatggat 660 aaaacatgtc attatctttg aagatattct ataggagaag agtggtggtt taatcggaga 720 atccctccca ttcctcatcc tcatcttcat tctcttgttc aatgctatcc tggtcctcac 780 840 totogttoto ggoatotaco attgaaccat catcatotoc otocotoaca aaccoogcaa caaagaaccc gcctgtcccc tcctcatccc caggccaaca tctcaaacaa ccccctaact 900 cctcatccga caaattcacc tcaccaccct caatggcacc atccgcactc ggctcctctc getteacace gegatgaate caettettea ageetteagg etgeteatee egeetgagaa 1020 ctctccatcc tctccgcttc gcaatatcac tttccagtat ccgttgcacg acggcctcgt 1080 tctcgagaag atggattgag cacgtgctgt atgtcacctt cctagcggcg gggaaggcga 1140 gtgcatgtgt gacgattcgg aactgaaggt ttgagagttt gaggaggcga tcttgagtta 1200 tttcggaaat gggagtgtcg ttttcggatg ttgacggcgt tgctgctgat gttaatgatg 1260 agggtgtgga gggttggttg gaggaggatc cagatgagtc gttgcgcttg cgtttttacc 1320 ttgggtttgg ttcttcgatc ctgatgctgg ggtgggtctc ccaggcgcag ggaggacgag 1380 ctgggggaca tcgtcgcggc cgatgatgcc gctccctgag caggaagggt caagaaaaag 1440 gcctgtgaca tccttaaagc gagggtcttg cggggtcaag tgcgagaaag tcctgtcctt 1500 gaaggacgct ggtaaagcta tctgcgtcat cgatagagac cattttcttg agggtctttg 1560 cccggattta gtaggcatcc atggatatga tgcgggatga ctccgccttc ttcttggact 1620 tagetttgeg gageaacgaa gecatatgeg tagtettatt geetggegeg gegeateeat 1680 ctaccaaatc accttgccca tcccagtcat cgccaagcaa cagataggca gggaaacaag 1740 atgccttatc ttgcaggata atctctccat tcttgtacgc cggcgtactc gagaactcaa 1800 caccaggcgc aacagccaca aggtccggga tatgcgggtc taaccgcatt ctcttctgct 1860 tatcgtctcc accaaccact agaccgtcca gtgactcgac attctcgaac gccgcaaagg 1920 tggtcttcaa ctgcgcctcc atcgttgtcc gtacattgtt gacccgaacc cagcgtggat 1980 agaccgcgcc actactaccc ttggccccca gcgcagctaa tttttctttc cgaacagcct 2040 cetteagtte eggaattgte gegeaggege geegeacgeg egettttgtg aatteeceet 2100 tcagtcgaat cttgtgcctt tcaactgctt gacggagcgg gtgggatgcg ggcgcggcga 2160 tgccattctt tgcgaggaga tggtcgtgga cgaggagaag agcaagcaat ggggtgagct 2220 ggatcagata ttcttggtca gtcagcagga ctctccatgg tggacatatc cacaatcctg 2280 atataccagg acagggcaat ggtgagggac aaccttgggt tcaagtttca gaattccagc 2340 ctggtcgatt acttccttga gcaggatgtc ccatttggct gcttcggtga tgagcgcgta 2400 aacctgtgcg ggagaagctt taaggttgcg ggagttgtag agccgagact taaatgaacc 2460 accagcagtg gagggcgtcg tgagaattga cgcggcgtcg tagtatagcg acatgtctcg 2520 2572 cctagagaat tgtgaccact tctgactgta aaaaagttcg gaggtcggaa ta

<210> 2438

<211> 1988

<212> DNA

<213> Aspergillus nidulans

<400> 2438

atctcagcgt tgactcggat aatcgaaggt tcgccggatt agagagaaga atagaggtgg 60
aggatgttgc aaagaagagt ctgtttaggc gcgaacgcga gacgaggaaa gaagggaatg 120
cgaaacgagg ttaggtgacg aactatataa cctcacttct gcttccgagg caggctaatt 180
tcgcctctca gccgcaacag caaggcggca gagtgacctc cagttgtgag ataaaatagg 240
tatctcagca atagcagggg aagtaataag atcagcttct agcgtcaagg cggggggata 300
gcgcggcagt gttggacgaa gaaagccaag atcgagagag aagcacgaga ggggcagaag 360
agggggcggg gaggcgaccg agcatcactc aatgtgttac cagaatgcat gaagccagca 420

480 aaagacgccg agccagccgc ttgccagcaa cccagacaca ggtaaagcga acgtggatga gttttagaag ggaaacatgc cagtgcagaa agcgagtatg catcacgtga gcgggcagat 540 aagcgccctt tatcgcgtcg agccccagga gcgtcatcag acaactcacc cccttcactt 600 gtcccttcca tcctactaag atctgctcac tgtcatttgc cgttcttttt cccatcgctg 660 ccgctgttcg gctccttgca ttctgtgtgc cgcgtatcgt ttgttttaga tccactcacc 720 780 tocacattog cooggtatag toctocagto tocgcottoc coatoccato gocaaatogg ctaagaacta acgacacttg cacttccgtt ccataggatg gtacgtaagg aatataccat 840 900 tttccattcc agggcccata tccttcatac cagttcgtag gttagctagt cagccctcca tgtgttgact tcttgtccat ccttatctag tcggggaatt acgaccatcc tcccgcttct cgccgtgtcg tccgaggaag cagatccggc gatagatctt atcgaccaaa cacgaaccgc 1020 ctgcagcacc tacgcaacct attgaatact gaacgcaaca gaaatacctc cgcgcgagca 1080 tcctttgagc gcacccgagc agtcgtgcat cagcagattc ggagtatacg aggagagagc 1200 ggatctcggg aggatcctat ccatggtgcg agctcaagtt cagggaatcg gttgcagaga 1260 ctgcaagatc ttgatgcaat aagctatcgt ggttcaaggc ccagcaatcg acttggccga 1320 ggtaggggga gtcaagagtc tatccttgac cggtccgttc ctcctttaga aacgccgtcc 1380 gcaatgcctc tggagctggg tcacgatcat gaattggaca ggttgagagt caagcgcagg 1440 aagcttgatt cggatgataa tcgagaagga ctacaaaact taaggtatgg tcaatttggc 1500 caagtcgtgc cggggactct gaaaatggag ttggccagtt gtgatggagg cacatatccg 1560 cccgtttgcg aaacgtcggg gccggagaac attcttcggg atgactcgtc cgtgtattgt 1620 acaaaatcag accgctgtaa tctgattcta aaacactgcg gggaggcacc gttctgtttg 1680 aggaagettg ttatcaaage gecaaagtee ggetatgaeg eteegtatgt teggeetetg 1740 atggttatcg ctgctttact aacctatgcc tctactagga ttcaagcagg gatggtcttt 1800 atctctatgt cagctgatga acttctcgct cgcaccgctc aatatcagat tcaatacgct 1860 agttcccgga gccgccgcgg ccgtcgacgc agcggaatgc aaccttccga agaatatttg 1920 aactcatatc gaactccgtt acaaactctt gagcgggcga ccttggccgg atttgactgc 1980 1988 ccttctga

<210> 2439 <211> 1767 <212> DNA <213> Aspergillus nidulans

<400> 2439

acggttgaga caacgcacca tgaaacgcct cgtttcgatc ggctcccttc ttcgagagct 60 cgaagacgcc cagtcccagt gcagctccct acatgacaca acccgcagcc gtatcaacga 120 cctccagcat taccttgaca ggcttatgta ctccaaaaac tcatactcct actcctcgac 180 gatgggatat ggcagctaca gtactcctgg acttgactca ggcggtggtg ctgcattggg 240 tgttgggaaa gccgaggaag atgccatctc aaattttagg gctgagattc gaggtgtcaa 300 gggggctctg cttagtgcaa ggaactttcc ttcgggcagg agcgtgggtt tgaggtcttc gtttgtgaga tgatgcattg gtagatggcc acggctatgg acaaggctgt gctcgtttta 420 tcatttttat actcccgact cgatgtctaa cgattacgcg tgtttctggt ttcaaacaca 480 gcctggtata gtccgataac acaatagtat ctaattcgac gctgtctgcc gttatccttg 540 attttgtcct agtagcattc ttatcgacga gtaggcattc catattctcc catctcatgc 600 agcaataata gggctattat ttgaatatcg caatattcca ctcgctgatc tgtgcgccat 660 ataggggtga tgcccctcct catagcatat ttatttgttc gtgggtgagt atattacgtc 720 gacagtgtcg tttcatccgc gtaattcctc gggagcgcgc atttttatat tgacgggatg 780 taaagctgcg gagccttaca caactgatgg cgacatgcta ccttcatttc aaatattcat 840 accttagcag cctggaccac cacactgcgt ccaccccact aatcaagcca accatttatt 900 tctgcttata tcatgtagtg aaaaacgaga aaagcgaagc attaatataa cattgacaag 960 tgaagtagat atgtaaagaa aagatccggg caattattca ccagttgccc atcaatacat 1020 ttaccagaga atgcgaagaa tagccgccc taatacattc ctcacgcatg gatactggca 1080 ctggtataat tcactaatct aaggagtcac tttactcatg ctaatgagac gcttcacacc 1140 gacctgtaga tataagatta gcataagatg tttagcaaac gataggaaag tactatacca 1200 tccagttacc gcactcatca gtcctgttcg tcatgatatc aatgtggatt gtacgagccg 1260 tctcgtagtc acgtgcctgg atggcgcggg cgagctgcac catgtcctga acggtattgg 1320 gcttgagaag gtcttcattg ttgaggtggt cgaagaggaa gtttagcctc cgctctgcgt 1380 <210> 2440 <211> 1153

<212> DNA

<213> Aspergillus nidulans

<400> 2440

aaacctcaat cccggtctag gccactggat aagaccatac cagcgacgtg ttctggtcgc 60 ccggattgtc tgatcgatga cttcctgaca cgcctgcagg tgtctacatg agcaagtaca 120 tccctccgaa agagttcttc ctcttcactt tcacggagcg gtgggaggag aatggactga 180 ccgagcacta ccgctgcaac atgagcccag acggcctgct ctgcagtgct catgcttggt 240 ctctcctgcg cccatctatg tacaaattga tgtattgagt aggtgccgat taaatcgcca 300 tgtgtgatta gagacattcg agcaagctct ctaagcgcgt atcacactct cgactcgtca 360 aagtcagcag ctgacgtctc gcgcaaacac agtggcagag caggcgggct gcgacctctc atggcaaacg tcaggatgga gagacgcagg tctctacacc tctggaacca ggttaatgat tgctacaggt tttcctggcc ttgggcttct cgtgcttctt tctcaattga taggttgagt 540 acagaccttt tgagaatgtc gaagcgaatg accttggagg aatagacgta aacgcaggta 600 ccggttggta ggtaattaac cacggtacgg gttctgactc ttggcccgtc actggcttta 660 tattgtctac aagaagcaga caaaaacagc catctccacc ctattgcaca tgtaagagag 720 ctgggttcgc ctcttactta ataggtttat ttctcaagat ctatataatg gctaagttga 780 840 attttactct ttcacctccg ccaaggtagc gacagttgag agcaaaggct aattggtgct atggaaggtt gcctaacgag tcaattgaag cggatagaag agaatggcat gcagaaacaa 900 gttggggcag actaggacta tcgtctatgc cccaaacccc agaactagcg acccctgcct 960 caacaatccc agccaaggat gatgcaatgc tattatggag atgaggcaaa gtttaagtta 1020 cttgattgag tgcagcac aaggccatat ttaggcagtg cattgtatgc ccctatttgc 1080 tgctgtcggt cgcgcacgcc atcccgttgt cggatttgct ctctcttgat ctaatctctt 1140 gcaccgttgg agc 1153

- <210> 2441 <211> 3257 <212> DNA
- <213> Aspergillus nidulans
- <400> 2441

tctgccgggg agacggtagt ggttcgttat tcgtagagtt gctcgagacc ccggttgttt 60 gggacgette eggeeggtee atteeegggg atgttteeat tgeggaacae caacgaggea 120 acggggaatt tcaaggaatt taagaagaca atagcggcaa gatcatggca ttcctgcaag 180 caacgggggc agccgagtaa cgaaggacga acgaatcgag gcgaaaacga ggggacgata 240 gacaagagcg agaaaagagc gtgggcgtaa cgaggtacga atgggaaacg gtgatgggaa 300 tatgaaataa taaaagaaaa gcagtcagga gaacgagaat tagaattgct ctcgctgtcg 360 420 tegteggage ceagacegte gttaaattag tgttggtgea geeacgegta teettaeegt ttcagctagt tcaggggccg atcggcagag agcaaggcgg aaatatcaat gtgacaagcg 480 gcggtaattt gcgacagtta tccatccagg agataaaggt atgggatgtt cgcaagcaat ctggtgtgtt gtgggctgga gttggtgatg atgagaaagc aaggggaccg atgaagttac 600 ggttgggagt ctaagcactg ttcagctgaa gctccgacta tcaaattaat ataattccgg 660 cagatcaaag atactgaaga attatctgtg ttaaattggt ctgtcaactt tataacatgg 720 tgaggtccta tttaaatgta caagaatcaa atcgcagtcc tataaacacc gacaccaatg 780 tacctcacaa tataaacagt agtccaaaat gagcaatgaa gggaaatgag gatgccctgt 840 ttatcagaaa cagcggcaga taatcactca aaatagaaat tcaggagaac aaatcataga 900 atccacccag aacccagttc gggggatgca ctccaaaaca ggggcaagtc aactggtgtt 960 gtggtgcaga cgtggcatga atggcagtca gctattatcc tcccagtcgc cgaggatgcg 1020 aagacttcga gtaaagacag tggcggaacg agggtattat gatagagaaa atgagcgacg 1080 aaagcgacga aagcgacgaa ctggttataa cgcctaggac cgttttgtac agcaaaagaa 1140 aggccgtctc aaatcccggg ccatcggttg cgaaggcctt cagaccaccg ctggtagagt 1200 acatcggaca gttgcttgac atgttccatg cctggtactg actggccggg gagattcgcg 1260 agetgtgget gtggattegg eteggetaet geageagaet gaegeegeeg gtggetttte 1320 aggtgtgggt tgttctgtgc aagaaccaga cgaggccttt gtgggggattc gggtggtgga 1380 ccctgtggga cgagacttga cagcttggga tcgctgaccc aagatccgtt agcacatgca 1440 gtccagagaa ttaggggcag ttcgtttacc ttagcagttt ctcattagtg gctcggagga 1500 tgtggtatag gccttctgga tccaccattt ctaggtcact ccaagcctca gcaagacgag 1560 aaatcgcttc ccgcttctct tggtctccag tagttcccag aacctcctgg caagcgtgac 1620 ctacagcctt gctgtatgct cgacgtccca gttgagcttc tttgctgttg gtttctgagt 1680 atatagactt aggactcgca ttttcgtctc cggtaagctg gtatgaggag aatggatcct 1740 cgcttggcga tttatcagac acgcgacgga attgacggac cgtggaaggg ctattgccaa 1800 atgtcaagtc cactcctagt ggttgcttaa caccgctgga ccgtcgcttc ggtcgccgca 1860 gagacgggct gcggtcgggt gctggaatac ggcggacggc agtaccgttt gcgtacttct 1920 gggttggtgg gctagagatg cgaagatttt ccaccatctc cgcagactca tcatatggag 1980 ggtcatgaat gatggatccg ctgtctgaga catcagagtc ctctcggaaa ccatggtagg 2040 tgctttgact gtgtcaacac ccagccgtca tcgtctgtga aatgtgtaat tgtattcctg 2100 aatgagttag ctcgcaggct ttgcaacata tgaaagacac atacaaagat tccgcatagt 2160 atttcacatt ccttgaaaca ccacgtccac tgtcccagtc ctgcttccgg tgaataagct 2220 cctgcagagc ctccgtcttc ccagcgttgc ggatgaactt gtgccttaga agttcctttg 2280 cgctgggcct gcgttccggg tctttggtca agcactgcgc gataaagtct tttaaagcac 2340 tgctgtagcc gtcaccctgt aaccgaggag ctggttcttt ggggatcagg aagagcacct 2400 tcatcgggtg aatagcagca tgcggcggtt ctccattgat catctccata gcggtaatgc 2460 ccagagacca gatatccgcc ttgtaatcgt acccagactg ttgaatcacc tctggtgcca 2520 tccagaacgg agttccaacg aacgtattgc gttgagattt gatgttggtg agctgtgccg 2580 caacgccaaa gtcccccagc ttcactttac cagtgtgaga aaggagaaca ttggccgctt 2640 tgacgtcccg atgtattttg ccttcactgt gcaggtaatc caacccaagt aacagctgtt 2700 gacagacgat agcaacatgc gcttcgttaa aaacgcccgg ttttagctac atctcggtca 2760 georgeatet teccaageea gagteggteg gttattacea agteaagaea egateegeeg 2820 cecagataet ecateacaat eeacagttta tgteeeegga ggaagetage atgatacega 2880 gtaacgtagg ggetegegea egtegeeagg acggagatet eetgetgaat etettgata 2940 teatettege tegactegag ategatetgg acgagegtaa ategateaatt ggaatgeate 3000 agtaggeaag atteacteaa aacteacatg ettgategea acaattteee eggtagaett 3060 gteaategee ttgtagaegg taceaaaact teegeetatg egacgaaegg ttagagaaag 3120 taattggtee aattgtgtee teteeactea etteeaaget eetecateat etggtaetgg 3180 etegeeatgt tateggeeat ggttegegae atatetgeeg accetgaatt tttttggaat 3240 tgaageetttg gatggaa

<210> 2442 <211> 3483

<212> DNA

<213> Aspergillus nidulans

<400> 2442

gttcactcgc tgtttttccc aagacaacaa attaaccccg tctcggtgac ccgtcaagga 60 gggttcagta ccgagcgaaa cgttatttta tggcttgacc accgcgcagt caaggagact 120 gagetgatea atgetaeagg geacaaggtg eteaagtatg teggeggeae eatgtegeet 180 gagatggaaa tgcccaagat cctatggctc aagaaccaga tgccgccaga agtgtttgcc 240 gactgcaagt tctatgacct ggttgatgcg ctaacacata ttgcgacggg cgaggagacg 300 agaagctact gtagtttggt gtgtaagcag gggtatctgc cgagccaggt ggaagggagt 360 acgactgggt ggcaagggga ctttctagaa agcattggac ttggagagct tgctgcggat 420 gggtttgcgc gtattggggg cgtgaatggg gaggtgagtc tctcacccga tctatgcatg 480 gatgaacatg ttcgttaagg tagctttgct gatatcttcc agaccggcca gcacctcagc 540 gcaggcgagc gtgctgggag actctccgca cgcgcagcga aggagctcgg tctgcccct 600 gggattgccg tcggggctgg ggtgatcgat gcctatgcag ggtggattgg cactgtcggc 660 accaagatcg atggcgttga cgtagtgggc aatcacaaca gggcagacgc tttcaatcgt 720 ctcgccgcag tagcagggac atcaacctgc cacatcgcca tgtcttccaa tccggttttc 780 gtccccggcg tatggggtcc atatcgcgat accgtcttcc gtgggtgctg gatggccgaa

ggaggccagt ctgccacggg tcagctgctg aaacatgttc tcgacaccca tcccgcatcg aaatctgcct ttgccgttgc tgctgaccgc gggttggata ttttttcgtt tctagacggc 960 catctcgctg cactagctgc gaaacagaac ctaccgtgta tcgccgctct cgcccgacac 1020 ttcttcttct acggcgactt cttcgggaac agatcacccc tggcggaccc gaacatgacc 1080 gggtccgtcg ttggtctcac tgccgatacc tcgattgaca gcctggccat acattactac 1140 ggcacgctcg agttcatcgc actgcagacg agacaaatcg tcgagacgat gaacaaggct 1200 gggcatgcta ttacctcgat ctttatgtct ggatcgcagt gtaagaatag gactctagtc 1260 aaactcatcg ccacgggtgc aacatgcccg ttattgtccc gcgagccgcc acgtcgaggc 1320 cgcggtgtgt catggagcag ccatgttggg cgtcaaggtt tcttttctgg atgccccggg 1380 qaaqactgtg gacttgtggg atgtaattga acagacgagc aaacccgggg atgtctgtca 1440 tccaacaacq qeqqaatacg aaagggcact gettgetgea aagtatcaag tgtttetgga 1500 ccaatgtaca cggcagcgcg agtatcgaga gatggtggac agggtagcct ttccgaatca 1560 agtgtaggca tctatattcc acgacgtcgt gaaacgtgcc tgtctggccg agtacacccg 1620 ggtactcgtg gataggtagg gtactacaat accctggagg agcatttctt cacctcccac 1680 ctgccaatcc tctttcttgt ctcagtctca ccaggcaaag cctagttccc tctatttcat 1740 catcaagcgg gctcatattg ccttcaatat ccgagatttc agttctttct tcgacagtct 1800 agcetecact cactaagetg geeegactae agteaggttt eeegegetaa atattteege 1860 gggtcttctt gctgggcttc atcaaaacct atgagcacca ctttgagctc agaagcattc 1920 tcacttgtat gtcacagccc ctgttgagtt gaggctctca acaccttctg gcttctcaaa 1980 ccqqccaaqc aaqqatctat ctqcqctgat gccaatcaag gaatatactc ttqagtacta 2040 qcqctctctc ctccggagaa ctctcttcaa gctcaggtgc ctgagcttta ctgagcttgg 2100 tttgggttgt caaaatatac gccatgcttc gaggtgcgtc taacacgtac cacagaaaac 2160 aatctgaaag taagccatga tgggtcatga acgcaactca tcagtcggca gtcgcagcac 2220 tgggcacctt tttagaggta catctccttt caggctctta agtccatgtt gaagctcgca 2280 tgctqaggaq cacagtgtac caaattgacc acggttggga accagcatcg aacggcactt 2340 gtctggcgac gacgggttga gttccatatt tacgcgcctt ccaattctac tacctatatt 2400 tatagtatca tcatatgggc aggcctctac tgggcgcaaa caacctcacc gatatgtctt 2460 tgtcatcttc atcgttccga acctttaaca ctcttagtgc agtgggctat cagagtgctt 2520 gtatgacgtc ttcgtccata gaggaatgac agacttagct gctagcaatc ctatcttgtg 2580 qccttqaqtc qatcacqctq ccaaacctcc aggggcatct cttgctcaaa ttcgtagaac 2640 catttggcct ttccttacaa cgttttcagg tcaaccagta cctgttaaga ttcttcccgc 2700 acaaatttca gcgtctgatg caggcgccga tggtaatata tacgggagga ccttatctag 2760 gcatgtcaag atacgatacg gtcagatact ggcaaaattc acgcaacttt atgcattatg 2820 tactggcact ggaccgtcta teccaatatg ttatecetee ettaaacega etatattgae 2880 ccctagatat tcagactgcc ataacgccgt ggtcgtggca tgaccgaaaa cattgactct 2940 agcactttcc aagagcagct acaaccaccg tcagttctct gcccacaatt cagcctggac 3000 tgaaatacat accaacagtg catttgctat cagtgtagta gccattgaca tagcaggtct 3060 tgccatccca gttaatacgc tgccaggtgc taaacagcca ttagcatgtc atatccaacg 3120 cattcaaaga taatagaccc agtaagctta ttaaatgtac gtaccagttg ccgttatagc 3180 agtctccaga cttgtagcac ctaaactcgt agtacttgcc ggggatcaca gagtacgagg 3240 ctqqataqtc aaaqcccqqt ccggtgcggc agttgacctt ggaggaactc gagttgacga 3300 tettgeacae agtattggeg egetttteaa ggeecaaage tteaggggag atgtegaegg 3360 ggacaggggc ctcgagggcc tctgcctccg ccacggcccc tgcctcaggg gcaggcatgg 3420 cgagggccag aaaggcgagg gcaagaactc cggcgacagt gaatttcatg gtgatcggat 3480 3483 tat

<210> 2443 <211> 2237

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2443

gettgttega gagettttat getecaggaa tgegggaget gtgecatget gtatactaag 60 caettgggaa gegatateea egaegteate gggteegeeg tgatgteatt gttetteaae 120 caaetttace eegagtaaet teateaatgg eecaattggg tteaaaaaag tgateetee 180 tegaagtttg acegtgagat tattgateeg eeatetteta ettetteagt tgagattaeg 240 etacaattea gggatatggt aatatacaca gtagtatett etgagtetgg ttgagtgtet 300

ggacatgctc tttagtaaat gaaacagtac ccttgattct agattcgatc ccttctgagc tactctgtat ggcagctaag cttaattcga ataagtctat cgcattcatg cgccgatcct 420 ccgttcagat catagcgctt ggcaaatgat accatgtaac tgtgacgaac ggtgggtcta 480 ggtcatagta tccagccatc caagccatta ttacataaac caagtcttat cttcatgtct 540 ttgcttcctt ccggcctcgt ctcttcttgg ccgtcgcacc gtcattctct ctactaccct 600 ggccgttctc tgcagcctct tctggttcag caccccgctt ggcgcctttg cgcgtcccct 660 tgcccttccg ccgggctggt aaagcagaca gatcctgaga gctaggatcg gtttccacat 720 780 caactagete tgegteetga teageteeag cetecegteg aaggeggeta aaageetttt ccatcctgct ctggccaccg gaccggacgc gtggtgcgaa tgctcctgct ccttgaggtc 840 cactgaagaa actggtgata ttactctggg tcccctcctg ttctctctga ttgatgtcac 900 gaatcacggg cacgaggact tcatcagttc gttcctgact ccagccaata gtcgccatca ggaagtttcg gagtccatgt agatcaggca cgccccactg aaagggtgaa gggtccctgt 1020 ccgcttccgg ctcgaggtaa gctgcatcga ctcgcgcgtc cgggaaggta ggcggtagaa 1080 aaatcttcgt agcctgtttc ctgaactttt tgtagaaagc cgcatggctg ctgttcgaca 1140 tatctgcccc tgtctgtacc tgcgtccacc agtcccggaa ttcctcaagg ctggagaatt 1200 cggtcagaat ctccagcgct gtcactggtc ctatgccggg aattccttct gtatagtcgc 1260 teccaagaag atgtgegaag etaateagtt teegtegatg gagageatae teetteteea 1320 gatccgcagt gagataacac tcaacgtatt tgctctggtt gaacatattt ttgtagactc 1380 gggtgccacc gaacaggaag atatcactgt catccgtgat aatgccgtcc acaagtccta 1440 acgagaccag ttccgcgcat tgtggcctcc gcctccatgg gcgctgtgat atacggtagt 1500 ccgaacaatc tcaaaagctg ctgacactct gtaatcatga tttgcgtaac ctcgtcggcg 1560 tetetgeggt etttettetg etgegagege agetgtttga gttettgtte gtagtegaat 1620 gtgccttcac tatgtggggc tgagttcaag gttgctgcaa acctaacatg ttcctcgctt 1680 cggcagcgag ctgtctcatg agctcttcgt cttccggatc cgagaagcct tcatcgtcga 1740 tatcaacage ttgagegage ecaaceteat gaagegeact gggeaettge tgtattggaa 1800 catcttcgaa ttctggcgat aatcgtccag tcttctcgcc atcaccgacg tgttcttccg 1860 ctggcaggtg cacgtcttca aactctagtg atcgttccct ttctgcagcg gggacggctt 1920 ccaccggttg cacagtgacg tettcaaatt ceggagaact agacegcacg gatteeteae 1980 egteagtetg cacegatteg getaegtete cateetttge aactttgget teaagageta 2040 cagaggetet gtgateegge gaetetggtt ttggtggete gggaggtgtt tgaatetett 2100 teagtteage tggttgggee ggegeagttt cettateage eteaggeget gggteaagat 2160 egatgacett getetegggg aatttgteae gtetattaae taggtgateg atgattanea 2220 aaaataaatg geetggt

<210> 2444

<211> 1858

<212> DNA

<213> Aspergillus nidulans

<400> 2444

60 ategeaacae ggaatttggt aaaaegatge aggagacatt aagetgttaa aggaegetgt tgcactggtg gttttcgggc cgtatgagcc ttggctgctg ccgcagaccg agaggttctt tecteteget gageagggtg gatteaeggt gaegaaggtg tttgagaage tgaeggagaa 180 gctcttgttt gagaatgatc ctggggtatg tgtctattga ctattgaaag agcatattgc 240 taacaggctg aaggatgaga gattgcgaag aacagtcttt ggttacgagc ttcgatggaa 300 ggatgaatta cgatagacat gataccttag attcgcttgg ctggatagac atcgtcaatt 360 acataaatat tccctcccgt ctgacttgac catttcgaag tgtcgttaaa tatgtcacgg 420 480 ataaaccacg tgcgcagatt agacatcaga tagatagaag gaatgacctc atattattca aatctctgcc agttcagttg gcaaagtcca agagcctcta taaatcacac ggaaggcggt 540 caaacatcaa aactccgcca tccccgctca aaagttacag caaaatatcc cagcccctca 600 ttcaaaatat tcatcagcaa tcatgccagt acgtcgcaac ccaataagat ccacactcat 660 caatactaac aaagtgcctt tttttctcag ctcatagttt taacggctac cctgctcggg 720 cctcagctac ccgcccaaca acttgcaacg cgccttgaag aaatccaacc caactagtcg 780 ccaacgcgat aatccctcct tcgaaatcga aatacaagat ccacattgtc tcaacgcacg 840 ataatgtcaa ctacccgcgg acagtatacg acaccgcgcg cacagagaag gaggcgcgcg 900 gagttgcata tacaaaggct aaacgcatgt tgggaagaga tagttttgtg attctagatg gaatgaacta tatcaagggg taccgatacc aactttggtg tgaggcaaag gcgttgggta 1020

caacgtgctg tgttgtatge tecegetttt cecaattteg atatgaggtt ggteaaagtg 1080 ctgaeggett cttgetaggt ceaeggttgg acgeeggttg ateaatgtat tgegateaac 1140 gaageeggac tgeggaaaaa gaacgeetee egaceggacg geteeggaa agaagataga 1200 gaegagaace caaageeage cactaaceet teateeteae eegacteeae eteeteege 1320 taegaagaaa etteeatgaa eagtegttgg gacaageetee teeteaaceet catetteege 1320 taegaagaa etteeatgaa eagtegttgg gacaageete teeteaeggt eecetaacee 1380 gaegetgage caceaatege egaaatetgg acegegtga eeggeateee geaeceagaa 1440 acacaggaga aagaaaacae aatateagaa ettegeageet eectaaceet aacaacaet 1500 teeeetteet eegeegeegg taeaaageeg eaceaggeeggeeggaeteeg gggegteaeg aggeggaete 1560 teeagtagae egeegetege gataaageeg eaceaggeeg eaceaggeeg eaceaggeg 1620 gaeteeteegg eegeeaacee eteeggaaaa egeegeeteg eateeteeaa aacaacaea 1740 geeteeggee ttgacaacga agatteaee egeeagaaa aaggaatetg eateeeegt 1858

<210> 2445 <211> 468 <212> DNA

<213> Aspergillus nidulans

<400> 2445

tgacattcgc catactacaa ggggaacgta ctcttgcgtg aagacattgc cagcaacgaa 60 acacgccagc aggtcgtctg ttccaatcag tccgcacgta cctacgataa agagctaaaa 120 agggtcagtc tcatcctqtq qqctcqtqac qtaqttactt accqcaaqaq caatqqcaaa 180 gacaaggaag ctctctcggt ccacgtagtg cttctcttcc gcccagtgaa gcaattccct 240 agaaacccag ccaacagtga ctccgtagcc aacactcagc aaaatcgtgt aggcccaagt 300 ctcataaaac cacaaaccca tggctttccc tgcacctcca ctgaaaccct cgccatccat 360 gccaatatac tggatgaggt agagggcaaa gaaaagaaac ggatagccaa gcccgtcatt 420 cgcccccgac tcagcaatga tgatgcgctg aacggctgag gaacattt 468

<211> <212>	2446 754 DNA Aspergillus	nidulans				
<400>	2446					
aaactcctgc	caatattcga	ctatgtagcg	ggcgaccgag	ccctcctccc	gcgccgaagc	60
atacatcagc	ggcttcaaag	ccaagggcac	cgaaaatcaa	caagagagtt	gtcaaagaag	120
atgttttcag	tgccgtaaac	catcaccgaa	gcatgggacc	accaagtttc	caccatgagc	180
attacgacgt	aaacactgga	ttggacgaag	acgagtcgat	cgagcaggca	accctagagt	240
cttcatctat	gatagccgat	gaagacatga	tctcaatgtc	ccaaaatggt	ccatactcgt	300
caagaaaacg	caagcgcgga	atcaacgaag	tagctgccat	gtcgcttagc	gagcaggaac	360
acattctcta	tggagatcaa	cttctagact	atttcatgac	tgtcggagag	caccagaggc	420
aacgcgcatt	ccacctcccc	agcctcccgc	taacttccag	gtggatcgcc	cgattgccaa	480
ttcaggtaat	ccggccttgc	attgggcatg	cgcaatgggt	gcccttgaaa	ttgtcaaaga	540
tttgctgcga	aggggaccaa	atatgaaagc	cctgtctatt	catgaagaga	ccccactggt	600
ccggcttgtg	ctttttcgaa	caactatgag	aagaggacgt	ttccagcact	gttagacctg	660
cttctagaca	cgatctccct	cacggattgg	tttggtgcta	cattgttcca	aaacataacg	720
ctagcgacga	aaagcaaggg	ataatggaaa	agct			754
<210> <211> <212> <213>	2447 1949 DNA Aspergillus	s nidulans				
<400>	2447					
ggcggtatga	gcttcgcaag	acttgtgaca	catctgcgtg	gccctatcta	caagattctt	60
ggagtgatca	agacagattc	aagtttcaaa	aggacataga	aggaacgtat	gacaggatca	120
ggatgcagat	cgcgcaacta	aaacagaaat	cccgggaact	tatttatctg	gtaactcaaa	180
ccctcactct	tatgcctacc	ttgggagcta	ataatttggc	caggaattta	gcctgacatc	240
aatcgccgag	gctcagaagt	ctacatccat	gaatcgcagt	atgaagcgcc	: ttagttggat	300
tactgtaaga	ccgccctctg	gttcatcttg	cttcgctttc	: taatagagcc	: gacagtttgt	360
gtttctcccg	ctgatgtttg	ttgcggtatt	. atctcaccgt	aggcggcttt	: caattgatat	420

gagctgactt tcggtccaga ctatttttgg aatgaacgtg gatcttcttg agtctaatcc 540 tgcttggtgg ttatacatgt tcttcgcact cggcaccgct gctgtgacga tttctgtgtg 600 gatactette aagaggaace caaaggtatg gtgtgacttg aaaaccatga tegaateteg gctgacattt ggtgctttta gttagatagc gtagaaagcc actttcaatg gttactccgc 660 aagcaaaaac ttcgggatga agagttaggt attgcggaga ggagaaggag aaccaggcaa 720 780 ttcccaggtt ctgggaaaaa gcggtcatga gcatctccag ctatgccgct ctgggtgtac aaaagcagga taaaccgaaa taaatgcact taaagctacc aggcacctct tgtgtatgcc 840 900 gcgagataga gcgttggtcg agctaggctc ccgctgcatt gacgactgat tcttgagatt aggcgatatt tgtagtcaga atattgtggc ttattgaaac gggaagttga acagaaggtc 960 aggggaagat atgcttgtta taagctatac ccttctattt gtgcaaggtt tgttgtgaag 1020 gagaatggtg tagttagtgt gtgcaggtag aattagggag cacgttaagc aagtgtgtgc 1080 ctgtgcaagg cctttaatta gccatgttct taagaaggat atcttccaca aggaacttat 1140 aataagtccg tgaaggtaag tatcctctct agaagtaata tatgggccag agcggaacgc 1200 ctagtttatg ctataggcat cgaattatta atcttgatat agtataccgc cacgtctata 1260 tacagctagc aagttaagac aagagccgca cggatggaaa tcaacttctg acagtagact 1320 cattacttac attgattacc gacacttctt ctgttgcctg tcattctatc ttcgatggtt 1380 cggtaagtct tcactccctt cccttataat actggcctgc tgcgctggga tcaagccgtc 1440 taccegegge aateegatat gacgeatgte ttggageate ateageeaca teacgatget 1500 atcaccagga ccttaagggg cccctgggc ccagggccca ttcgagaacg ttccgactgc 1560 gggcgcctcc acategtggc eggattgeeg aaacateece agtgatetat etggaeteea 1620 gactgecogg cattacggtt ctcctttccc ctcttctgct tcaattacgg tccatagatt 1680 ttctgcacca tataaatata ttttagtcac gaatatcaag caqtcqcqct cqcctgaaca 1740 teteatteag eacteattgg eggtgeaate aacgegaaae eagettggae aactgtgggt 1800 acaaatatgg gccgatgacc tggagacatg catggcctcc gacagaggtc tcagatgcag 1860 ctccagctga tatgcggtgt ggaagacacg aggtgcctgc tgtcaaaggg gcgcatgcct 1920 agtcacgttg ttgcttgcct acctgtcga 1949

<210> 2448 <211> 1842 <212> DNA <213> Aspergillus nidulans

<400> 2448

cattgattag ctgtacaatg ggaggtgacc tacatagcag ctctgttggc caagctgcgg 60 aqaqcaqaqg gcaggcggcc ccgagtctgt gaaagaagca ttgtcgtggg tccgataaca 120 gctgactgtt tttgggaata cggaccacgc caggagctta tgtaggagaa gaaaacaaga 180 aaactctcqq aqttcqaaqc qaqcaaaqaq tcaqaaaaga aqacaggaag tgccggacat 240 300 ctqaaqttct ccqcaggctc gcagcgaagt cggggccgga gttggccatc acttccccgg 360 tggccaatca caccccgatg ttagtaagag gatccacaca gagcttatgg cttgtttagg 420 gtcgatctta tatatgctag actatgctgg actctagcgt atagggctat atatacttga atgtcagagg agttataatt ctaagggtat aacatctgat ctagccaagc ctcataaagc 480 atteggeatt etegeegate tggtaateat geatgegtea taegtageat aaacaeagga 540 aacaagtaaa aaagaaaagt cagagcaaaa gaagtaagtt acagaaagaa gacagagaga 600 ccaqctcaqq qcacttcttt atcqcctcqc ttcaacccgc caggcacgtc aatggcgtcc 660 720 ttcacccact ccatggccgc gatctcttca aggctcttgc gttttgtgtt tcgtttcagg 780 agcgactcaa cacacteecg egegeettea agaccaegge eetteteggg ateceaetea ccgtcgctgt ctgcgtaccg gtaccaggac cattcgcacc gtgctatacg gtgaggagtt 840 cgggctcgga gtttcgcagg atcgcctcgg gttccaggga gggcgtcgaa aggaagtctg 900 ctctccatca tcgcatacag caaaactcca agcgcccagc cgtcggtgga gcggccatcg 960 tactgctggc ccatcagaat ctctggtgct gcgtagtcct cgcttccgca gcgggtttgg 1020 agaagaggge teteaggagg tteaggtata egtegtgaga ggeecaggte geteaaggte 1080 acaactgcac ggtcataagt acgccaatcg gtaatctttt gcagagcttc tttgggaaga 1140 ttgacgagaa cgtctggtag ccatcagtca gctttgttct agcaggaagg cgcggggagc 1200 ttactctcga gtttgagatc acgatgcact acataatgct cgtgcaaata gcgtacagca 1260 gccaccagct cggcaaaaat tcgtcggatg agccccggag tcaggggtct ggtattgttc 1320 gagacgactt cgaacaagtc gccgcctggg cagtagtcaa gaaccaggag agcgcgtttt 1380 tcgtcgctgc caaaagcctt gagttgtaca agggatggat gattcaaaga cttgaggatt 1440

tegaceteae gttteaggga cacetecagt egetecteat eggetecace egetggeeeg 1500
tgtteaatga tetttattge aactagette tgggtegagg ataeeggegte agagtgacea 1560
tgateagagt eegeeeette eggttegaea egaacageea aegataeettg getgaaagta 1620
ceatgaeega gttgteggag tttgegatae agteggggtt getgggteeg aatggagege 1680
acegaatagt acteeteegt aecatgeegg teggaatgat ggatgaegae aggtteattt 1740
tegettaeae egaaeecaeg tgttegegga ggegaaggeg ggegaaeeggt aggtaaagea 1800
atteetegat ggategegag atattgetee egatgeaggt tg 1842

<210> 2449 <211> 1856 <212> DNA

<213> Aspergillus nidulans

<400> 2449

cgagaagaat cttatcctga tcgggtccta gctataatga gaagttgagg agctacaaaa 60 atggattggc agaagataga cgacacgctg agaagtgtga cctctgcatc aaacaatatt 120 acatgggaaa aatctggctt atggaacaac tcaaggagaa ctacgacgat gaagacatcg aaaagttctc tcgcatgcta gacgagtgtg atattaaacg aataacgagg aacctggcga ctgcgacggc taccttaaga gcattaccag cggatcagat tgggctgcat gtgcttgacc 300 gagcgtcact actgtctatt tttgagactc tgagttgcga cgctatgctg cgcaatgaca 420 gcttgttgac ggaacacttc gacgagcctt tcaggttgat tcagacaaaa cgtactctca 480 aggtttcaga ttacatccca gctgtcaccc ggtttctctt tagtacaaat catagtcgca 540 gtcactgggc cgttcattct tggatgcggt accagcgagc tcctactgcg gcggagtttg 600 actgggcaat caaagaggga ctccttgatg cacttagggc agcatctcag cagccggtac 660 agatagctgc cattcagcga ctttggcgtg gcatgcagtt cattgccaaa agattggaca 720 aggaacaaat aacacacaac ttacgtgctt tggaaatcga cccctgtcgc ctgtctgtcg 780 aacacctcgc gttccaaaca gctagtctgc gatggactct caacaccatt cagatctttc tagaaaagac tcctggagat ttctgggatg cgatgcaaac aatatcgcca caggcaattg 840 ttgaggttgt tttctataac ccccaactcg agtccttcct catggaagct accgaaggtc 900 aggcatatga gaaattggct atgaaggata tgctctcatg ggtcaacccg tttatgtcgt 960 cgttgaaagg gccgcaccaa cctacagcat gcaggtcgct agtctatcaa ctcattgatc 1020 gactgcagga tacacgtttt ccaaacttag cgaggtacca ctgctttgag gtcggtttgg 1080 ttagcctgct ccatacgctt cgcagtttta ccgaccatga atcgtcaaga gaatcagtag 1140 cacgtgtcgt tctctctgag acattaggag ttgtgagcga atacattaac acaatcctga 1200 agcctccgca gttcaatgtc gagcaggggc gacagcgtgc aataaaatca ctctgcatgg 1260 atgtcattcg caacacatta gctcttgagt gtcagtctct gaagagtgat tatgaagtta 1320 tectcaagea tggtteecte cageatggtg tgageacata tteetettet atttgggatg 1380 ccgttatcat gcacctccat gagaatgatt tagctctttc gacatccgcc cttctaggaa 1440 ttctaccgct ggtcggtcta gagaaattct ccttgaaaga ggggacaaag ccggaaaaga 1500 cacactttaa cactatatac ggtcatctta ctcacatctc gtgccagatc attgaaaggt 1560 tggccgattt caaaccagaa catcttgatg aacttttcaa gagtcaggat actggcagtg 1620 ctcttgtgtc tactctcttc gcagcggacc acaataccta tcaagccgct gtagacctca 1680 tcaagaatgt tagcggccag tctgctcgga gagacgcgat ctcccacttg ctacagtctt 1740 tetteactae caegttgtae gggeteaget ggteetteeg aeggatttet aatatgaaga 1800 cgtttgcctc ggcaccgaga atgatacaca ccggtactga tattgtggat cataga 1856

<210> 2450 <211> 1378 <212> DNA

<213> Aspergillus nidulans

<400> 2450

cttccagatt ctggcagget atacceggeg aaatttgagt cagtatttt ttc t 60 ggcgataatt ttttttatc taaccaatct cttctcgcac aggacerige a 120 ccgacatgac tggtacgtga tgcgcgaaac gccgtcagge ccca is a tccgctatgt 180 gattgactac tactctggge ccccagagec gaccggagag cctgtttct accttgacat 240 tcggcctgct ttggattcgc ccaccgccgc tgccgaacga ctgctgagat ggggatctga 300 cgtctggtat cgcgcaagcg gaggcgctgt ccgtgacaat gacaaaaaat aacgaaaatc 360 gcaccgtctg accagtgtgc acggctgct aggaactaaa tacactggga gctggatagc 420 tcttcttggt ttcaatggtc ccgaagtagc ccttcagtcc gccgttggaa tttgcattct 480

ccactcttga cgccgggaat atacgaaaaa catggacatc tgactagcta ctgtttatat taaaaggttc cctcgtgttt cgcatttggc attaacattg tccacttccc ggctgcgatg 600 660 gttttatcgg catatgtgtt tggagtcgag gttccagttt gtggtgcttc ttaattagtc gaagcggttc attaccttca tatatgtata atagatgtac gatataccat tagcttcatc 780 tegeatette gageetaatt etatggegtg tatagggtta tgggggetgt gettgeegtg tggattgggg agtcaccaaa atctattaca gagtacctgt aaaccgttaa atgcaattat 840 900 tagcactttg ttatcaattc gcatcgtttg ggcattgaac caagtgatca tggcccgcaa caccactaac caactgtaga teetttacac agcaateace tgeetaatea taetaaacgg 960 cgacacccaa gacagagccc ccctgccaaa caagttcgct gttctcaatg gatcctcagc 1020 egteeegaeg aettgaetea aactagetag tteeegagga tetteeteaa ettatteagt 1080 aaccagataa tccagctttt gttcccctcc caaatccagc tctttcgccc cttggcccaa 1200 gggcagagcc aacgccacgg ggcaaacccc gataaaactt ggtccaccac cctcttggca 1260 taagcagagt gaggcatggc ttcgtcctgg ctgtgtgtga cccgaccagg atactggtct 1320 tcaatcggag catagatcga gttgggtgcc acaatgcgct gtgtgcgtgc aatgcgtg

<210> 2451 <211> 2387 <212> DNA

<213> Aspergillus nidulans

<400> 2451

aaccaagctg tagecgeete ttgttegate atttettgge actgteteaa egeaaacgtg 60 cagetgegga egagettgea etgtteetgg acgateegea tttaaacgtt eeaggtgeag 120 ggaattatet tegactaget gagegttett egtetacaat ggteecatte eaaacaegge 180 etgegeagtt teaceteatt atacgageet tggaaettgg ggttgtteet eeggaagaga 240 teggtgegat eatageeege tggteagatt ggagaaaate etgtteggat teetaaaaag 300 eeaaaegeaa getgttaaaa atatategeg egatgtggga egeeattgge aagtgtgetg 360 tttatggaca tegagatatg gaeeagtete ttgtteagae ttggettggt gtetgettag 420 aagagggeae tgtgggetat ettegaetag eeaegagtat tttattgget acegaatatg 480

ggatgtcatt atgcagttca tggctgccca agttcgtcgc tagattactt cgcqactcca actattcact cccggcgcct gacagggacg tcatcataga aagcttaaag cccttcgata 600 tegaeateat etegaatteg etgatttgeg geaetgaggt tttaatetet teecagaaca 660 egegeettet cagaagatgg gggaagtget tagetaaget teatgatgea tetagaatta 720 780 ccttgtctaa agcctgggtt caaatacgag agcagcctga ttcattggcg aagcgtcaac tgattttgca gcgtctttgg atgctgcaca caatgaggag attctcccag agacgtgctt 840 900 cccaagtcac taàatcagtc accaagcgtc tatatagact ttacgagtcc tcaagaagag ttccgagaag aaatggccaa atcaaaatcg acctctggac cagcctagtc cagcacatat 960 ctcgtttgaa gatacctttc aacctggaag caatggccga cgacctgcga actggaaagc 1020 ccatgaccaa cactatgagg aaacgcctcc gacagttcca aaatgaacca ctatctttct 1080 ccgacttatt cgcaaataca caaacttaca acgcctcccg ccacctcttc ttcaacaatt 1140 tegacaacca aateegecaa gtegacgteg caageeecga etteegeete tgggecatte 1200 aaatcgccag aaccggcaac tccccagcca tctggtctgt cctccgtctt ctgcgcgccc 1260 ataccccct caagattgcc ttatctagag catggccact tcccggcccc gcagatggag 1320 ttattgtccg ctacaaccca cgtcccaggt cagcaggaac gccggacccc cacgatgcgt 1380 tggacatggt ccatteteta getgetteet ttgegtgtge aaaacaactt tegeeceage 1440 gggcgtateg gettgteegt tggetttaee tetttettet cagacacqqt gegeetatte 1500 agacgcctat tgcgcgcgct ttgtatcacg cgggtgttgt gagatttcgc caggagaagg 1560 ggtatatctc tccaattcag tatgactata tttggggtat tgtggagcag acggaggggc 1620 gggaatatgt gegggetttg agatetegaa eaetgtaega atgageeagt gtgaaggtee 1680 acagaatttc agttgtttgt atcatataga gggagcgaca cttattggct ctcgatatcc 1740 tacatttcta tataaatttg gacggtaact acgcttgaat agagacatta tgtacttgat 1800 aacagtttcc catggtcatt caatagtagg gaagttcttg cggtactcca ttaqaaaaqg 1860 ttcgctcgat tatcaaatgt cagctctatc taggggtcca cttccatcaa attagggtca 1920 ccagagatet tettaacggg cacatattte etcagateet eettggaaaa cactttteg 1980 ttcaagtatg cgggaatgcc cttggggaag ccggaggtcc ttttcttttg accaccttgg 2040 tgggcctatg ttgttccgag aagtagcgtg tcttattctt ttaataccca acccttgcat 2100

tgtttccaga accagtcgtt aaaatcccgc cttgatggtt ctaccccagg ggatggcttc 2160 cttttgtaaa attggtttcc gttaatctaa caacattttg gtggggtcct ttctctttcc 2220 atagggggct tgtttactgc gccttaacgg gaagcctatc tggggccccc ccactccctt 2280 gcccatcccc tttggaaagg tttattatgc acttctcctg ggccgctaaa gattaattct 2340 tttatgtctc atatttttca tctccctcac tacctcctta aacttat 2387

<210> 2452 <211> 1600 <212> DNA <213>

Aspergillus nidulans

<400> 2452

tctccttgat tttctctggt tgaggcatga gatcccaaat cttgatggag ttaagcatct 60 cggcggcctt cttccagtca ccggcagcaa ggaacttagc actcataatg acgccatcac 120 gggtgttctc tgcagggcca gtgaagacct ggcgctcatt gtagtcgagc atgcggcgga 180 aggtcttgga aatgacgcga cgtttcattt cgggagacga tgaggtttgg gccatcagag 240 gaacctcgag gaacatacta gaagtgaggt agatgcactc gagcagctcg aggttgatgt 300 gcatgtggaa ggggagttgg cgttggcgct cgagacgctc ctgttcaggg gagacggtgg 360 agtaacgctg caggatgata ccctgggcga gaagctcctt ttggcgaccg tgccgcaaat 420 ttccgagagg gtgttctgag cctcgtaaat gagaccagcg cggaaagcac acaaaccaat 480 ctgaaccaac gtcctgttga agaggatctg agagctcacg tcgaaattgg caatgttctc 540 ggacaagtgg gacatgagca tcaggtcgcg agcacggtag tactggtcgt ggagagcaag 600 gaagtagate tgggegagea tageaegege tegaaggata eegtegetgt teetgaaeag 660 gtagttgcaa agcgtctgca cgagggtctg ggcatcactg ttgccgcgag ttgtgataga 720 ggtctccagc tcggagggaa gggccttatc ggtgccctct tccagaattg taataacctg 780 ggaaggettg aagtagatat getegagtet eetcateace aeteggttaa gaetateetg 840 gcgtagttcc gtcttttcca gctttgtgag gccttcaacg tagatctggg tccgcacaag 900 gttggtatac agctgtttct catcacttag gcgttcaatg tactcggcgg tgtgggggtc aatatgttgt agagacctcg tgagctcatc atccagtctc tcaacgtaag aaacgatact 1020 gccagggata tagaaagtct cgccagcagc aacctgaggc tgcttctcat cgtcctccca 1080

tteeteggea cetteaetga caacatagtt gegeteette tegagaacgg aaageagggt 1140
agacaattet tgeteagetg cetteeattg etegaegete atgtaegeag eggtagatgt 1200
ggtagaaagg tegaaacgtg tggagatgag agtgaggtag acaeggatge getggtaagg 1260
egtetgggee aceteeagga getteteeat ggtettaate tgetegagae ggteggtatt 1320
ettettteet egegaetega egataacaeg eagatgette agaataetet egggegtgta 1380
etgaagggte ttteetegga eaaeggtete aaaaceateg tegteteeag eaaeagegae 1440
aggegeeteg aegegeteea acettgeteag eegagggea gegatggeag gettettete 1500
tteetettea tegeteteea tgtagetate etgetegatg egatattet eaatetgege 1560
acgatattee ttgttgttet tettgatett etgettgatg

<210> 2453 <211> 1873

<212> DNA

<213> Aspergillus nidulans

<400> 2453

attgttaaac gtgtagagag catgttccga gcataagcaa gcggcattgt gtcgcccctt 60 ctcaaggatt tgcgcacatg cggggttttg ttttctgggc tggcgcgttc gcccacggtg 120 acagcgggga gggagattgg cgggccacga tactgatgat cggagcggtc tgcccttgaa 180 caggeggate cagattecta gactqtaqte aatatteaaa attettaaqa aeqaqaqaaq 240 gcattactac cgtatctgtc gacgcgtatt cgcggcatcg tcacqqtcqa qaqaaqacaq 300 aaaaagtgct gccttgtcac agagacatgg gcttggcgcc aaggaacggc tgagagcagc 360 cctatgtggg aggagtggag agaatgaggg ggtcgqcatg qcqqtatgat caaqtqqaat 420 caagcataaa tatatgaatg gacccgggaa taccatctcg agggcgggtt tagtttaccg 480 gtctagcgca gatggggtga atgttatgga agggaggcgg tatagacaag atatacttct 540 gcccgtcgga acagtaacgt atataataga agagatccca atcataacag atacttatct 600 ctttctctgc ggctacaccg tgtatatgat gccagtcgac cccttgagac actgtctaag 660 gctaagaata ctaaaatgtt gaaaactcca gtcgctagct agcgtgtaat cagttctatg 720 ctacagatge acgttttcag cateceaate tecacettca teacecaege cacacaagat 780 tcaaggaatc aaccgcccca tgatcaacct cttcaccacc aggcagttga ctgaggacct 840

ctacggggct ctccagcttc agatggaccc tcgtctcttg atcaccggcg gcctcccact 900 ggacacttgc aagattatct ttgcccaagg ctaccttggc agagacactt tcactcagcc 960 tcaacctagg cttgaagcgg attttcgcac accccggctt gacgggcgtt agaccgacca 1020 gctcggcaca gtactcgtag atcggcacgc tcccccacgc atggcagtcc gagcgctggc 1080 ggacgtcgtc ctcttcccac gtagtgagat tctccgctaa catcttgcgg tacgggttcc 1140 aggectegtt tetecaaaag gattegtaca tetegtetee ggetgeggag aaggeaegea 1200 gcgcgtagaa gcgcatcatg tagctgcatc tggagaatcg ttcgtccgcg aacgactgct 1260 tgagcagtcg ggagcattcg tctggaagag cggtcccgga gaggatggcg aacacttgag 1320 tgtgctgcga gtatgcatcg tcacctgata gatcggccgt ggagtctgtg aaataatgcc 1380 cgtcgtagca atggcgccgg actgccgtct gcaacgagac cgcgcgcgcc tcatattccg 1440 cagcgtaacc aggccttccg agatcccgta ctaacttcgc tgttctctgt aggacgtatg 1500 catacagaag actgaaataa gtatgccgat ttgatcttct gccggacgtc ggcactccct 1560 tatctgggtg ctcgtctgtt gcaccccagg tagtgaccca gtcaacgtac tgccatacat 1620 cttcgggaag tccgctgacg agaccgagct gatccacatt gctctcaaag aattcgagga 1680 caccgtcgat cctcggtagg aacgaacgcg tgtacgctct gtccccaaag aagaggaaat 1740 ggtctgcaac ttgcaggatc cagtacagag agaagcccgc tataatttgc gggacgtgcg 1800 aggggaaccg cgactgcgtg agcccctcag atgttatcga cgctgcatag tttgtgattg 1860 cctgccgcct tta 1873

<210> 2454

<211> 1571

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2454

aggcgaaggc tgtacgaaaa gattcgcgag gaagtccgcg aggcccctct cttccgcttt 120 gattggttct tcctcagccg gactcctgtg gaaattggcc gccgctgtac gacgctcctc 180 aacacaatcg ccaaagagtt cgaaccggac ggcaagaatg gtgatggaaa gggacgcggc 240

cgcgaccgag aggacgacga acttgacaat gaagacgacg ttccagctaa gaagaagacc 300 aagggcgccg tggtaagtga tgtttgtcta aagttgtttc gctcatgttc aactaataaa 360 caaatagaac aagcaagtca aagccgtcaa gggcagcaaa ggaaactccg cctccacgtc 420 togagoctet teagecaace eteccaagte gegegggega aagaagtgaa ateccactee 480 agcqtqaqaq cacagtqcqc taaqcactca atcaactacc ttaqcataac ataacatcta 540 tcttgtacta ttgtatggtg attttggcga aatttgtaga ggcatgatga aagaccaaga 600 gcctggagtg tttgttctgg tcctgggtcc qtcctggatg gtggtttgcg ttqqcttgtt 660 attatgaata teggttgegg egttgaetae ggttagaaag teaetggeta etttaateta 720 cttattttca gttcttgata attggggcta ccaactagct tgttttcgta tgggtttttc 780 ggagtccaat cggttcggcc taatgtcacg gaatactatc ataacaattt tattgaatat 840 acatgagcgt tgaaacctaa atattcattt cgcctaaata tcacactaga tgatgataat 900 acagaactca tgagccaaaa attagggtcg cctgaagaga gccactgtgc ctactaaccg 960 gtttagtaat agaacaatgt acattgatga tttggcatat atacgtaaca atttgatcca 1020 gaaacccgtg tgagaagatc cccaacaatt ggtacacatt agtcatatgt cgatagaggt 1080 gaaaccaact gaatcatgat tttagggagc gacgccgact gtccactcca acttccgagg 1140 taaccaaacc tcacatcgac taattcatag tttggagcgc cgttcaatga tcttcatcac 1200 gaagtatgcc actgtgacaa aaagaggtta gtgcgtgtcc atcatttgca gatcaaacac 1260 caacgattat ccagggaatt ggagtaggag acgaaaagag aatattagag actagctagt 1320 ggtgggtata tatagccgta gatattacaa tcatatatgg tatcaaatca agcagaggta 1380 tgtatgtcaa ggagagaacc aggagcgaag aacgcatata gccaaaattt atgactcacc 1440 agcagcaacg acaggagccc ttacagcacc ggccttagct gaaccccgcn cagtgtgagg 1500 atatatcgaa cccatctaga tggacctacn gcagaacgtc aaagtcgggg cggaaacctc 1560 gccgcttgac t 1571

<210> 2455 <211> 913 <212> DNA <213> Aspergillus nidulans <400> 2455

t	taatatcgag	g attctgaaag	gggctctccg	gcactggccg	g cccgagggag	acagcggttt	60
ţ	cacccggctg	g tggaatgtac	agaggagact	gggaattagt	cctttctgga	atagatcgaa	120
t	caactactto	: gtgcggggac	gcatgcagtg	gcatgcagag	g gcatccaagc	gacgaatcct	180
Ç	gagtgcagat	ggctggagaa	ttcgcgccct	ggatggagto	ttgagcttgc	attgcaacgg	240
á	agtatgctag	tggtatccct	tttgatggag	gacttcttca	gtctttgaat	gattagtaat	300
C	ctacgcctc	tagattcgac	tggtctgtgc	cacattagtg	gtggccagta	ttggtaggta	360
C	gtgatattg	gattctgaga	ttgagctgaa	gctgttgaga	agcctggaaa	ttagtttgcc	420
g	ıctcaggaaa	gataggtagt	atgcatcttt	gggatagcaa	ttgtattttc	tgctcgtatc	480
â	ıttgacaggc	tttgtctgaa	ttgtcgactg	cggggttgag	tcctgcatgt	aaggttcatc	540
t	gataaagtg	atagtacacg	agatcgccac	ttccgcattg	ggctgtcaat	caaacctcga	600
С	ctatccatg	acaataaccg	tcaatccttc	acaatcccga	caatgaaccg	tccacattcc	660
С	tatgtttcc	atcgccattc	gtccttgccc	tgcgctccca	tcatgctaat	cgggtccagc	720
С	atggcgcca	tccggtgggg	atcctccgtt	ctctcggctg	gagatttagt	caaaagacca	780
a	aatattttg	ccccgaggct	tcccttaata	atcgtgaatt	tttcgccctc	ccttctgttt	840
С	acatatccg	cgagatttcc	atatagcgat	gctagcaccg	tgcactcttt	ccaatacctt	900
t	ctacccttg	tgt					913
<.	210> 211> 212> 213>	2456 1742 DNA Aspergillus	nidulans				
<	400>	2456					
a	attctaaat	tgataatacc	atttactcaa	cgacatctgt	atcattatct	ctgtcctctc	60
g	cattgattc	caaacaatat	gtttagtata	tggacccagg	tcagcaggtg	ctgatttccg	120
g	ggtaggatt	cccaatcaac	tcgattccat	caccgtcgcg	tggggtggga	tctggggaag	180
to	ccacgctcc	taggacattc	gaataagaaa	ctggtgatta	atatcccaaa	gtcatatcag	240
tt	tctagata	tcgaaggggt	aacggagctg	gtaccctatt	atccgcatgc	agatgcttga	300
ct	agcccatc	tgcttggtgt a	agtcagtagt	actatggagt	agcccgggtt	tgcagtacta	360
gc	egtttegtg	ccttacagta q	ggccatgagg	tcgggcatgc	attttgccga	acatcgaata	420

ttttcaaccc agcttgattc tcgaaactgc gaggttactc cgtagtatac agagttggaa 480 tggactgagg ccaaagatag aaaataaaag aggcgtagcg taatctaaaa acgtggcgat 540 acagacactg tggttttgtc tctcaacaat gctgcgcctt tttcctgaaa caaagaatgg 600 atcgaaaagg tggctgccaa aatggaccga aaatagcgaa aatagcgggc aggaacgggt 660 ggcggtaatt ttcactgtaa gttaccggca agaggcaaaa aaagcaggcg caagtgattt aaatggtccc ccacccacag tactctgttc ctcctctct ttctccatcc ctccgtcttc tcgctctctg agtctttata aaccccattt catcctccat tcaactctct cttgctattc ggaaccagca gactattttg tgttgtgcgc atttgtccat cgttgaccgt acatccacca 900 ctttttagca cttccacaca tattcaaaat ggtgagtcat tattctgtca tgcccttttc 960 tcgtggacaa ttgctaacct atattgtcca gactgactca actaatgtct ccaatacgga 1020 gaatgtgcgt gtttaccacg atcgacttga ggactttatg tctcgatagt cgtactctgt 1080 actaatttta cctgcagctt atgaagtaca tgagcctcga ccagcgaggg tcggtcatgg 1140 ctgagtacat ttggatcgac gcccacggcg gtactcgaag taagacaaag gtatgcacct 1200 gattcgctct gcttccccga atcggcgacg gaaacggact gcgctttttg tatacgtctg 1260 ccaagcagat aaaacatgat gcgcatcggt gccgcctgca tatacgcgtt ccacgtgact 1320 ttttttgtct tggttccaaa aactaactct acctgcagac tctttctaag gccccttcta 1380 gcgttgatga gctccccgaa tggaatttcg acggttcatc aacagctcag gcccccggtg 1440 acaactcaga tgtctacctt cgccctgtcg ctatgtaccc cgatcctttc cgtcgcggcg 1500 ataacatcct cgttctctgg agacatgtga ctctgatgga agccccaaca ggttaactac 1560 cgtcacgact gccccgtttg atggaacgca tgccaagaag agttttgttt gtcttgacaa 1620 aaacaccctt tggccttagg ttggcttagg tggccaaggc ggttcccggc ccaggaccgc 1680 tctggggggg tcccgaaggg ttagccgaac tttgggccct cgcctgtttt cccgttaaaa 1740 tt 1742

<210> 2457 <211> 696 <212> DNA <213> Aspergillus nidulans <400> 2457

caccettgca catgaactte etgtgatega aacaceaate gggtagtttg actttatgtg 60 agaacaagac acagccagtc atgacgtgaa caagtcgaaa tttcgattga atagtccgta 120 atcgcttctt cgcctcttcg ccatccgata aggatttgac aatctcgaca cgccagtaat 180 cgtttgcatc gccaggaaaa ccttcgtatc catatgccga gacttcgaat tgccaatcga 240 catcagtcac tggaggacgc tcgttatgtg aatgaaccct gcggtgggtc atcaaatggt 300 gtagcctgat gactgcacca tcttcgatat agtttgtcgt gagattatcc caagcaaaag 360 gaccggggat ttctgctcca ttggcgtcga gaggctgagt ctggttctcg gcgatgaaaa 420 ggttattgtc atctttatga gggtaaaggg tgatctgctg ctgcttgctt ccggtggggt 480 acatatgact gtgagagtgc aaatatccgc cttgcgtgtt atggtggcga atactaagac 540 gagaaccgaa gacaacgtet gegggaacgg etgecatgee ttttgaattg agagtageet 600 gaaactcgga ggacatgaaa ccgtcgccct ctcccggatt gaccaagcac cggaagtgaa 660 ttgcaaacat agagcaatag aacgctaggg ggatca 696 <210> 2458 <211> 810 <212> DNA <213> Aspergillus nidulans <400> 2458 gactcataag agtgtggaga tttcaaggga gaagagggaa tatagaaatg tacagaagga 60 cgacagttag gtactaggaa tgcaaaaaac gagcgggtta ttgaggttaa ggagtaacaa taagggaata cgaacaaggt gttatataaa aagtgaagtt tagaggaggg ttaccgagtt 180 gcaagaggat tgggccagct tgacgacgag agtattgtcg tgcataagat aggtttcgaa gggtcgggtc ctagtaggtc gttttttcaa tgtggtcaaa aggccagctg tgaataatac 300 ggaaagcatt attacgccca gccaggtcat tttggatcgg ggcggccttt tgagggggca 360 acctacaggt ggtcatgggt tgcaaggttt accatggcca cagttagcac gcgaggggta 420 gacgagcaca gccgatgtga tcagctatat ggagcgtcgt ccccagaaga gtccatgcag 480 cgtctttgac cgtgtttgag ggcataaatg agccgaacga gagtctgcac ggggcaaaga 540 ttgttccgaa acatgaagtt atccgccacc aggcaccgca ttgccgctcc ccgatacttc 600

660

gccgacaggc tacgaatgtt ctcgccaggt gtcgggtcac ggcctaagtt cctgagcagg

gggttgtcgt	catctaatgc	agtaacggaa	aggctaagag	tgccgtagag	cagagcgacc	720
caggacaaac	ttaaaagatc	accggatcct	gtttgaactc	ttcatatctg	gcgtgaaagg	780
tgggatcgtg	aagaacgtgg	aaaagcggcc				810
<210> <211> <212> <213>	2459 531 DNA Aspergillu	s nidulans				
<400>	2459					
atgaatgaga	catgtcttgt	cgtcgatcat	atcccgcggc	gccgattcat	tggagcatag	60
cctggaaaca	catagcggca	cgatagttta	tatttttgtt	gtgggtgcag	ctaagataga	120
gagaaaagtc	tcttgtcgac	aaggttcgta	gccacatata	gcatgtcaat	cagctagctg	180
ttcggcaata	gtatgccaca	gcaatgccga	cctgattttg	atgactttac	gacggcgtcg	240
catcagttta	aaacaaaaga	aatcaccttt	ggagagttct	agaattgcca	gttacctaac	300
caatcgttgt	tgacaatggc	acgtgcctga	tgttggctgc	gggctaaggt	tgggatgcag	360
cttagcctaa	ccaggcgcag	aaatagcgct	tggccaggag	cgacggggcc	gggttagggc	420
ctttgtctcg	aggatccaaa	ctccaagacg	agtcaagcgt	tggtgttgtg	ttggtgttgg	480
tgtttagctt	gacgcgctga	cagcccgtgg	tgtacttatt	tgacatcgga	С	531
<210> <211> <212> <213>	2460 1482 DNA Aspergillus	s nidulans				
<400>	2460					
aaaattcagt	cgataagttg	ctgccgcgtg	ggggcataaa	tcaaaggccc	atttgatgtc	60
caagccagcg	gcttcagcgc	cgcacgagac	cccacccgca	ccacagaatc	cgtcaccgaa	120
ggtatacttc	cgctgcgcct	tctgttttaa	tattgtatcc	tgaaagtcat	tgtcatcatc	180
caacacaatc	accggcgtct	cagcttcctc	tttgctgccg	aaaggagcgg	tttccccccg	240
ccaaccatgg	cgcaagcttg	ccgagggcgc	gcggaacccg	gcatcggctt	cctcgaatgt	300
caggtattca	attgaagtag	tctctttctg	aataaccctc	ttcaagcggc	agaataggcc	360
atcaggatta	ttattcttct	gacagtettg	accaatggga	caaacqttqc	taaaatataa	120

tgagacaaaa cgtcgaacga accagagagg aatctccgca gtttcatcqq caacccaaat cagctcattg cgccattggg gaaggtattt gtctgggtgg tctttgaatt tgagcaaccg gcggccggtc aatattatat tgcctttcaa tgcttgccgt atagagcaaa ttcggaaqaa 600 tgcgccatcg tggagctcga cggaattgcc cggcttgtag acaattccgt cagcatcaca 660 gacctcttct agcagctgcc cttccggaag ctccggcgag agaggactgg aagcacacgc 720 ggaagcaagc cagtcctcgc gcagtacctc gaaacactcg tcggttatgt attcgccatc 780 atgcgtcgtc tcatcctcag taagatcaat aaattccctg gttgctgtgt cagagtcttc 840 gcgcaaaaag tacaaccgat ctgggtcgtg gtcgattgtg acactgctgg cgtcgctagc 900 gtcatcgaca atcacactgg gacggtagaa attgtgcatg tcgcgagagc aagaaggcaa 960 cgagaggcga gtgaggaatg tatacagcaa aagttcacag acagtgcaag aagaaacaaa 1020 ggttaggtaa atataggctg actgtctcat gaaatacagt ctcagagaag ataatctgag 1080 acaagatggc cttagagaat atagacgcag gggagtagac caatatacga ggagaaaagg 1140 ctggtcagta ggtagtgaaa gtgttgaaac aggccggctg cggaatagag aagagagtct 1200 tatatgagat tacggacttg gagcaagagg gttttgagac atcaatacga aatgaataaa 1260 acattcattg tttgactaga tggaatattt gatcaaacga ggaaacgaat actgcagatt 1320 gcaggttttg ctggaagcca ggcttagcag ataaaacatc tgcatacaac cggtcatttt 1380 ctaagcacta tgctcaacaa agaaagaaga gtaacatctg accccaaggt tctacgctga 1440 tcagatgtct ttcccgactg agtataagtg aagccccata tc 1482

<210> 2461 <211> 1313

<212> DNA

<213> Aspergillus nidulans

<400> 2461

gacgetttta catttttage atttgeteac catecaggaa ttagtattge ttaaatgtat 60
tgcaatatet tactgttatg ttecaactgt atggetacgt getacatgaa acaaacaceg 120
aaccaettea gtaecateeg eegeteeaaa aateetggae ateaagttte atttetgett 180
aattetttt caaaceecat teattgeeac ttaaataget tetetttggt aettgteece 240
caecaagtea aettgaaget ggacaacaat ettgegatta gaettggeeg eeaatatata 300

tctagctctg ccaaaatgga acaggcaacg gccgaacaat catacttcat ggaccaggca tttgaaatgg tgctggactg cgttctcact tcatgtatta gaacaatact gaccctcgag 420 caggctcgaa aagcgctcga tacaggtgaa actcctgtag gctgcgttct ggtgtacgag 480 aacgaaatag ttggtcgtgg gatgaacgac accaacagat caatgaacgt gggtccatta 540 tatatttttt ttcattagac acctcgaagt tcggaataca ctacttcaaa tatcaatcct 600 tetggtttet tttetageag ggaacaaett ttgaaetagg caacgateta ttgaaaettg 660 ccctctgaca tgtcagcata gggaacaaga cacgccgaat tccttgcaat ccaggaaatg 720 cttcgcacat acccgaaatc tgcattacgc tcgacggacc tatatgtgac cgttgagcct 780 tgcgtcatgt gtgccgcggc tcttcgccaa tatcgaatac ggcgtgtgta ttatggttgt gggaatgaga gatttggagg aactggaagc atcctgtcct tacattccga gtttgttqcc 900 cattcatgaa gtactgttag cttttcagat gctgacctgc ttcagttctg ccattgatcc gccttaccct gtccatggtg ggctgcagcg caaagaagcc attatgcttt taaggcgctt 1020 ttacattcaa gaaaatgaaa agggtatggt gattatatgc gttgctatac tcaaagaaac 1080 tgctgctgac cttgacagct cccaagcctc gtcccaagaa acaccgagag ctgaatacca 1140 aatttgagga tgatgccgac ttttgacacc acatcatgag aaacaaaaaa ctgcagtact 1200 actgagcgag taatgacctt gacaacttaa ttatacaatt gttgtagctg gcttgctaac 1260 atacattatc gaaggagatg gcttcacggt cagtgacgcg attgacaaga tat 1313

<210> 2462

<211> 794 <212> DNA

<213> Aspergillus nidulans

<400> 2462

tttgctggca atcettctga tegttgagga tgacatggca etegtegatg acaatgeggt 60 egageegteg catctgegt tggeggttca ggaacgtgtg gaaateeggg ttetcagteg 120 acteaggggt cacaageacg ategetget egteaggggg eeggeggete teccaegaca 180 egeacgagat geecagggee tgacagega teateaggte egegegage gacageaggg 240 geaceaceat gattgtgeat eeeeetgggg eegcataege aggeaacatg aacageatge 300 tettgeeact geetgtggge atgattgeaa etacaggget ggeacegtee tggategeet 360

tcagcgctgg	f tgcctgcacc	ccgcgcaact	gcagcgcggg	g ccgtcctgtc	atgcgctgca	420
atgcctgcgc	catgtctgtc	tgggccagct	gctgttgctg	, ttgctcctga	tggtcgacag	480
cctgctcctc	: ccacgggtta	gcgcgcttgc	: ccagcaccgt	gttgactggt	agcgggtctg	540
gaaaccccag	aaagcgatgc	cagtcagtgo	tcgacgctcg	aaaccgcagc	cggcgcgtcg	600
tcgtgctgcc	agcgagcttg	ctgctcttgc	gcccatacac	: catcgctgcc	acatggggcg	660
agtgccctgc	ctgctcgtcc	gcgatattgc	ccatctcatc	gagatecteg	tctgcctcca	720
gggcggccat	cgcctctcgc	gctcggcctg	gatgttgttt	gggaacacgc	tcgacgcgcg	780
caggaatcga	cggc					794
<210> <211> <212> <213>	2463 1514 DNA Aspergillus	s nidulans				
		accctaggtt	gaaggttccg	cagcaatttg	tccacaaaaa	60
				aaggcggaca		120
				gtgaagcctg		180
				tcccgtatcc		240
				gacttagtga		300
				caagttgagc		360
ggagtcaaaa	cagaaagtat	ccatacagga	cgcgacccct	gattttgacg	tctctgaagt	420
tctcacacgg	gcgcatgaaa	tagtcaaacc	ctccccagca	cctgagactg	cagcgcctag	480
tgactctatt	gacgagaact	ccttctactc	tagcagggcc	ccagactccc	cgcagcacgg	540
tgaccataag	tcgtcttcgg	cgtcatcgtc	tgtacctggg	gagcttggca	ctggggccat	600
cggaagaaga	tactcagatg	agttgcatcg	gcttgaagcc	ctcaaccgtc	ccgactcgga	660
tcagtcaatg	caagatactt	actccattgc	agagccccga	ccttcgtctc	aaaggcagcc	720
gcactactcg	gaaacgtaca	ggacacacat	gcgccaaccg	gctgagccgt	cggatgaacc	780
tgaatactcc	cctccagctc	ctggagtggc	gccaatggaa	agggtagaga	cttacgaacc	840

cccaagagcc gttccgaacg gccctaaacg ccaggtagtt gatccacgag accggtacga 900

tagacggtcg atetetecgg cagatggagt acgagttgta eggaateata teacatecee 960 eggagetece cageegteta gggtetecee tetegecatt gecaaggtte catetgttaa 1020 eeageateat gaategeget cagagtatga gecagagege eggggeagee etgaggtgee 1080 eggeteaaett eeagteeeta gaaagegtag gegattacat gatgacagge eggtgataaa 1140 aacteaaggt ggtggtteegg ttaaaceett eateaaagag gageetgttt eeeeteetee 1200 ttttgeagat acgeeaett tttacegace acgtgeteag gaagggeetg tttaeattga 1260 tgteeetea eeeegetata egeeagtggt tgaeegageg gageegggeg ttaagaactt 1320 eaggatatgg aatggaacet taegatgagg etettggega teaggtgata eeeegtacag 1380 etttaeegget ggetgeteag eggeeaatge ggatgaeeag taetgataga gtgeeggttt 1440 gaeaaagegeg atageetgat gggggeegaa tatetgagea eaggeeetae etggeegae 1500 ggeeggttae atgt

<210> 2464 <211> 1927 <212> DNA

<213> Aspergillus nidulans

<400> 2464

eegectgeeg eeggegggea tteeactgee etgggggata etactettgt ttegagaatg 60 gcgtggagtc ttgccgcttt tacgtgcctg cgcctgccgc cccaacgctg ccgttgcatc tatataagee eggeeteeet eeetegaaeg accaegeaet ettetettee aetttteeet 180 tteeetette cegteeeacg gegeecagtg caetgeeece ceettttttt tteteaagat 240 gccgcgttat ccggacacgc tccttttcca gcacggcgcc atctccacct tcctcqcttc 300 gcccccttca actacggcgt cgaggacggg ttatttggac gattgagacg tgaagtcctt 360 gtgaccatta cttcgattgg ttgatgagcc catccacctt cttttattct gtccagtcac 420 tgactcttgt gacttggggg cctttcgcgc ggcgttcagc aaccttggag tcttctggcc 480 gacactgcat gtcagcccgt tttatctttc cctcgcgccg ttttcgaatt tccttctacc 540 tegatgeagt etteaatatg aggaacetgg eteaetgett geeatggget teegagatee 600 gacatgggga gggcagtttc ttgatcgtcc agctaccacc cctgtcccqc agcctqccqq 660 tgccgctcgg gtgaacaggg tcacatttcc ccctccacg gccatattcc ggaccccact

gggatctgat cacatatect tgcettgtte caccaaccaa tggcaaaatt geegeateeg tttcatttcc gtgtcttggg catgcgacgc ttggaattgc agtgaagaga tgcgattggg 840 gccgggcacc agatcttggt ttcagcccag cgtacgcagg tgagcttagg cgcgtcagcg 900 gaccgatcat gatcttgcgg gcaaggggat tttgccttgc cgcttctgcc gatgctggac agtaacggac ccagggggag atataagggg acgattgggg cccacgagac tttcgggcat 1020 ctcacgttga ttcttccaca gcctgccctt cctcctccaa ttccgttctt tctctcgtcc 1080 ttcaaatcgc atctctgccg ccgtgttata cctccaaaac taccccgatt cccataatat 1140 gcttcctgca tttcagataa ataatttcaa gccatggacc ccccttcccg cgaaaccgtg 1200 tccaccacac agaacactca atgcgtgctc cccacaaact tcatatcctc ctaaccctga 1260 gccctgtcat gttctacttc caggcacttt gccgcctccc aaacatcacc ttccggcgcg 1320 accaccagec gaaqtetgeg tgcatqteag tgccaacace cagetggagt cagagacatt 1380 egggegtagt accgegtete gacagagtte tgtaceceat gtteetgete eggatetgat 1440 ccgcccctgc tatcctcagg acgagactag aacccctacc aagccgcctg gattccagga 1500 agatgacgca gcggctaatg tcccgtcccc gagtacatct agctcgaccg atagtctaga 1560 ggacttette aggatgeeag actegeeeca agacaacate cecattgate eggtaattet 1620 tgccaatctc gggccatggg agagtgacga cctccagcta catgcccccc cagcagacgg 1680 cataacaaat ccggagacaa cctgcctgta tcctgaacct ccggccattc tcggcagtcc 1740 aactagccgt tttgaagtgc ctggcgaaag ggatggtagt gataatggcg gtattcaggg 1800 aagtegttat ggetgeeaac aaatgaacce teeetegeee ggeaceggae cagaccaate 1860 ttctcctgat agccatggga agcaccatat taagcgaaaa acacgaaaat cagacggcgg 1920 1927 aattcgc

<210> 2465

<211> 1086

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2465

gctccctgtg ccgcaatctg agggggggaa ggctcgaaag atcgctatcc cgcgcgctac 60 agcggcgaga acgactttcc agcggcgtcg gtcagcgcga gcctgcgagc catgtcggca 120

gcgaaaggta aaatgcgacg cggcgcggcc agtatgtcag aaatgccgcg agcatggatt ggaatgttcg tatatggata taaaacggat ccgggatcag aaacagttgg gtctactgaa 300 tqaqaaaqtt qaqcgatacg agaagttgtt gaaacagcta gagacggagg ttgatccaac 360 aactgcaaga ataatcagaa ggactttatc ggtgcgtgat ccgagtacat ttaatggcaa 420 aactaatqaa qtaqqtttct qqqcagccct cgtcagatga tggaggggga gaaaatgata gtgacgccga ttcgaccaca tcgcaaggat ctttggaaga tatagacttg gtcaaagagg 480 540 atttgaatcg cagtgacaaa acggttgcag ttggattctt cgggaagaat tccgagattg cgtggatgca gaagcttgag gatgtatcag accaacgaga gcacggcctg tcgaacggag 600 660 agaagcctac tagcaaagat atccccatca attcgatgag taccatcttg atgacctctc cattccattt cccgacacgg tcaaccccta cgcagtgccg gggaaggaat tggctgataa 720 780 gtacttcaat gcgtacatgg agtcggtaca tccatcattt accgttgttc ggaagcgaac tttcagggcg cagtacgaac agttctataa gaagaaacat tttcgtccgc cgcggaagtg 840 gttggctgtg ctgaacatga ttttggcgtt gggctgtcgg tactgtaggc tgactagcaa 900 qqttqtqqca qqtqaqaqgg atacggacga cacggtgttt ctgaatcgtg ctagaatact gtgtctgagc gggaatgtgc tgttcgatca tgacgatccc caccagatcc aaataatcct 1020 ctagttgcgg tctatcttgt tgcgtttatt caggtnnncg agtatgacat gcgcccnctg 1080 1086 atgcaa

<210> 2466 <211> 1340

<212> DNA

<213> Aspergillus nidulans

<400> 2466

gtagttagtc aactcaacga catcaaagga cccaatgggc tctgtttaaa tgattgaaaa 60 ggattggcag ctttcattgc agcagatgct tgtcaccttg accatcaatt atcacaagtc 120 tgtataacat caacttcgga gggcacgctt cagtccttgc atagggtaag tctatggaaa 180 tccttctgta tagtcagcgt acagaaaaca aaatacattg tgttacgtgt tggagtagta 240 ttataactga aagaggtaat ccacaggcag ctcctggcag ctttgaaaca ttgtctaatc 300 tgggtctctt ctagatactc cagcacgccg cgaggaaaac atcctgctat ccttgtacgt 360

cctgctttga gctaatacgt ggtcttagtt gttatctagt actctgtgct ctggattcgc tatcgaatat ggctcacaca tttgcagacc cacttaaaga cctcgagatc gctattgtaa 480 atttatgccg cttatgtagt gttgaaaaca tgcaaggggt gctatggtat cttgaagtac 540 atggcagagg tattatcagc atctgaacaa tatcaaccaa gcaagttatg aagatgagca 600 660 tctaccaata tccattttta taaaatgatg tttccattgc tatacgtgcc atgtgggctg tttgaatttg aaagaatata cttgtgtaaa gccccataca aagcaaccaa agaaatcaaa 720 gcactttatg tgcattgcta tataactgct atgaaataca gcagtagcta agctggttag 780 cqatacqaga ccttgagatc tttcattatg atgtacatca gactaccata ggagatacca 840 actaatagaa agcaccagaa ttgacacagt gagctctcga ccattccaga tgtcttcaca aggagacete tacaacatet eegagaegag aageaggtea ggeetettte aataageaat 960 caqcaqqaqt acqctcaqcc aggagacgag gtgtccataa tgtctagaaa acaaccattc 1020 atggcgcctg cgaacggcga taacgaggac tcgctgcggt ctctatccat ccgcagacgg 1080 ggcagagacg gtcgctcatt atcgcgagac gaatcgaaca tccatccagc attccgcgac 1140 aaaccctact ttagtccgtc ctcgtcgcac cacgagaccg gagccgagtc actaggccag 1200 ggcggaacag agacgacgat atcagactta ggcacgaact cgcggaaatg cagctcaata 1260 gattcactgt gcagcgagtg tcgtaatgtc ctaaaaagcca tccggcctaa cgtgagtgac 1320 1340 aagtacctcg agtgcccacc

<210> 2467

<211> 1602

<212> DNA

<213> Aspergillus nidulans

<400> 2467

agaagataca gggcagtttc agtgccaata acataattta ttctgtgttg aatgatcgcc 60 ctagacccgg ccaggccatc cgtaccctct tgaacctagc cattgggcta ggccacgacc 120 gaagatttat cgtttcgatg agtcaagatc atttttccac cacttcacgg gacggtcaga 180 tggtctggat ctacaacgta agacgttatt ctgcggggta gattagagaa aactgagggg 240 cgagaggcga ctttgctctt gataggtgtt tcgcgccgat ggctgtcaca cagatgcgtt 300 tctgaatcat gatctttaa aataggacta tactttatga atgctcagga ctatgtcagg 360

atgcgttcgg agtcttccct ctagagaagc aacgacaaag caatatcatg gttgctagaa tgcaatgcat tttcgcatta ggccagtctc aaaatacatc ttatcgagga agccacataa 480 ttaccccaca aaataccaca gtctgtcaat aaccttgttg agtggaacga tgatttgcgc 540 600 cagggttgat cttgactttt cctctgggtc gaccactggg agaacgatgc gatatcgagc cacccatcag gcgactcagc ccgcagacgg tcaggagatt ccaaccatga tctcgaaaaa 660 aaacatggcg attgctgtca gcccatccgg cgaccataag catatgcaaa gaccatttgt agacgcccat ataaattgaa cagtgtcaag agcacttctt ccacactatt tgaatcaaaa 780 accaggogta aaaaaaaaa toactgtoaa aatcaccatt atotaatatg acgaacacgo 840 atgacttttc ccgcgatccc aacaatgtcc aagcctggct tgttggtagc ggtattgctt 900 cgctcactgc agcagtgcac ctgatcaggg aagccaaagt ccccgggccc aatgtccatc 960 tcatagatac qcacaaggga accggcggag ggatgagcat gcagggaacc gaagacagcg 1020 gttatttcct cccttatgaa tgcacaccgc actttcatgg cagctgtgtc gagcggctct 1080 tagcactaat accgagccca gaaaactctg aaaaatctat cttgcaggct gttcacgata 1140 gggaggccgg tggccgctcg acagtggcgg caaatgtgac taggacctac gactatggct 1200 acatataccc gttcgaagcc agcactaatc gccatggaaa ccttgctgaa ggtctatttg 1260 tggctggagg cattggcggt tcctcaaaag atcccaggaa gcatcatact ctgccggcaa 1320 ggttcgtcac caaaggcctc tcagggccgg aggtgtctca tcacaagggc gttcagattg 1380 ggataactca gcggatggca cttgttgggt ttttgctaga acacgagagt gcaatagata 1440 gcaaaagcat caaggatatt tttgatgcag cgtttttcga aactgagttc tggatgctct 1500 ggtcgacgac gtgagttctc caatcatcac atctctaccc attttcactt gataatgatg 1560 aaccttctga caaaaaccta ctcgcagatt tgggcttcac ac 1602

<213> Aspergillus nidulans

<400> 2468

ttactttgtg gatacgatga accatctgta ggtttgaacc atcacaaggt gggctaattg 60 ctaacagcta cagtctggac tttgcaaaaa tcaacaacct cgcttccatt aatcagactg 120

<210> 2468 <211> 1108 <212> DNA

cctcqtcagt caccagtcta cttacctcgt tcgaccttga cgtcctgatt gaggaagtag ttagcagtgt cttttccgga atgtgccatg cggccattgc gttaacgcct ccggagagtc 300 ctaqcaaccc cqacactgcc tacaaacagg gtgtgtctgt tgtcttacga ttcgagaacc 360 aagatcggtg gaaggtgaca tccatgaccg gggcatggcg acgaattgtc atgaatatct ttggaaatgc acttaaatat acagacagtg gttttgttga aatctcggtg tcgctgctgg 420 480 atccgccagt gaaaaccgac ccagattctg ccgttgcaca cttgcgcttc actgataccg 540 ggtgtggaat gtctcaggaa ttcctgagga ataagctgta ttcgcctttc gcgcaagagg acqccctaqc cqaaqgtgct ggccttggtc tgagcattgt gaagcaactt gtctcttttt 600 660 tcaaggggtc aatagacgtg aagagcgaga ttgatgttgg aactcaagtt gatatccaaa tccccgtcca actggccccc gatgatttcg ctacaggtgc atttggtccg gaattaggca 720 780 tqqqtttqcq qgaaaccaca ttctctctca tcggccttga tgcgtaccct gaactttgcg 840 ttaccaacct actttccggg aagcccaatt ggaagatctc ctcgacagcc acgttggccg 900 aggcagacgg cgagattgca attgtcagcg aagcctctct gaaacaactg ttcgtagacg aggcactgcg tcgtcgtgcg gagaaaaatc agacctagtt tggatgccat tgtgatggct 1020 agccgtatct aaacgccgaa ggaccagggc gggcccaagg tagctcgtct atacgacggc 1080 1108 cgggacacga ttacagcggg gccattag

<210> 2469 <211> 2669

<212> DNA

<213> Aspergillus nidulans

<400> 2469

cagatgcgcg actcagccgc tggcaggcaa gacgtttact ctgtttgcaa agaagtggac 60 ctacttggcc tacgtggcta tctttgaggc gggcagcttg gtatctgcat tagcgccctc 120 gtccgcagtt ttcatagttg gtcgagccat agctggtgtc ggggcatctg gtatcttcgc 180 tggcggcctt gtcatcctga ctaccgtgat ccccctccac aagcgcgcta tttggactgg 240 cacaatgaac gcgacattcg tcgtggctag tgtcattggt cctgtagttg gcggtactct 300 aacgcaacat gttacatggc gctggtgctt ctacatcaat ctcccgattg gaggcttctc 360

tattgcggtc ttcatgctat tctttcacat caagccggca gcaacggaga atgcacgccc actgcagaag ctcaagaagc tagacggcat cggattcatc cttttcgccg gtgcagttac 540 gatgctcctt ttggccctgc agctcggggg aacaagtgct cagtatgcat gggactcatc tcagattatc ggaatgttcg ccggctgtgg tgctacaatg gcagtattcg tggcctggca 600 660 ggtccacctc caggattcgg cactgatacc acctaggctg tttgtcaatc gtaacgcccc 720 gcttatcttc gcgtctgcgg tcttctcaaa cgggcctttt caatgcattg tttactggct gccaatatgg ttccaggctg tgcttgaagt atccccgaca gcgagtggag tcaggtatct 780 ccccactqtc attqcaqacq ttgtgacatc aatctttggt tctgcactcg tcacatactg ggggtggtgg aaccecttee tgacatttgg aatggegatg ateteteteg geggeggget 900 tctgtcaacc attcaccccg gtatctcaaa cggtcattgg ataggctatc agattctggc 960 tggaatcggg tactccctcg ccgtcaacat ggtcagtcta ctgctgctac taactagtaa 1020 ctttgattct gatgtcacac ttattaggct catatcggcg tccaagcttc actaccaccc 1080 agectegtte ceeteggege aacgaetete ttatttgtga teteagegag etgtgeaata 1140 ttccttgcat ccagccaagc tatttttcaa gcgcgactca aaaccatcct tgtgggagct 1200 gtgtcccaag atacaataga ccgaatccta gccgtgggcg ccaccaacat ccggtccgtg 1260 gtcggcccgg acgaccaggt cttggtcttg gatgcctaca gtaaaaccat aaaccaaata 1320 tttgtaaget atgetgaeae tgaactetet gtaettgetg tgeatgttee ttgetgetgt 1380 tgtcctgggc aactcgagct gacgttaccg tattagtatc tcccggcagg ggccgcggcg 1440 ttgtcgttta tgtttgtctg tgcgacgagg tggatctcag tcaaaaaaggc agtgtcgaag 1500 qagacatcta gtqcttagat aagtctttgg tggtatttct ttggtctcct ccatgccacc 1560 ttctactacc gaatctcgag cactagtact gagagcttta agaaagcgaa cttgaatctg 1620 gggcgtagat agaagatgga agacagattt tagtgccatc atatctgctt agcagtgtgc 1680 tatcgggtcg ttactactta ctgcaggggc ggttcgtagt ctcctttctg tacctatcgt 1740 acattgttta aggtggtggt atccgatatg ccaaatgcat atacccacga tgccaacgct 1800 gagtatgatg agctgcgctc acttaaagcc acagtgcaat atcttccaga ctggaaattc 1860 tatacctctt catctaagag catcttaaaa gtgctacaaa aactactgag ttgcgagcgc 1920 agggactgca taacttaagc gaactgccac cgacgcaccc ataatatccc actacacgct 1980 tacttccct ccetcttt cgectgctt gacatcaatt cctcatattc cttcatgttt 2040 gatacccct tcggcattcc gttcggcatc agcccctgtt cgtccatcag ccgatctctc 2100 gtacgcatcg cctcacgcca cgactcgcgc atttccatgc ggcgctgcca ggcctggaca 2160 ttcgggtacg gcgcaagagg gtcttcgcce tcaggcgtca gaagcaccat gttgacgcgg 2220 gcattccagg ggaggaaggc caaatcagcg aacgtgcatt tatcgccgac gagccagttg 2280 cggccttcta gtgctgttt gagcacgccg aggatgcgat gaacttcatt ctcgtaccgc 2340 tcaattgcgg aaggaagtt ttcagcatgc aagacgttga acctaggtag gtagaacagt 2400 tgttagcggt tgcgcttgtg ttgtctgctg cgtgctgggt acatgaagaa gtagtaggta 2460 gacactaggg tgagaagta aagtcaacac gcaatcttac catccggcct gtccgaaata 2520 aggtcctgc ccgctcatct ggaaatggag ccactgattc agaaggtgtt ttcctcaag 2580 gaggtgtagg ttagctttt ctccgtgtcg tacacaccc gagatactgg aggattgcc 2640 ggattccaca gggtcaaatc agtgtttgg

<210> 2470 <211> 2110 <212> DNA

<213> Aspergillus nidulans

<400> 2470

60 tcagccgatt gtatggacca agaccacagt aggtcttacc aacgacccca acacaaagca tcgtcgctac catctaccgg aatcagcagt cgtcccaact gaagaaattc aaccaaacac 120 agtaaagtac tatgtaagga gaactcacag catcagcagg ttcccgccca tcaggataat 180 atccgtgcca tgcctactgc aaatcgcgct ctcactcgcg acggcacccc tctttccatc 240 atgagcctct gcagatcgct catatttatg ggcgcgagtg taacgatcgt acgagtccaa 300 cggtgacgga aggacactgg gcacgtggaa aacgaccagc actagacaga gcgtggtaca 360 420 gacggataac ctcaaaaggc gcgataacga cagcgatggc gacggcgaca tcgttgaacc tgaattgcgc gtctggttct ggagtgaaaa tgaaacttgc agctcgttgt caagactcgg 480 gagaagcggc tggttgcacc attatagctt aagattagca ttgcttgggt ctccaaacaa 540 600 agcgggcatt aaagtaacag taacagccgc gcgaggctga ttttgtgccc gttcgtacct gtttctccac atcctgagcg ttgccgtcat acccctgcag ttgcatcgcc ttttactgga 660 caqcctcqtc ttctactggc cttgcaaggt gacgagccag ataaggaaga aggatgggga taaaaaactg gagcgaaaga cggccatttt ggagaataat ctgcatcgcc tcgaagactc 780 tgacagacac tcgtggacat tgataagcaa agggcaagcg acaatgtgag tggttgataa ggccgcgaaa ctagcactcg agtcgctgcg tgaccgtctc caatcttgag gaccgccgat 900 960 acgagatctg ggttcctgtt gcaaggcaga taagaccacc atcagcatca ctaaccgttt ccctcaacct caggtggtca agattggacc cgacagactc gacctgtcat cctgagggtc 1020 acgggtcggg gtcactgtag atccccccgc atagtgcagt ctacgctata ctcgtagtac 1080 tcagagtgta cagtcattac gtacaacaaa ccgtcctcgt taccttaacc ccatctcact 1140 cttctccttc tgtctctccc cgtcatatgg caccgtatag gcaactgcct gcctcgccca 1200 ctggaccgtc tcctgccaaa cctcaggtac ctcctcctgt ggcccaagcc ccgtcgcaac 1260 caggeggega ecceaggtte ecacatacea ettattaeta agaagatgea teccaaegee 1320 gtagtgcaag aatagaatcc gcgctatcca gtctccctcc tgcagtcgcg ccataaattc 1380 cttgctgatg tggatcggga acgccagaat tccgccttga ttcctcccgc gcggccattc 1440 cttgaccatt tcttgcagcg tgtcccaggt gctgaggtat atcgctttgt gcggggactc 1500 tgtcgaatct attgagctgc ggagatgatt gagtgacttg agcaggtccc tgtgcggttc 1560 agaaatttgt cgcgaggtgt agagttctag gttgatgcga acttaccgtt gtaactgctc 1620 tagaccaggg tetteetgeg egetgeacgt attgteagea atgeeggtea ggtgeagtge 1680 agtgttgaag caaaactcac teetetaeet geeeetgttt cagaageaee acteteegtt 1740 tatagataaa ccacgccttg atctcctctg gctgctccac gctgtctagc tgctcaaaga 1800 ggaacgcgca tccggtaagt agccggttga tttccagcac ttgcagaagc ggatcgaacg 1860 tatcccggtt ttgcgacaca cacgggtacg caaatgcaca gagcatgatg aagatcgagc 1920 aaatgaacgc cggccccaga gtctcgggcg caaggtcggc cagcacccga ctaaaggctg 1980 agcatgcacg actctggtac ttgagtgcaa tctcgagcca tttgctatcg ccaagctcga 2040 ggaacgccag gtgcagggct gcaaatgcga gcaaaatgtc cagcgagaag ggatttgtag 2100 2110 ttgcgaggcg

<210> 2471 <211> 878 <212> DNA Aspergillus nidulans <213> 2471 <400> atattgtcgg aatgttttcg tcaatctttt acaacggttc tttcttgtgg tatcccaaac 60 attatagaaa ctacccctac taaccaatcg tactgagcag gagtttccga ttggaactaa 120 aagcaccggc ggccgagtta gtggattcgc cagtttatgg cgaacttatg acaccattcg 180 aagatcattc agcacagaca agaacccaag agacatttgt caggattcat taggaactac 240 300 qaactcgaac ctcagacacg atgttgcgcg tgcttacgag attctagctg ccgttgacga tcaagcacgc aatgcaatac tggggactgc tgcgatcgct tcgatcgctg aaaagctccc 360 tttcgagagt tctccaacta gaggatttgt gactcaccgg ctcgatcggc tcgttgcgca 420 480 cggccttggg ttgctgttgg aacacggatg cgcttccaga gaccatgcac tgcttgacta 540 cgtaccgaga ctacgtactg acgcctcaga tttagctcga gcgtctccaa ggtcctgcat ctaaaagggc gaattgacgg tgtacgcatg attcatacac agtcggcgaa atgctgcgac 600 660 tatgatctgt cataattgta ggcgaacata cgttggccag ggataggagc aggtgacgga 720 tgagagcagt ctcaatgcgg gttagaacaa gaaacgttgt aggctgagta ctcccgagta 780 taggagaaat cgagccttga ctctgtcgag atatctagaa tctcctcgga gcgacgatgc caagccagag gcgccgtcac gtcacgtacg aaacagacgc aggaaacaag ggcccactat 840 878 gatgtctttc ttccaggcag ccccaccagc gagtgctt 2472 <210> 1480 <211> <212> DNA Aspergillus nidulans <213> <400> 2472 aacacatttc ctatggacga ccgggggtcc tgacgcaaga ggcaaaatca ctcgttaccc 60 gggctttatg cgttgctgtg atatcgacaa gtgagggagt ttccctggca catggggtaa 120 tccaatctat tgtggcctca aatccagcca ctgaactccc tcatttagta acttcccagt 180 acctacagge egacteeetg ecceegteea geataacaat eteeteagat ecagtteeaa 240 300 acatgaacat ggccgctttg gtgatcttca caagcggtac cactggacca cccaagggcg ccgtccagcg aagaagctac atcacctctg ccgccgagga cgtggcggat cactaccgac 360 tcacggaatc ggatacagtt ctgcacatgt taccagttca ccatgcgacc gggatagggg 420 480 tqacqtttct tccgtttttg gtggttgggg gatgcattga gtttcgcagt ggaggatttg 540 acceggaatg gacgtgggag eggtttagac aaaacgecaa eccaactggg gecaaggegt tgagtgtgtt ctctggcgtg cctacgatat atacgcgtct taagcggtac ttcgaaatac 600 660 acatttcccc tttaccgagc atagagcaag agcagtatat tgccggggtc aggagaataa 720 gggtctttct atgtgggact tcggcgctcc caagaccaat ccaagaattc tggacgagaa tcttagacgg aaagatgata ttgacacggt atggtgggac agaattccat actactctga 780 840 aagctgatct cgatgggtca tcaccggcaa acagcgtcgg aagggtgtct ccggggggttg atttgaggtt atcagatgaa ggagagatct tggtgaaggg gcccaatatg ttttccaagt 900 acctccatga tacaaacgca acatcaaagg cacatgacaa ggatgggtat tttaagacag gtgatatcgc atcctgcatg ggggagagct actttattca ggggcgggct tcgcttgaca 1020 ttatcaagag tggcgggtac aaaatctcgg ctcttgatat tgagcgggag atactaggcc 1080 ttgattatgt ctctgaggtg atgattgtcg gcgtcgagga cgaggagttt gggcaacggg 1140 ttgcggccgt tgttacgcta aaagatgaac acagagcaag cgggttgtct ctagagaagc 1200 tgagggggga tctaaggggg gtgctagcgg gttataagat gccgactgtc ttgagggtag 1260 cggggggcga gattcccaaa ggagcgacgg gaaaggtaca gaagaaggtg ctggggccaa 1320 gatatttccc tgatggatgg cgagggttgg aggaggtgca agtctgggat ccacaaaaga 1380 tgcagcctaa gtcgaagtta taattggtat attgtcaatt gctcagtgca tgagttttat 1440 1480 aagagttatt ggtagtaaca tagagtccga gtattatcct

<210> 2473 <211> 1747

<212> DNA

<213> Aspergillus nidulans

<400> 2473

tcaaggtcgt gaacaagcga gaagagtacc gagtctacag gaaacctatt cccctagaac 60
tcttggtaat accccaaatg gacgaggtca tcccaaagcc tggcattgcg aagaggccat 120
cgtcagggtt acttgccaac aagactgctg cgaatccacc ggccgcgaaa gataccctac 180
cgataacttt caggcatctt ggtaaaggtg gatacgagca gacgctatat gcctcatcct 240

cacaacaacg aaagaagttc ctggagctag tggacgagca acagacaaag ctccgagaac 360 gcaacagtaa cttctacaac aaaaacatca tttgcgaaaa attcttcaat tcagtgaaca gggtgaactg ccttgtccca attggtatga atcgttgcga ccctgcttag atattagcta 420 actcgatgct gaagatggtg gtccgaaact tgtatatggc acagatagct gcatatacgt 480 gtcggaccga aacccacggg accagtccgc gaagccaaga aaagtgctag atgtcagtca 540 600 agtgactcag attgacacgc tggaggagta tcagctactc ttggttcttg cgaataagac tttqtactct tatccgatgg atgctcttga ggtcaccgaa gccaaaaccc agcggctaag agaccgaaga agatccaggg tcatgcgaac ttcttcaaat ccggaatcgg tcttggacgt 720 cacctggtgt gttcagtcaa gacttcggct ctctcaacga ccatcaaagt atatgagccc 780 840 atggacaatc tagccaaggg taagaagaag tctactgtca gcaagatgtt ccagagcggg 900 caagatacct taaaaccgtt caaggttagt ttagccccca catcagtcct gatttctgag ctaatcaatc tacaggaatt ctacatcccg gcagaatcat cgtcgatcca ttacctccga tcaacccttt gcgttggttg tgctcgtggc ttcgaggttg tcagtctgga aacgacagag 1020 actcaatctc ttctggacca agcagacaca tctctggact ttgtcgcacg caaagagaac 1080 gtaaaaccca ttcatatcga acggttgaat ggagaattcc tactgaacta cagcgacttt 1140 tcattcttcg ttaaccgcaa tggttggcgt gcgcgggcgg attggaagat ctcctgggaa 1200 gggaatccca attetttgc actetcattg cettacatac tagcatttga accgaacttt 1260 atcgagttca gacacatcga cacgagcgaa ctgatccata tcatgactgg aaagaatatt 1320 cgcatgctac attettccac acgagaggta tgctcgatct tetecetttg aaaagacggg 1380 ttactaacgg cacagattct ttacgcctat gaggatgatt caggcgaaga tgttgtggct 1440 agettggatt tetggaagea caageegetg geacageatt aggettetge acagaactgg 1500 cqcctqcttt tqatcqcttt ttagaccaga ttctatttct gctcattgaa gaagcatttc 1560 qactccatct cttcccactt ctttttcttc tttactcatt tgcttccttt ttgagctgcc 1620 tcaaagattt tctaatacct cgacgtttat ttggtccgtc ccagatcgag cctgctttgc 1680 tctcaaatta tcttccgttg gccatttact tccatcgtgc tgtgtacaat gaagcgcaaa 1740 1747 taccatg

<210> 2474 <211> 1452 <212> DNA <213> Aspergillus nidulans

2474

<400>

gcctaagcat gcccaccatt ccttcggcag aatcatcgtc cttgaggccc ttttcttcca 60 120 gccacgaggc ccacttattc atgttgggca caaagtagct gacgagggta ggttcttcga acttgtcacg acgcaccagc gtcacgttct ctcttacaag agggtgacgg gagagatggg 180 tatcgatttc acccagctca atacggaaac cacggatctt cacctggtca tcggcacgac 240 300 cagagcactc gacgtctccg gaaggagtgt atcgaccaag gtcaccgctt cggtagagac ggtccctggg tccaacatag aactctctcc agggctcatt cgcaccctgc gactctgcgg 360 catctttctc gacccacgtc ttagggtcaa caaaccagtt cgtaaggaac ttcttctggt 420 tcagttccgg tgaaccaagg tatccttccg caagtccagc tgcacgaacg taaatctcac 480 ccacttcgcc aatagcgcag atgcggctag gctcgaagcg gttgacgacc agcatctgca cgtcgagcat tccccgaccc gccgggataa cgtccttcat ggtgtccagg tacccaccgt tgctcgagta gctggggatt tcgaagtagc tgacagcacg ctgtgtctcg gtcgttccgt 660 acatgttgac aatgttgaca ttcggggcca gcccttgcaa tgagcggcaa tctctcttga 720 780 tcaagatatc ttcgacgaag aaagcgtggt gaagggtagg gaactgggca gaggcgcctt caacgaggat ttgacccata gcaggtgtaa ggtgagtgac agtggcaccg taatcccgca 840 tccattcagc aagcttttcg ttctgaatat cttcgcgtgc cggaaccaga agttgggcac 900 cgaggaacag aggagtaaaa atatctctct gaatcgggtc gtgagcgatc ccgctaagca 960 tggtaaattt gtcgttggga gtaagcttga atgtttcaga catccatggg aaatagtacg 1020 ccaaatagaa gtgacgacct ttgacaccct tgtgtctacc ctcggagcct gtagttaacc 1080 atagattttg agtagagtta ggactcacta caactcccac tctcttggac tataattgta 1140 tcttgtttag cttgtacctt cctcggcctt agtcttgaat cctgcccaat tagctacacc 1200 ccttacgtct caactctcca ttgtcatagc tgtcctcttt ttctcaattc cttgtaatct 1260

ctctacacat catttccatt atattataaa atgtattgca tattaactat gtattctact 1320

gtcgctttat acccttgttc tactcttatt gttgtatctc ttcattccac attgcatttc 1380

tattgtaaca tgtatateet teteteagte gteetattgt tettgagtta teaettetet 1440

tgctctatac ct 1452

<210> 2475 <211> 1570 <212> DNA <213> Aspergillus nidulans

<400> 2475

caggtgttca gttataagac gagtgatgag cctggcagtg cgtgcgagaa attgtcgagg 60 cacttgaagg gtattcaaaa aggcgacgag aaggatacgt ttggtgggct gaagagagtt 120 gaggaggtga ctgtctagta tatagtatat ttctttcaca accacgtctt aagctctgtt attgctttca aaatcggtag catagtcatt tcaagatcgc ggcaaggagt ttgacaccaa tctagatttc cgctttactt tataaccccc taacatttat atcgtctaag gatattcagt 300 ttcttcatat atttgcagca cctactgaaa taatgataac aagttcgaag agaaattgca 360 420 gaggatatcc catgccatga actaaccaaa taacactagc agaaacactc catcacggcc tcacctcatt cccacgattg tcataccacg tcctctggtt ctctccctga tatccatgcc 480 ctccaggagc cggccgcgaa gtcggagcgg agcccctctc ctgcgcatct agcagatcaa 540 600 cgccaatgct tccatgcttt ctcctcctct tcctccctt cttcgcctct ttctctgcaa tcttggcctc cttcttctct ctcttccttt gcttcttctc cttccgactc acccttggga 660 actcgctatc gggccccacc aacactctcc ccggatgcgc cacgttcaat atagccaagc 720 aaataaaaat gggtgccgca tcccatacat actcaaacca ctcgttccga agcgctgggt 780 tatcgatatt cgttccgtcc gcatactgcg ccaaccgaaa gatgatacgc accgtgatca 840 900 ggaacagcga ggcataaatg gcgtaaaaca gccaccgcca cggcatcgac cctctaccga ccttctcggc atctaaagtt ccatgccgct ccatctcgcc catcttccgc tgcaggtgga 960 tgaacagccc ggtgaaaatc aagatgaata gctcctgcac gccaatacca cccatgtaga 1020 tatgcacccc gcgcatgatc gtctcctgcg atgcctctgt gtccgtcgtg aatgccgcgc 1080 caacaagctg gatgatgaag gccaggatct ccagccagac gaatatgtgt ccgaagcgtt 1140 ttgcaccgat gccgccgaga cggccgctgg ggaggaagaa gtagatgagg cggccgagcg 1200 tcatgtagag gaaggcgtta acccagattg gagcgaggag aaagaaaatt gtgaagggag 1260 tgttgtaggc gtcgctgctt tggttttttg cgaagaggga ccgcataatg aaggcgatga 1320 gttcccatag tgagctcatg attacaaccc aagcatagcg ctgaatccgt tagctttcct 1380 tcattgtctt tttccttatc tcttctttt tgtttttctc ttttatttgt cttcagtaca 1440 atgtggacgt accttcttaa acatgattgc ctgaacaata tggatgatcg tcgtaaggcc 1500 gaacaacact gaaaacaaga ccggcgccgc aaagctggcg tcgtacatgt ggaaattgcc 1560 acacccgagc

<210> 2476 <211> 1266 <212> DNA

<213> Aspergillus nidulans

<400> 2476

gactattgat ctttcctttg cgtacgccac agcacggggc cttgactctt atgatgaccc 60 agagetteet gegeteettg tggeaattge atatatgaat geegttgaag gacetetttg 120 ggttgcggtt cgcggcaagg gactggcgta tggtacgact ttcgcctaca acatagatac 180 gggtttcgtc aactttgacg tttaccgatc gcccaatgcc cacaaggcct tcgagtcaag caaggatatt gtacaagcac atctttctgg ggaggccccc tttgacccgt tgatgtttga gggcgcaatc agcagcattg tggtcacttt cgcaaatgaa caagtaacca ccgccaatgc 360 agctcaggga agcttcattc gtcaggttgt gcgctccttg ccaagtgatt acaaggagag 420 aatcctccgg gaggtccgtg ataccagcgt tgaggatgtc aagagagcac tgcgcgagat 480 aatccttcct cttttctcat ctgacacggc gaacattgtg attacgtgca caactgtgct 540 600 tcgagaggta tacttgtttt tcttatggga tttgaaaatc agattactga ccttcacaat agacgataga gagtggtctc aaggaatccg gtttctctcc aaaggtccag ccgctcaagg 660 aatttgagga cgactatgga ctcaaagtcg gagacggcag cgatgcagac gacgacgatg 720 780 atgacgatga cgacgatgat gatgatgagg aggaaggtga ggaagacgag tcagaatcgg aggaggaatc tgacaataac gatgacgagt gatactattg taacacggag cgaggctgga 840 tggtacggtc taagactaag gactgtcgtc tgtatagagc aaaactattt cagtagaggt 900 gcacgtctag acgagctcat ctggagtgac tgtgatttcc accagtttgt cagatatagt cgtcagttta taaacccacg tcgccggcca atcggttctc atggcataca cattgctgac 1020 acgaaacata aaactggtat aagtagcaat cttcatcgtg tgtggtttct atatcgacat 1080 atgttacaaa aagctcaaaa tgagaagccc tcgtctcctc taggattaca aaggacttgt 1140 catatcactg accacgaaag acgcgtgtcg gtgaccatga ccgcctcaaa ccataaatat 1200 acaaaccgac aatcctatag tctaaggcac aaggctcaat agaaaagcga atgaagagaa 1260 gggaaa 1266

<210> 2477 <211> 2209 <212> DNA <213> Aspergillus nidulans

<400> 2477

ccggcgcaag aaacatcagc agcaccgggg cgaacaacat gcagtacagt aacatacaaa 60 cgagaatatg ccggccagta tgagcaatat gcaaggcacc accaatatgc ctggtagtgg 120 gggtcaccct catatatgcc agagtatgtc tggccaggag agggaatgct ggttacgaac 180 ccgatgttga agggtgtcaa tctgaacacc gagggcgaca tggcgaggga ggagggcaaa gatgcggata tgggggatgc gaggcgagaa ctgatttaca actgggaaag cctacatata agtaacaaag ggacacatgg agacttgaca gattcgtagt agaatttaga ctcatccaga 360 atcctctttt ggcaattgta ggttaatctc gaagatttga taatggataa gaagcctagt 420 gtaagccatg atatttaata gtagacgtaa aaggtattga gacatcaatg cgggtatttg acagctatat taaaaactag tgttgagaga gaaaacatgg gcacgaaaac caaccgggcc 600 tgttctggct tcagtctttg ggacgaatat tccagccatg gtcatcgccg cccacattca cttgtagggc tagaatcgag gtctatttca ggtgtgatct aatccgcaat tctagactcc 660 ttgacatcac ccttacctcc tattttcaga gattgtggag gtataagatg gagcccgtca 720 tccccttcaa gcatgaaggt agtcacaccc caatataacc aaagggtcct cacggtctca 780 aagtcctcgg atacctggga gtcattcgtg cttcattatt acttattata ataaccgatc 840 gagtccttct caggatgtcc gactacccgg cgaatacggc atatgcgcag cgacatatct 900 acaccaatcc gtggttgcgt aaaaagacat ctctgagcca gagccagaca cttactgttg atgccgatct tgatgccgac gccgatgccg acgccgatgc agacgcagaa tctgaatctg 1020 aagagcagtc tgtctctggg acatctgcat ccaagggaga caaggtgggg gaggacctcg 1080 acttcgatga tgtgaacaca ggcgaggctg atgatgactt tgggtcaagg tagagggtat 1140 ataaatttca ctggtataaa tgaaagatcg aggttcaacc tgtataggca gagtcctaaa 1200 tcgatcaggc gaagagtata gcctgtctcg cttatcagga ggggtcatcc ggattacaga 1260 acctetteaa accatagaat gagtettaac cataacaaga ttgagttacg agteetgttt 1320 ctgacaacga tgtccgttag agctacgacc taggccgcga gaaaaagccc tgcgacgccg 1380 gcctaatgta aaagtccggt gacgagctcc tgacatcggt ttgccttttg acatcaaggt 1440 tacctgtatc agccaacgta ataggccgta ttattgatag tagagtgaca gaccaaatca 1500 tatatctagg ctctaggcat tcctctctct atcctgcgac tgaagatatc tatgacatga 1560 tatatagcgc ccgcctttgt ctaaatacat atatcatcac ctgaaaaata gtgttattct 1620 ccagtattca ctctatcacc agagtcactc aatggatcag gacgagctag acctttccga 1680 ccacactgca aggtccaaca gattcgagaa ataccatttt aaaccacccg catcgctaaa 1740 tccaggacac ggccaagtca gcaacattca aaatagcagc agtgacggcc tccaagaatc 1800 ctattactct ggaaacattc agggcagcga tccacgagcg agcaacatgc aaggccaccg 1860 ccaacctcag actacggccc agggacggta tttctcagca tctccagctg aggagattga 1920 tgactttgat gatgaatacg acccagagag tctagatatc ggagctggcg gaaatggaag 1980 tggtatgagg gagtggagtg agagggatta agtagctagt ctagactggt ttggataaaa 2040 gcgtaattaa tcatggtgct tcattctatg ggtttccatt tatgatgagc gtattattca 2100 aagattttag agccgtgagg caggtagaaa ccgtaaaaga gggcttgata atcctaggtt 2160 tatatggcta gagccatggg caaagactgt cagataactg tccctggtt 2209

<210> 2478

<211> 1362

<212> DNA

<213> Aspergillus nidulans

<400> 2478

atctatgcca aagtaccatg gttcccataa atcatggtac gacaaatgaa gaacccagga 60 cggcgatacc ggcttgaact ctttccagct cgagtaagac taggccacag aatgattggg 120 cgcttggtgt attggcaaag ttgaaggcga tagttgtgct ttggcctctt cctttcatcc 180 ctctgctggt gtagccgtgg gaagaactcg acataccata cgatggttgg tcgaatacgt 240 gatagctgtt tgccgtcact gggacaaaca aaggagaacc cgcctacgta accttcttca 300

atcaccacaa agcaaacctc tggaatcaaa ggccggaaag ggcttccgcc ccccggtcat tggtgctttc attccagatt catggaacgc cgttcgttgt gagcttattt gtcaacgtga 420 480 gcgccaacgc caaactcacg cactgacttg cggctgtcaa tagacagggg cgcagactcg gatagggtaa gctcgagcgc agaacaaact cagacaaaga acctgcaagc gtggtcaact 540 tgagcttttg cagtttctgg aggtgaagaa ttggatctag ggctgggttc tttgttgacc 600 660 acgggatcac agattcggtg tgcaccaaag caccaagtag agttatgagt atcgagctat tgaatgcaga tgatttgtca gctcgaaact tggcttaacg ggcaatccgc ctccatgtga 720 780 gcgtcagttg tcacaaacct gaggtcctat ggagcagaaa tcgatagctt ggttgagctt tgggctctcc accggtcctg gaagtctggg acgaccttgc ccggtgccct tttgccctca 840 gcactggaga gcagtgaaga gaggcgcgct caaggctggt agcacgaaac ccggtcatac 900 tcgggctcct ccagatccct attcgtgaca gatcggggtc tatgatgctt atggaaccat caatgtggtg ttgactcgac agacagcaag gtaagaataa aggtcacata attatgcaca 1020 taatagtgct gtacggtcac ggtcacgtat tactaccgtc gtaaaaagta aaacacgcac 1080 gttaaacgcc tcaggcaccc aggctatgcg gcgggcacac cacggccgag cgatcgggaa 1140 ccacagagct gaaggtcccc gaacgggcag attgaagccg atcgggaggc atccaatcac 1200 aaccatgcaa ttaaaggccg gagtttctcg acgtcgcaac caaggccaag ggttcggctc 1260 agtacgacct gcagttcatc gcgaggatgg aattggcaac gtaatggccg ccgccggttc 1320 1362 acactgcaga ctttcagctg ctagtggtac ggcttttgtc tg

<210> 2479

<211> 3704

<212> DNA

<213> Aspergillus nidulans

<400> 2479

gaccaaattt ttgccccag cttgctggat aatcgtgaat ttctcgcct ccccttctgt 60

tttcacatat ccggcgagat ttctcatcat agcgagtgca tagcaccgct gccactcctt 120

ttcccaaata ccttttctac ccctttgctg cttccgcaat ggccggcaac acccccgcg 180

ttccgttatc ggcgaccctc ccgccgctga taatgggcac cgcgaccttc aactcgcagt 240

acaacgaaga cccctacgcc cttccgacga cggaactggt gcaccgcgg ttcgccagtg 300

gcgttcgtgc tttcgatact tctccctact atggccccgc agaagacctc ctcggccgcg 420 ccctggccac agacttcgta cagtcgaatt ttccccgaag ttcgtatcac cttctcacca aggtcggacg gatcgccggc tcgtcgtttg attattctcc gaaatgggtc agaaaaagcg 480 ttgccaggag tctgcgtcgt cttcacactg agtacctgga cgtagtatac tgccatgatg 540 600 ttgaatctgc ctctccgaga gaggctctgg cggcatgtcg cgagtagcgc cggattcgtg atgcagaggg tacgattcgc tacgtgggta tctccgggta cccagttgat gtgctgtgtg 660 acctgaccga attggtgttg cgcgagaccg gcgacccgct tgatgtagtc atgtcttacg 720 ccaactttac cctgcaaaac acacgacttc tgacgcaggg tctaccccgt cttgtcgcag 780 ctggtgtgga cgttgtcccg aacgcatccc ctctcggcat gggtctattg cgaagaaagg 900 gcgtgccaat tggcagtatg ggcgatttcc acccagcacc aaatggcctt cggacagcca tccgcaacgc cgcagagtgg gcagataccc aaggcgaaaa gattgaagtt attgcaatcc gcttcgcgct cgagtcttgg ctgcgcgacg gtgcaaaggc aggcgctctc ggtccccctc 1020 tcgcgcgcag ccctgactca gacccgagct tcctctccgc tgcaaacatg ggcacaggcg 1080 aacgtttggg cgtgagtgtc atgggcgtca gtaacattga ggaattaacc gagactcttc 1140 gtgtttggca tagtattgtc gacggcctcg agaacaaaga cgacgacgct gaggatcttg 1200 aactggtggc aaatgcatcc actgtcccct ctgcacccag cgcaccagcc atcctcacac 1260 cctccgatgg tatcatcaca gaccgcgtgt ggtcccgcga gcgccgcagc cgtatcctat 1320 atcttgcaaa ggagatccag tctatcctct cccctatgtg ggtggattat acatggccca 1380 gccctggtcc agacttcgta aataccttac cagccgacca tattgccgca ctgaatgagc 1440 aaccagagaa accggacaaa aacaatgcta tgatgacccc tcccttggat gcgcaacggg 1500 agatcgagat acccgcggac aatgttccgt cactatgagt tttaacgatt tatctcatgt 1560 ttatagagca tttggcgggt tcgatttctt cacggttaag tcatcgaaca caaaacccta 1620 tccagagcca agatatttta tgtttaatac ccaattgtat caggttcagc cgtgtcaggt 1680 tcttctatta tttctagtta aatagctacc ctacctttgg acgcagaatg ccggctcaaa 1740 cgtcccggac aagtcgcgct gcagcccatg cgtaaggata atttcgttga taccagttca 1800 cactacatct gtattagcct tttccaggaa ctgaatacga taatgggact tacaacgtcg 1860 tcctcccaac aatccgcgga tgagtcgccc acgaaccacc gaggattata ttatgctttc 1920

cgtcgaagaa gtcggctagg aagagaataa gtcagtgaat gatgcagacg agtgtgccta 1980 gaaggaaaac taacaagtat agcctgggta aatctccatg gctttgaacc catcatgggg 2040 ctccaaaggt gacgaagtcc actcccaaac gccgccgagc tctgcgtggc cagccagttt 2100 atcgccattc tggatcacgg gcatgggatg ccagttcttg aaaccgacat tgcaagtcgt 2160 gaggtcgaga aaaacaggtg gagaggatgc ggatgcagag ggcgggagga cgggttgggc 2220 tgtagaagga gcaattttga cggtgccgtt tctaagatgc ggtttgtggt agccgttttt 2280 gagtccgttg ctagctgcat ccgcggagcc gtctgtaaga gttttcttta gacgagctga 2340 gtgtgcatag atgcttttgg cctcctcgaa cgtcggcagg cggcaattca tccatgaagc 2400 gtattgttga agctcgtcgt aggatgcaat gactggccag tcctgagcta gctcaagtgg 2460 aacggggccg aagaccgtgc gaacagagaa gtcagttaga aaatcctcag ttgcggtgct 2520 accepticgica acticiation citigatiggi catalatica gaggicaggic accigitgiaat 2580 ttggttcttc tgaaggtacc gggcatattc accattggta acgggcctcc cttgcgcttc 2640 aaatggttgt accgttacat tgcgcttagg tatttcgtta tcccaaccga atgttgacgt 2700 tggcatcaag tcctctgaag agtcaagccc tatagatagg gtttgttctg gtatagcgaa 2760 ccattcgttc ggcttcgcat tttctcttgc gtcaagaaat atcttcttga aatccggcgc 2820 ctggataccc ggcggaggaa ggactctctc actctggatc agcatgtaga ggaaggtctc 2880 caagtgcatt gcctcgtgct caaacccgat ccaaagggct tcacccagcg ttctgttctt 2940 ggacaggccg ggtatctcga gtgtggatcg tatcctgttt ctgacccggt cttggtaatc 3000 taggatttct gaacgagatg gccactcgtc cggaatttca ctgtgagaat ggcacttttc 3060 cggatcgtca acgtcggggt cgatgccgcg ctcaaatatc agttgatatg atttagggtc 3120 tgtaggcttg ccacccaaag cacgggtcaa gtgaatatct gaaagcttga gtaagcaata 3180 gcccaattga agtccgtctg cgatagaact taccagcgaa cgtgggaata tgtcctaggt 3240 aaaatatcag ggaatttcgt agtttaatcg gctttgaaag cagctcttct tgtgggatca 3300 ttgctttggt gactatatcc catgcggtcc actgtgcctg aaaatctttc agactgggaa 3360 taggaccage agcatactgg gagggccgca acggtaagte taaagetgee ggetgeagga 3420 gatgtaaatc tgttcccatg agttaatatg gttttgttac atgatcatat gtacgtacgg 3480 tagtcctcgg aaccgcttcc aaactcagcg gcttctatca ggccagcgtc gtgccacagc 3540 ttctcgcgtg cttgacaccc gtacttgaaa gcctcctcga agatgatctt ttcaccaggc 3600 ctgagcagca catcacagaa ggacacgtcc ttccttggta catagaatgc ctggtgcaaa 3660 ccataaacgg catcgtattc ggtaacaact tcccattcat gggt 3704

<210> 2480 <211> 1237 <212> DNA

<213> Aspergillus nidulans

<400> 2480

60 cagtgccgat gatgagaact ggaacgtcca tggtgatatt tgagaggaca agacgcaata atcttgtact gctgatgctt ttgacgatgt gtgcgttggc gtcgattgca aataaaaca 120 gaggaaaaag ctatccctgt cttccgacga cgagacttta tttagcaatg aaaccactca 180 tatgataaaa tttcatttgt atgctcacct ttctttgctt tggtacagtt gacctcacca 240 300 ccagattgga ccatcgaatg ccacattatc cggtagggag ggggaagatg ctgtgatcat cttgttgcgg agaatataat tgtgacatca aggggagtct acccgggtta gtggatggat agcctgcgct tataagtccc tgcattctgt gagaatagag gtggaaagtt attcgaatcc 480 cacagetgee gecaacatga tettegetea aettecaace ettacageae aggttgttea 540 ttttatgcag agtcgtcttt tgctctgtat cactgccttt gtcgtattat gcattattca 600 caccgtaagt tcacatcaac gtcttccaaa gtggttcatt ctgacttggc ttttagtttc tttatgcctt cctgctgtct cctgtcagac atgtccctgg gccatggtgg gctcgtgtgt 660 caagaattcc tctcttgtac gccacatggc agcgacgtcg atcaagatac gcctcagacc 720 tgcttcgcaa atatggtcgt cttgtggtca ttgccccgga ccagattcac acgagcgacg 780 agactgcgat gaagacaatc tacgcaaagt cctccatcaa gacgcgtttc tacgccggca tggggtcctg gaaaggcgta aagtcaaccc ttggctttgt ggactaccgc agcgctgcac 900 caacccgcaa taatcttatt caatgtttcc aaaatcggaa tctcgacact cttgttgata 960 gcatggcttg ccatatcact gagttctgcg acatgctcaa gcctaaaagt gtccaacaca 1020 aagccgttga tggagtcgtg attttccgcc tgctggcctt ggacattgtc accgatattc 1080 tctggggtga gaaagacact ttgctatcga aagcttcgat cagcgcctgt gttcctcgtc 1140 gttcatgcgt cagctcttgg atgctctaaa agcttaattc tgggttgaca cccacgtcgt 1200

tcttaggtct	cgaacagcgt	aattggaggc	gatgacc			1437
<211> <212>	2481 796 DNA Aspergillus	s nidulans				
<400>	2481					
tttccgccac	cgtttgattc	gcaaaacagt	cgatcattag	ttcattggga	attaattgat	60
cttcttttga	tgcaggaaat	cttacagctg	ttgcttggct	ctgagaccca	atgactcgcg	120
gatttttgca	atttgcacac	aactcggggc	cccgaagtcg	gcctgatccg	atgggatttt	180
ttcgactttt	cggtgtgcca	agttgtagta	gtcattgctc	accatcacat	attcaaccac	240
ctaattaagc	cggattgctt	gagagagcat	tcgctacgac	gtctctcttc	ttcaagaaca	300
tttctcccga	ttccaaaaca	gtttgttcag	caattgactt	gtgtcgcatt	ctgcttcgtt	360
tattcgggcc	cctccgactt	ttgagtctcc	gattctttgg	cttgttttcc	ccgcaataat	420
gtcttcaaaa	tcgttcgtca	ttcggacccc	ctgctcgtcc	gcaaatattg	gccctggatt	480
cgatgtcatc	ggtcttgcat	tgtccctcta	cctcgagcta	caggtgacca	tcgactcttc	540
caggacgtcg	tcgcagcagc	cactcaattg	tgtcatcacg	tacgatgatc	aaagcaacag	600
ctccgagaag	atcagcctgg	acccggaggt	taatctgatc	acacgcgtag	cctgtacgta	660
cttagatgcc	atgaccaaag	agctttcccc	gttgagaccc	gggttcatat	tgtaaatccc	720
atcccgctgg	gtcggggact	aggttcgtca	ggaaccgctg	tggttgccgg	tgttatgctg	780
gggaatgaag	taggtc					796
<210> <211> <212> <213>	2482 2144 DNA Aspergillu	s nidulans				
<400>	2482			at an at tagt	tttaggatta	r 60
			cggctttgcc			
			gacgcggatg			
			caccccagca			
gtcttcaccc	acccccccgc	aacgccgacg	acttcatccc	ccgcaataga	gacgagccag	, 240

cccaaaacct caacgctaga gaccctcacc tcagccgcca agtgcgtcat accggctctt atatacggca tgagtgttcc cacatggtct tttacgtcat gttgcgggag tgcacggagg 360 420 agcttaagca gatttgcgcg gactgaggca ttggagtcta ggatgagggg aaggagagac ggtaggatca cacttactgg ttgcgggggt gggaggtggg taggttggct ggtgagagtc 480 gttgttaggt gtgcaaggga gtcgcggcgc tgagagtctg attttgagga gagcctaaat 540 600 tgggggtggc tgaactgggt tgtttgcgga tggggccgct agggttagag aatgttggtc 660 agggttattg cttttgatca ttagtacacg ccctaagatg agggtgatgt ttgtgactgg 720 agtaggcgag agctagacag cagctaggca tgtagcatta tgccgtacta tgctcttcca cctgtccagt acagtcgatc cagcccggat atgggaaaga gcctcagaag gcgagcatac 780 ctttcgactt gaaacttgta tctgtaaaat tgtcaggctt ggcctttgcc ttgccgacct 840 900 tcaactttgg tttctgcggt gcgttagaaa cgagttccat agatgggtaa cacaacgtac ctggaagtcc ttctgtttct ccttctttct cttggtgctg gcgcccattt tggctagctt ttctgagtat ttctgttagc taaaatccac aaactccgca gattcacgta taatagacca 1020 atataatggt tatggagctg attgttctat taaagcgtac ttgaattttg tgttggtagg 1080 tcaatgattt cttcagtctg agatgccgga aatttttata ctgtcacgtg acccacatga 1140 ctaagcatct gccgccagtc ctacaaaact acacagtact attgattcag aggatgatcg 1200 atacataaac atcataatct attagactaa agcaaggaga tgcgcacttc tgcccggcct 1260 gacctcgaat gcaacaacaa acataacaca tgaaacacaa acaaaaaaag cagacagacg 1320 aaggccaggt accggacaga cgcggttgta tcaagcaaaa atcacaagtc aagcacaaaa 1380 catagacgtg acgatectga caaacgttge atatetegaa tegteagtea gattaagacg 1440 taaataagac ccgaagaacc gaagacaaag acgaagaccg agaaccgtag accgtagacc 1500 gtagaccata gacgaaaccg aaccgaaagc gcgtcactcg taaccatcaa ttagcatcgt 1560 gaagccattt gaccggctgt cccgctcgat caccaaacgc ctgctccagc gagaaaccca 1620 gctcagtggt agtcatcagg tctatgtcgt ataaaatatc atcgcaaaag aaaagggtta 1680 ggaaagagat cacacacgtg agttggcccc tttagaagcc tacaaactca tcgtcaacca 1740 ctcccattcc tggcttgcgc cctgaccagc agcgatactg tggttggctg ggttgacggc 1800 cgctggaggc atagccggcg ccaatggaac aaccttggat cgtccaccgg acgaggtact 1860 ggacgggctt tccgccatat caacatcaga ggccttttcc agcctacgct gacgtttagg 1920
agccacctgt accgcaccac aaccgttgtt tgtgcccgga gacgtagtcg ccgctgagct 1980
agatttaggc ggggcagccg caataggaac gactccagag cctcggccgg agctacccgg 2040
cattgctggg ggagactcgg atgtcgtatt gctttgggcc cggctcgagg taggcgcat 2100
agtagtgccc tgctgagccg agttcctgcg ggctgacttt tgga 2144

<210> 2483 <211> 2123 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2483

ctcttactgt ctttcgactc ctgtcacgag ttcttcgcca ccctgggtca ttcaaacccc 60 gagctcaaca tcctcgaagt cggggctgca ctgggagtgc cacggcgcgg tttctggact 120 atctgcacgc gccagatgga agtcggatgt acgcgcggta cacattcact gatgtctctg 180 ctgggtttct agcagcagcc aaggagcagt tttcgcgata cgatacaatg gaatacgctg 240 tgctcaatat cagtcaggat cccgcgcaac aagggtttga gctgagcagt tacgatctaa 300 tcatcgcctc caatgtaata ctggtcctgt ggtatgcggt tatgtaccct gttaatcata 360 420 taattcctag gtcgtccatg caacacccag tctgagctgc tccctggcca acctcaagtc ccttcttgcc cctggtggcc gcttgctcct tcaggagata accgagggta cgtctcattc 480 atccccggag cgtttcttag agttctaatg ttgacactgc aaaagaatgt atattggctg 540 agtacatatt cgtatgttaa acttcttcag cctttctctt gtttatgctg atgtgatgta 600 gggtctgctg cccgggtggt gggtaggcga acacgaccag cgaatcgaga gaccgtacgt 660 actagtcgat cgctggagag aggaactcac aggagttggt ttcaacggca tcgactttgc 720 catccacgaa caaaacagcc cggtcgtgaa tctggtagcg acctacccca cgacgccgct 780 gggagcaaat gctgtaagcc tactcgtaca ggagccgcga tgccagtggg tattagatgt 840 tgagaagatc ttccaaaagc aagggtataa agtcgagata tactcactag accaaccgcc 900 accggctgaa ggagaggtgg tatccctcct tgacgcatcg ggaccattcc tattcaatat 960 gacggagggg gatttccagc agttgaagaa ctctatactc agtgcctcgg ttaagcacat 1020

ectetgggtt agcaaaatgt egcagtttac ttcaagegat cetegatacg ggctaateca 1080 cggatttctg cgagccttac atttcgaatg tcattctgaa ggcaagagct tctcaacatt 1140 tgacattgaa gaattcgacg aacggtccat ccatagtctg ttgaaggtcc acgatcattg 1200 gcgccgggca gcaccgtctg aggagtctag aagagacgaa tatgcccttg tcgacggcgt 1260 tgtccaggtc agcaggttcg aggcaaccga tattgagaaa gagcttcaaa tccccgtgga 1320 agatacggct cctagaaggc tttgcattga aaccactggt ctcataaatt ccttgtattg 1380 gaagcaagac caacacatta tgcctggaaa gggtgaagtt cggatcagag tcgcatatgt 1440 tggattaaat ttcaaggcaa gtcctcagac atccatggcg atgctaatgg gctgacacaa 1500 atcaaggaca ttatcaccgc cctaggacta attgcgtctc ctgaccagct agggctggag 1560 ggcagcgggg tggtcgagag tgttggcact ggtgttacca atgtcagcaa gggagatagg 1620 gtcatcttct tgggcccagg gtgttttgca acccacgtta ctgtgccagc tgcaaaagct 1680 ataccactcc cagginating grounding gagging gagging a citizeness to the state of the s acggcggctc agtgtctctt acgactagga aatctacgac gagggcaggt aggttgatat 1800 gctatggccg atgtatagag ttctgacacg ctggttcagt ctgtattgat ccacqctqcq 1860 gccggaggcg ttggaattgc ggctattagg atctgcaaag gtgtgggagc gaaggtagag 1920 attttttctg aagcgtcgtc aattcacact gacagacaat agatctacac aacggttggc 1980 aacgacgaga aagcacagta tttggtcgac acattcggta tcccacgtgc gcacatcttt 2040 cattecegea atgeateatt ctatgatgae etcatgegtg aaaceggteg cengggggeg 2100 natatcgttc tcagctctct cag 2123

<210> 2484 <211> 1460 <212> DNA

<213> Aspergillus nidulans

<400> 2484

tectggaget ggttettgae tttttetgag gtgeateaag aacaataege egteaetate 60
taggeettge aggageageg aacaggeetg ggaatagage gaaagggtet cattaeegae 120
tgagagtgae ettggeaeag acacaaaatt gteggtggte eetggaeaet ttegaetetg 180
ttgagaatte geatetgaea gggtaggeet eeggettegt gaageagggt tatgtgeege 240

ttcattgcgc gaggtcttcg gactcggagg actatccgat cgagtcgtat ccgatagaga gagtcgcgcg atatcgaact cgctcgaggg aacaccgttg gcagttctgt ccggctttct gaatgtccag tccgtcgctc taagccgcgt ttgatccttg acaaatctca acaacgcatc 420 480 gagctgccgt tgggccttga ggccatcttg cagtgcccag aaaccatcag agccctcgac agactcgggc gagagtagag attccatata aaatctgcaa gcgtttgcca cagcctttct 540 atgatgtttc ctgggcgtct gataaaggga ttggtggcat ttcacgcgac cgtggggtga 600 ggaggggaag cttgtgctat gatcattcat cggcactgtg attgtagatt atagcatcgc 660 aaattgagga attttcagcg aggcaatgtg cacaatcgac tccgcatcgc ctggcaagtc 720 taaatagtcc cggaaacatc agacgatatg gaaccatggc acaagccgcg aggcggaaga gggtccagac catgcaccat ggtttaaact tgatgtcgat tctcaatgaa atctggttca 840 900 ccagtcaaaa tacagcattg ccatcgccac ggcaaaggag ctcttgaggc tacttgcgcc tggctcccgg aggccgccta ttggttcttg gtggtaataa tattgagtat tatcaagatc 960 gttggagaat catcgttgac aggtaaacat tctatcactg tgaggagatg gagtccaatt 1020 gacatgattg ctgggtgctt gaatcaagat agtggatgat ggcacgaggg ggtcagcgac 1080 tttcccttat cggtcccgtg actttcattg gtgtggagta tatttccagc tcttcgattt 1140 cgtcaacatt tggtctggct cgagtttatt cttgatatat aatcaaccgg ggaaggtgat 1200 tggccttgtt gcctgttaac caaaagtcaa atagcagaac gttgacgcag aggatatgcc 1260 tacacccgag ctgccgccgt ccttgcagta ggctcttctc agaaatgctt aacgcctata 1320 gaaccacatg cttgagtcaa tcaatcctct tgaaatagaa tttctgacta gcggtggttg 1380 caccactatc actatcgatg tggttatact aatgtggagt tgtcagactc aagactccaa 1440 1460 gcacttagga atccatccaa

<210> 2485 <211> 1954

<212> DNA

<213> Aspergillus nidulans

<400> 2485

tgtaggcgga ggtggagatg gaggtgatga tcgcacacgc gtggaatccg agttgacgcc 60 gaccgggcgt cgagagtgtc gcgtcccggc gaccgcgctt cggattaatc ggttccggtc 120

ttccggtaca ccgccttttc ctcgtacgtc agtcacccac tgctgatcaa ctacatcgta 180 tgattcgagt attcattatt tgattgatca ttcatctaat ttatttaatt attcagttca 240 aaattggcgc agctcgcatg attttgtctc agctctgtct gatatcttca tctgtagagt actctgcacc ggccactgcg atactttgac tcgaccttga atccacatgt gttgctacta 360 atatgatcac gtgcaaggga caccatgtgc cccatcccaa tggcatgatc gcactctgcc 420 cgcgcaacct cacggaggca gaccaggtac aacgtgtcgg tctcccgtca agcactacaa 480 tcagcaacat tctgcgcttt accgtcgccc gttccatcag gaacgaatcg cttcggcagg 540 ggtatgcggc tttggctctg ctccagcacg tgatctggtg tctcaatata ttgaacatgc 600 ctctaagccg aaaagggcta acccctttgg agaggtaggt tctgactaat atactggttg ccgcaatatc tgtcttggca aggcctcacg aagaaaggcg ccggtcgaca atgccgtata cgaatctcta ccggcgagcg catagccccg gtagatggtc ggcagctctc cggctcgcga 780 tgctcatgac tgtcgcgcct gcggtttcct tctttcgccc ctcgcgcggg atggcaggca 840 gtttataccg taccagactt gcctaccaac gttatagact ggcttccctg ttcggtcgag 900 aggatgttct cgtagtatag gtgtctcagt acggaattgt ccgtaaactg cacgagatcc aatagagatt cacacgccgt cgtcattttt ctcctataca cattcacagt atggaattga 1020 agaaagcagg actggcaaac gttgctatga aacctctgcc tcggcgcctt cgatcaccag 1080 ccgcttggca tgagctcggg gtcatgagcg cgtcgataat gttcacctcc agaggcccag 1140 tggagtgcag cggtcgggtg catagtacga tatagtcttc gccaggagaa gcgagtgcag 1200 taagccgcct tcaggccaga gctgatcgtg gtgatacttt gggtcttcaa tgtacccgcc 1260 ggcgttgcta gtcgcggtag gtgggcgagc gccgaaatcc aggttgaacg ggtcgctcgt 1320 ttcggcgtcg gatcctgcgt gcgcacagga tattggtccc tatcccgcca actttttgaa 1380 actacccggt accgtcagta tagacgagga caaaccttca gcttaggata cagccctttt 1440 gcgtcgtgac gccgacaggc tccaaatcca ggtactggat ccggttcgaa aatgacaacg 1500 ccgtgatcga gtcgcggtag ccccggtaaa ttaaaccgca ccgtaactac ccgcatttgc 1560 agccccggac gatcgctctc ttttgttgcg tccgcttgta gggggctttg gaaggagtcg 1620 ccttctgata cgtcttgaca gcatgttgta gaagtatcgt tggtgaaggc gatagctgca 1680 cgatccggct ggtgaagact gaaatgacaa ctctgtcata ggtatgcctt tctcataagg 1740 gtgcagccag attaaatata tacgcagggc ctcattcgcg tagcgctgtg ctgcaggtgc 1800 ctacccggat tcttccaata caacccaaat gacgaccttt ttcagcctca tcccctgctg 1860 aacctcaacc ccggatctca gcttggcgag agagtacaat cagttttgcg gaggatcagc 1920 1954 cgggctgtta aggccgcgac aaaagccatg gcga <210> 2486 1108 <211> <212> DNA Aspergillus nidulans <213> <400> 2486 gcaacctcaa atatagggct tgttccgggc tagccttacc gtactaggtt agtacctaac 60 tgatttttag taaagccgtc tgctgactgt ttaacgttcg attgcatgcc aattaccatg ttcccgctcc cgcgcccagg cgtcgaaccc aatagagcag ttctggcgac ctctgtaaga 180 cagctgagta tgggcgcaga gcagactgtg gccagatcca cgagaacggc tgcctgattg 240 actactagat gattgaaagc attgcgtgtc gtgatgtacg gtctccaaaa ggtcgaaagc 300 agaatctggt aagatattca ggactcctat cgtgaagtat atggaattac attcaagaga 360 aagggcgatc aatctgtcct gatcacaacg tcatgaagat attaaaaaca ttggccagtt 420 catcgagaga aaccttctcc gtgcagtcgt agagatctcg tcttcgctga ctttcacccc 480 cgaaagcctg ggtaaccgtt ccaaaggggg atttcgtgga cggcccgtag cgccttgctg 540 taaagccttc tgtcacagtt gctcgagtga tagcgggcca aggagcctgc ccgtggcaga 600 atttgaaaaa gtcttcagca aacgcagttc caactgcttg ctgttctgcc gacaagaact 660 cgcggaaatt ctggaagagg tacgaaacgt cgagaatgtg gtttgttcgg cctttccact 720 gtccttccca tgggtttccc tcgttgaagt agtaaacgta cgcgtttcct ttccatcctt 780 gcgcgaatga cagaacaggg gtgaagaaca agacgtcatt gatatagttc agaacggcag 840 ggtaagcgtc atcatcgctg gcactttcat cagtaatgcc gtacgatttc aggattttcg 900 tcgaccacgg ccggttgaga ctggagcgcg gtcttcagag ccataatgaa ctttctggcg 960 cacccaatct tggtatgcgg gaataagaat gcgatgatgc ttgcctagaa cgtgattaag 1020 tcagatttgg tacatatatg atgcacttac atccatctga gaatctccaa tcatgaggtc 1080

gatgcaccag ttcttccctt ttgggacg

1108

<211> <212>	2487 983 DNA Aspergillus	nidulans				
<400>	2487					
gtgacctgct	tgaagggacg	gtccattgag	aggggttccc	cacagcaaca	aatggaattc	60
agggtctcca	tatcacggcg	gccagatcca	ttccaagcac	aagggttgta	acatgtctgc	120
tttgcaatat	cttggccacc	attccactgg	tgtgggggag	gaaaataaag	cattagggtg	180
agctcattgt	taaaagaatc	aggaccaatg	gaccctgttg	tcgaacccca	tcttagcata	240
aaacgccgca	tataccaaaa	agcactcgag	tgtatattgt	gtttcgtgca	gcggaaaacc	300
tagggcatga	gccgatgaag	cgtgaagtaa	aacagatcta	gcccgctaca	tctgccacca	360
cgccgagact	ccaagatcaa	agcatttacc	cgcaaaggaa	cctctctcta	tatccgtccg	420
aagaagccat	aaaggacgac	gcgagagaag	aaacggaagc	aaacagggta	tgtataacta	480
aaggataaaa	aggcggttat	cgggagaaaa	ggagaaaaat	acgacgtggc	ggcatctagg	540
atgccctggg	gaaacagttg	caacatcagc	ggtatatctg	cattccaatt	cccgaaccgt	600
actgggctcg	gtacacagaa	atgataaggg	gtatcggcaa	tgtcgcccat	ccaggaaacc	660
aagctcatcc	accacgctaa	agaagagaaa	acaaaaaaaa	gagtctcaaa	ccatgggcac	720
atcatacatg	caatcctgac	atagtgagga	tcatgaaggt	aatatcagac	atcataccag	780
cataacaata	taaacagaca	tgaatggaac	gaaggaaaaa	agatacacat	tttccaaagc	840
cagccaccca	gaagaaatca	aaaagacgat	cgcgcaaaac	tcagccatct	tcatccgagg	900
gaccgccgga	ctctgcctcg	ctttcgtcgg	cattgttact	ggctttctgg	gcgccggtct	960
ttgctttctt	cgcagagtta	ggg				983
<210> <211> <212> <213> <400>	2488 2453 DNA Aspergillu 2488	s nidulans				
tctagtgcct	tctgttatag	agtatatcct	acctatgcta	gagacagggc	cattgcacaa	60
gacacgtaaa	ttagtttctc	tatcaaggat	gaaaccgctt	ttgaagacca	aaaatgtaca	120

tatacaacta taaaccgggc aggacctggg aattgagaca aagattctag gtaggaggta tatccaagat gaggttctaa atctttatca cattcgtttt caggcgtggc gaataggtgg 240 aggagttagt tgaggtggtc ggtggcttag aaccgcaaat cccagccaat ctgaggacct 300 360 aacttgggaa gagactcggc aacactttca acgtctttat cacctctacc actaacagta 420 agaacgatgt ccttaccctt tcccatggtc ttggcaagct cgatagcacc ccaaatggcg 480 tgcgaggact caagagctgg gatgatacct tctgtctgag ccatggtgcg gaaccagaga gagectggge gteegtageg geaataaagt gegegeggte getgtettte.eaattgetga 540 600 gctcggggcc aacgccggga tagtcaagac cagcggaaat ggagtgcgtc tcagagacct ggccgtgctc gtcttgcagg atgtaggtgc ggacaccgtg aagaacaccc ttgctaccgc cggagagggt ggcggagtgg cgatttgtgt cgataccgtc accaccggct tcgacaccaa gaagettgae getagtatee ttggagaatg ggtagaaget geegaeageg ttgetaeeae 780 caccaacaca ggcgacgacg gcgtcaggca actttccaat ctgttcttgc agttgctgtt 840 tggtctcttc accgataact gactggaaag tgcgcacgat cgttgggaat ggatgaggac 900 cgatagcaga gccgatgatg tagtgggtcg tatcaaggtc aacaacccac gcacgcaaag cctcgttcac agcgtcacgc agagttcgac tgcctgcatc aacggcgacc acggacgcgc 1020 caaggcgctt catacggaaa acattcaggg cctgacgacg cacatcctct gcacccatgt 1080 agacaacaca cttcatgcca aacttagcgc aaacagtcgc agtggcaaca ccgtgttgac 1140 ctgcaccagt ctctgcgatg attcttgtct ttccgagtct tcgagcaagc agaatctgac 1200 ccagagcatt gttgatcttg tgactaccgg tgtggttgag atcctcacgc ttcagccaga 1260 tattggcacc tcccacatgc tcagtcagac gggttgcgag gtgaaggcta ctggggcgtc 1320 ccatgtaagg atagtatgag cgatattcct cccaaaatga agggtccttg agggcgctat 1380 cgaagcctcg ctccaactcg gccagacaat ccatcaaaga ctcggggaca tactgtccac 1440 cgaattcgcc gaaacgtgca ggtgttgcgc tagaacttcc accaccgttc agagcctcaa 1500 gttggtctcc aagaccagga cccgaaggcg tatccttctc cgtaatgaca tcagtaggct 1560 gtgacatagg aggggtttcg atcttcaaaa caggctccag cacgttcacc tcacgagtca 1620 acgctcccga ggtatccctt tctagtttgc ggccagtaac actagacaag tactcctccg 1680 ctttttgagc cgcctgacct gcaggggctt ctccaagaac ggtgataatc tggctaccga 1740 tgacgacacc ttcagaaatc tcctgaacag aaaggaagtg ctcgcgggtg ctgacaccga 1800 aaccaagcgc tgttggcacg ttcccggacc atttgtggac acgagcgagc agttcgggga 1860 tgttcgagct aagggtcccg gtagcaccgg tcacacccat tcttgagacg acgtagatga 1920 aggaatcggc aatcttgcaa aggagtttca tgcgagactc ggaggtagcg ggagcgatta 1980 gtgggacata agaaagacta ccacaatatt agtgttattg aatgtgcaaa gcgtcgaagt 2040 gagtaggcat accetgtact ggtgcaaaga tetetgaage gaaeggeete etetggggga 2100 agatcgacca tgatgaaacc attgacgcca acctccttgc agtcccggag catacgttct 2160 tcgccatagc tgagcatggg gttatagtat cccatcagca taataggagc cttgaggcct 2220 cgattcctcg cggaggactc atctccagta ctgtcgagac cgtgacacca ttggcaagag 2280 ccttagtgtt agctttttgg atggtcggtc catcagcaat aggatcggtg aatggaacac 2340 ccagttcaat aatatctatc caatcatgtc aacatcgtta gttccttgtc tgtagaaagc 2400 gacacccgac aactgagtct caaagagtca attgaagttt tgagaagaag tac 2453

<210> 2489 842 <211>

<212> Aspergillus nidulans <213>

DNA

2489 <400>

gatctctttt tctactcttg cgctatgttg tcggagaggc ttcagttgtc tctctcgcag 60 ttgtattttt agatttaaga cttcctcctg gatgctggga atcgaatgtg aactgagttt 120 180 aggaggccaa aaatattttg tctcggccaa cgtttaggtc tttgtagttg cccacaacaa acgaaggaac cctgtccctt tcctcgtata tccagaattg ccaattatat ttgctccata 240 ccaatatgag atacaagtac acggagaggc tgaaacgcaa tcgagcggca caatgagacg 300 360 aagccaggta agaagcctca cctcaaacca aggagaaaat ggcacattgc aagatggaac 420 catctgcata accaaaatct aacatacggg ttcggtgata gataagagac ctcttgcggt 480 tcgcgatcaa cgccagccga tacctaagcc atgaaatagt gtagggaaaa aaaaagtaaa 540 atatgtaaaa tcagcagtac aaatgatgac gagaaggaga atatgatttc gactgcaaaa 600 tgttcatagc tccaagcctt gcttctattt cttcttagat ggcactcaag atctgcattc 660 gtaatatgtt tgttgcttgc tcatgtactg tcgctcgaac ccggcttgtt cggctgattg 720
agtgtagccg ctggggcatt tggcgaggca gataatatgg actccggtac ttcaactggt 780
gtgcattctt ctgcctcatc gtgaactttc ttgagcgttt cgattattgc ttacagtagc 840
cg 842

<210> 2490 <211> 4413 <212> DNA <213> Aspergillus nidulans

<400> 2490

gctacatatg ctcccgccat tgatcgattc tttaagacta gatggttctc agaaaaggcg 60 ttgagctacc ttctagcgaa cgcccagcta atggccgaat attccgcatt aatcgaagca 180 tttaccggca atctgagtga tcctaacgtc cttgcgcggt tggagagctt cgaggcatcg gttgtctgga gcacaatgac attatgtcgc catgtgatga atgtatcaag tggaagccaa 240 ccagattatg atctcttagc cacctccaaa cgactggacg ttatagaagc catgatcacc 300 ggtgaccacc tggactctaa tccgcttgcg caatttccaa ccaggcaacc cgccgccaat 360 ccgccctcat tacccgatca actcatgcag cgccagctag acttctggag tgcaatcggt 420 480 cactttttga ctctacatga caacgaggcc agcgccgcga aagaaattga tgacacgctc 540 ggccgttgcc gcacgctcct ggatacgtac gaaaatcgag acgtcatcta ttcaatcgca atcgcgcgcc atctaggcca acggtgggcc gacttcccgc acagcttccc gcagcctatt 600 accacgaacg agaaagacgc cggggccaag ctttatgtcg ctcagaaatt ccttgaacag 660 gaagctgggg gcaagggcac gacgcaggtc ataaagcgcc tgtgcggcat ggtcgtccgc 720 tcctggtatg tttcgcggga atgaaggcat ctttgccgta tgttctctcc gttgtgacga 780 atcttcttac ttgtaatatg agaaaattgg tgtgctggca ggtttctgtg ttacgaccgt 840 ttactagacc atgttcattt gactgtctgg cattttttgt ggtatgcttt gccgtggagt 900 tcgctcatat atcccgtctc gacgttctcc cgcgtttatt tggtcgattt atcagggaga tgtcctattc acggacaagg agttttttt ttttttttc ccccatcatt tctgcagctg 1020 ggcaaggcag cacaatggcg tttggctgtt atttagatag cttcattttt cttccacata 1080 ttttaaccga ctcatttttt gatgtgccgg gaatgtgagt cggttcatct agccaattct 1140 atatacatcg aaaccgcttg atacatatat agttctttag tggatctcgc ttaaccaaat 1200 cacgttaatc tccaactaca aatcagcctg ctcggggaca ggggtcttca acttgcccgt 1260 ctccaaggcc attcgcacat tctcaatagc ccattcctcc atcgcagttt gcgtctgcat 1320 tcgagttaac ttctgaccaa tgcatatgca tattggcagg aatgagagga acatacctca 1380 acagtccaag tacccatgtg cggcacaagc aaaacattcg gattctccac aagaccaggg 1440 tgaattttag gttcgtcctc gaagacatcc aagccggccg agtagacctt cccattgtcg 1500 agggccttga caagggcgtc ttcgtccata acggcaccac gagccgtgtt aacgatcacg 1560 acaccgtcct tcatctggtt gaattgctcg gtgctgatga tgtggcgggt atttttctac 1620 gcacacccat cagtttacca gtccagagtc aacatgacga gagggaagga ataagggacg 1680 cacattcaac ggcaaattca aactaatcac gtcggattgt ttcaagagct cctcaaacga 1740 aacgtatttc gcgccccttg cgagttcagc actcagttcg cggcggttat gatagattac 1800 tttcatgccg aacgactctg ccttgcgctt caggttgcgt cctattccac ccatgcctag 1860 gatgccgagg actttattct cagggtcgtg gccaaggcgc ggcggtgtaa ggccacgcca 1920 gtgaccctgg cggagggcgt gcatgcctgc gttgaaattc cggagtgcgc cgatgatcaa 1980 gaacatgttt acgtctgcgg ttgcgtcgtc gaccgctgta gggacgttgg agactcgtaa 2040 cggaggattg cgcgctgtgc aggcttgtgt ggagatttgg tcatagccgg cgcctgcatt 2100 cctatatcag tatctgcccc caaagaagga agcgggaaga aattaccgca atgcgctaga 2160 tataccagcg aagaaggaag agcgttgacg agttcctcat cgaagagacc ggtgatggag 2220 acggagtcga aggtgcggta cgcgacaacg acgccgtcca gagcgccaga tttgcattcg 2280 gcaataaagt cggcgcggtt cgtggccttg ggagtgacta ggtctgcgag ggaggagagc 2340 gagttccagg ttgagtgggc gctgagaggg ttagttgctg ggccgggggct gatagagggg 2400 cgcgttggag tatccatact gcacaatgct gccgaggagt agaacaatta gcttagaaga 2460 catcttgtag agagtcctgg gtatacctat aatgatatta ggacagaaag tggttcaata 2520 gggctgcgtg aggcagggaa tggggatcta taacggtacc tgaggagggg taatgcgggg 2580 tcacttgcgg ccccagcagg ttgacttgag gcggctgggg atatataaag cctaaagaga 2640 ttctccacga ttgaaggcct caaaggaagg actgtctaga gaagaaagga aatgcgatgg 2700 aagaagaaaa agagagaga gaaagttgga gttggagaag aatcccccac gttgtgcccc 2760 acctttatca actcaggctc cgtctcgcgt tatctctttc cgaaggaata actgtggagt 2820 tttagagacg acaggcgaaa acagccagga aatttgtagt cccgatgtaa acattaatct 2880 atcgggcata gtgactattg aagcgcagtg gccaaaccgt tccctcagcc atgggggtgc 2940 accteggget tteteegage etetteteta geatatteae agegetaeeg agetgegeta 3000 gacagtgatc tatggccgta ctcggtggta ttctctttgt cctatctgtg gaattgcgca 3060 gtgttgtgag ggcttgcccc ggttgtctac cttgggctct gccatgggtg tttccattgt 3120 agaagcagta ggctacacct caggagcgtt ctgggctgat gcaagagcct tctcggagga 3180 ctatccggaa aaaatgacgg atatgcaaga gaaaagaaga tatagagtgg tgcctacaga 3240 gcgtgaatca gtttacgaag tttggagcag aatatggccg ctgtaaaccg taaagagatc 3300 agcgagatgt aggtgctgct gaaagatttg cagagaagag gcatatgcgt ccatgaggaa 3360 ggtcacacca agcttggatg ctcaagaaaa ccctgctcaa ggctgttggg cgataaatat 3420 cacgtctgct gaggcatagt actacgaact gcagcaaccc atgtgtccac tgctgtagga 3480 atgacaggaa tctcaagtat cataagtagc gccagtaagc ggcaaactat attgtttcag 3540 agagggcctg tattcaggct ggaacgggtt atttccagtt cttactggaa tacagagctc 3600 ageceteaac aageaceete gteeagteaa aetteeteea eeggetetgg aaceegeeaa 3660 ctcgccggtc tcctcctcgt gtccagcgtc cctgtttctt aatcacctcg gggccaacat 3720 ctaacatgcc tccaatgacc tcgcgcgcaa agagatcgcc tttcggccac cgattggcat 3780 cttcaacaat atggcccaat ccgccgtcaa gctggaacca aacgtggaag tagggcattt 3840 ccttggcaag ggagcggcgg aaggcgtttc ggccgagacc ctgcttggac ttggtgagcg 3900 tatcgatgag cttgcggtgt tgcgtccact cctcatcaga agagagtatg gcctctttga 3960 ggcgcttccg gtggggtgcc gcagcgtttt cgtagaagat gacatcgcgg ccttggtcat 4080 gatacatgcg agtgaggctc ttcatgaagt tgcgaatctc ctcccattcg tcgtcgtcgc 4140 attctaggag gttggtgcga tgctgtattg ggacaatggt ggcgctgccg gggctgattt 4200 cgggctcggt tgggagtgtc aggtagactc gtgtcgcaag agacacgact ggggcgactg 4260 ggggggtgtt cgtgtcttcg tgatggcata gtgggcagtt gtccaggatc ttgttcatct 4320 tttgtagctc gttaattgtg gtattcctga ggtcgatctc ggagcgatga acccggcgag 4380 <210> 2491 <211> 1340 <212> DNA <213> Aspergillus nidulans

<400> 2491

gcagcggcga atcgtactca ctcaccctcc ccatgaagct atagagcacg cttgacctcc 60 tecatetect cateetagge catattetgt eteteaaaat tgeeggagge eectaeeact 120 ttccgtcctt cccgaggtct aactatccta gatccccacg agtcatacat cgccgactat 180 cgggaccgcc cgacccgcgt cgcggaccac ggcatcagtg cgaatatgca cctgctcgcc 240 acacgggccc cgaaattgag tacgggtttg cgggctgttg cagtcctgca cgcctggcta 300 aagtatgtgg gctttcatag ctcgacgtct gcggcgcctt tggctctgaa tgtgctggtg gagcggtctg gaggggtgga ggtggaaatg cgaatgcgat cagtttgcag gtctgaggaa 420 ccctaggttg atcgtctcga tcaggatggg gacatcttgt tatcacactg tccatgggtt 480 gtggaccatc tggtatgggt agaagacgag cgcgtctgct ccagcctatg gctgcatctc 540 agatgatttg tatatacgat gcgattgcgg aatctccctt ccataactgc gtttcaatct 600 tcagatccac cagacaagtc ccgatagact gatggcgttg cctgcgcaga tggattattt 660 ctatatatgc atctattctt ccaacggcta tccggaaccg ataatctcag tcgcctgcgc 720 tcgattaact gaagcaaaga tcgttatcag gcgcaatttg gattataggg tctcaattga 780 acactaccca gtagtcttgc tatttttcaa gtattacgca agtgctgggt actggttgtg 840 gctggatata ataggaaact ctaggcagaa cactagccat acagtatatt agggcaccaa 900 agacacagct cagtcaacct tttcttgcat agtagcataa cagcaatagc aaaattatct cgacaaacac ctcccattac catatccaat caaacctccc taactccaac ctcgatccgg 1020 actcccttct cagtttgctc atctacgctg cccctaatgc cagccctaat tgcgtccaca 1080 ctctcgccct cgaggaaccc ctcacatctc gccatctcct caaagcccat ccccttccct 1140 ccattatcac taaatcccct ctccaggatt ctcaccggcc agaacaatgt caacacgtaa 1200 taaagcaaac aacccattcc gaagctcaac aagaacccca gcttatacat attcttactc 1260 ccctgcgcaa cagctcctcc gtctcctaag ctccctgcaa taccatgcac cgtaaatgcc 1320

<210> <211> <212> <213>	2492 769 DNA Aspergillus	nidulans				
<400>	2492					
tggctaaaga	tcttgggtgc (caagggggcc	gcccgggacc	ggggattcat	cccggttgct	60
aaaaacggtt	aggcccgggc	tcacttaata	atgtgggcaa	gccaccgaat	teccaaegee	120
tctgcggcag	cgaactctca	caacggggtt	ttccaaccag	gcacccatct	acggccggcg	180
ataccgacat	ttttattctc	cgcgaaagtc	gacacgtcct	tttttctggc	cacccgcaac	240
tatgtcgcgc	tttttctacg	gcaacgacag	cgacagcgac	agcagcggct	ccgatgagga	300
ggagctctac	agcgatgagg	aggtcgagca	gtccgaggag	gaatccagcg	aggaggatgc	360
ctcttcggag	gaggagtctt	ccgaggatga	ggacgctgga	aaggccggtg	ccagtcgttt	420
catgaaggat	gtgagcgaca	gtgaggagag	cgaggaggaa	gatgtggtca	aggtcgtgaa	480
gagtgcgaag	aataagaggt	tggaggaact	cgagagcacg	atcaaactga	ttgataatgc	540
tcagaagatc	aacgactggg	cagttatttc	gtcaggtgcg	tgaatatcct	gagctcgggt	600
tttacatgtt	ttgcgctttt	cgagccatgc	gaaggaatga	taaagtgaac	tctggtactg	660
atacggtgtt	ttagagttcg	ataagatgaa	ccgtcaggta	gtcaaggtcc	tccagtctgg	720
ccccgttccc	aaaatctatg	tcaagaccgt	tgcggacctc	gaggatttc		769
<210> <211> <212> <213>	2493 961 DNA Aspergillus	s nidulans				
<400>	2493					
ctgctaccto	tccgctggat	tgagtcccaa	tgccaatgcc	acagacttca	agctttctca	60
gtggaataag	ctaggtacaa	tgcagggctt	tcttctagcc	ttcgcatagc	ctccgggaat	120
cgaccgtcgc	: tttgccctgc	ggcatgttag	ccctagtttg	ggggaccgct	tactgggccg	180
tttctagatg	agtttcaggg	cagtagatat	taaatcataa	ggacgagttg	gaaatgagag	240
tgctaaggtg	aggcgatagg	agttgaagaa	tgagggaggg	gtgtatggtg	agatggagct	300

tctctaagcg ttcagtgagg ttacctatta cgtgtcattg ggcatagagg aatggatgga 360 qtccctqqaa ccctaataqq tttqqtqcqt qggatatgta tcttactctc taactcgcgg 420 tgaggcggac gggccaaact cgcccaagat atagcataga agaatatgat atctatacct 480 ctgaagtact ttagggagac aggaatggca gcgggaaata taactcacct cgtagcaaat 540 aagaagtagc cggctcgtat agccatagat gaactcttcg agtcatttgt accggtagac 600 ttttcctcgt acggtaactc atcggctaat tgcggttcca ttctttagtc aaagaacagg 660 ctagactctg ctaaatctac ttggatctta ctcttgtggg gcagatgaaa cacaagacca 720 gctgtgttgc tgcttggcac ggagacactc ctatatcgag ttggatatag gactaaatat 780 atgaactcca tatagtgcca agatacccgt ctattcattt gtctgccgcc gtgttagctg 840 900 tattctggtg ataaagaaat atcgtgtgtt gaacagtgtt cgagccggat ttccgtcaat ttattatatc gaccacgtat ctattccaca gcttgtacgc tgttttgtgt atactacgag 960 961 а

<210> 2494 <211> 1471 <212> DNA

<213> Aspergillus nidulans

<400> 2494

acagageeet teaaageegt ageggteege gaatetggta acateaatet gteaatatee 60 agteceatag ceatgtagte tteaccecae tacetgtege ceaaaggtaa atgegegaga 120 agcattgctg gaagegtaca taccatgctc tccaggaaac acgtcgtccc gcttttcaac 180 atctctgcaa tactcaaccg cgccgccgca tatccatcgt cctttgtaaa gttcccctgc 240 300 agaacccaga ttcgctcaca gagccacgag acaagctcga ggtcatccgc cgtcccgcga 360 agcagtgtct gegeegtgtg catgtgegtg gataccagee cagggateae gateegaeeg 420 gtgaggtcat atttctcttc atcggggtat tgcgcaagca gcgccgctgt cttgccgagc gaggaaatgc gattcgaacc gcgggggacg taaatggcac cgtcggtaat gattcgccgg 480 gttgagtcaa gggtcaggat tgttgcgtga gtgaagagca ttttatctgc ataccgctct 540 gcctcttatt ggagctgttt tatttatcgc gtgggtgtgg tttctttgcg atgttctgca 600 gattgatgtt atatactttg cgagctgggt gaatcgggat gtcggcgacc tccgagactg 660

tagataagaa tggagagcat ttggagtcta gttggagtag ggagattggc ccggccagct ggagctctcc gaaactgaat ctgtcccact taatgtctga gagctggatt tgttgatcct cctccttggt atgggctggg tttagctaat gggcagattg gcgctcagtt gtctagggct 840 agggttaaag ctgttggagc tagctcagcg cgtcgcatct gacagagctc aagcgacgct 900 atctatcaca tagaataagc gagacagcta tagtatttga cgtcgtcttc atcgtagtgc 960 atgactgggt aatgtgcgtc ggctgttggt ggccatcctc aactatccat tgccctcagc 1020 ctccccttgg caggtatcat agaggcgttg gcccactcaa ggctgttacg aatgaagtat 1080 aaacacatgg actacgaaat tggaatcgcg ttttacagca atgtgtgctg aagtcaagca 1140 tgagtgcatg ttatatagtc atggaagcgg gaaaaaacag gacaaggtat catctaggac 1200 actaagcaaa ccatacagtg cccttcccag gtagatcaat tgaatcccaa attccaagcc 1260 ttcaaatttc tactccataa tccaattatt aactcgcaag ccaaagtagc atagtaagta 1320 ggtgcgtagg taagccaagc aggtcatgag aaagacaaaa cacacaccac ttagtagata 1380 tacctgaaat ataagttctc ctgatcagtg cggtcctcga acgcatgcgc tagattctgc 1440 1471 tcatttggat caaggcctgc ctcacggagg a

<210> 2495 <211> 1432 <212> DNA

<213> Aspergillus nidulans

<400> 2495

60 ttcccacttt tcttgactat aaatatcagc ccagtggaga ctcgagtggc tgaaacgaca taagcgagtt ctaattggca aactaagctc cactgccgtt atgatagtca aaattcgccg 120 gcatttcagc acgcatggca aaagccacaa acttgcttcc atacaagtga caaaatcggc 180 tgctgattcc ctaccccccg tccagatgga cgcgcagatg tctcgagtta gctaccaatg 240 gattacagag acctattcat ctggctcttg ctgatatttt gcgcccaagc agcgtttatc 300 cgacgcctgc catgcagcct ggaagaggat ggatcgactg atccgctatt cgagcctctt 360 teeetgageg getegetgga cageagggat gatggegetg eeetgteeat caagettttg 420 ggcgacttta tcgatgaaag atgcgaagaa ttggacgggg catcagccgt gctcacactc 480 gacgcccgac tattgggccg tttgggcata agtggaaagc cgtgggctcc agaggggaga 540

600 tgccctacac tgtcgccaaa ggataatcca aggtacgtag cggcttgaaa ggtcaacaat gggtcagatg accgacattt cgagcagata tgaccgacgg acgtatgcga tatacgaagc 660 ctcgtttccg ttagaacgtg agctccgctt caggagtctg gatacaacga tccagctaag 720 cttgaacaat acgaatatag cctgtatgag ggctcatatc acgccatatc tcggctcaat 780 accttcccgt atacttatgg gcgtcccatt gacaatcatg ttactctcag gcatcgtcac 840 aggcgcgctg agaagctacc agagacgacg ccagagtacc tttaggtacg agctcggaga 900 cggcatgcaa gacccggcag agtcaaccat gcctggactt ggcccctgca tccactacct 960 ccagttcatt ttcttaacgg ggtgtctgac cttgtcctat ccgggcttct tccgcgcggt 1020 agtgagcagc ctcagctggt cgtccctgat cttcaggaac tggcccgtca cccaccagtt 1080 cacctacccg ggcgtcgaag acgggattta ctcggtgaat gcgacatacg gcctggagga 1140 gatggcccaa taccttggca gtactgcgac gagcgatctc tggaccaact cgatcgtcaa 1200 tettgeeetg etgatggtgg gegtegtegt gaccattttg tegateggte tetategetg 1260 gctacggcag ctctacgaat ctcagcgcaa cccggatcaa gcagtcgacc tgcagatcga 1320 gatgcagacc ctcctccacc gcattggatg gagtttcgcg cgcctcgtgc tcgactattt 1380 1432 cctccacccg ctcatcgccc tgtctctctt ccagacgaac aacgcgcgat gg

<210> 2496 <211> 1224 <212> DNA

<213> Aspergillus nidulans

<400> 2496

ctgcagcttt ggatacattg agagacgatg cgagacttat gatggatgcg cttatcgaga 60 agggggtcga tgtgaggtat gatgcgtacc cggggcttgc gcattacttc tggagttatc 120 cagcgaaggc tctggaaggg gtgtctgggg tattccacgc gaatatgtat cgggcgctgc 180 agtggataca tgagtaggaa ctgaagttga ggattcctgc gtgtgcggga ttgatgcaag 240 ataggttagg ggtgaattag catctgaacc tgcaatgctt cttcgtctcc agtttgtatg 300 gacgcaagta gtgtgcctga tgaatatgga tgctttgttc tcgcaaaaaa taaactctga 360 cgcttgtcgg ttatactcct ccttcttgcg gccgtgcgct ttgccctgct cgctgagttc 420 tttggctgct gcgccgtcgc cggacgcgta tgcttcttgg gactggtagc atcactattt 480

540 tagcattttg aagaggtttg tggttgttgg tgttaaggta aggtggtggg tttgcggtgg acgtacgcgc tggaaacagg agttgcgctt cgaggcttct tgtcttgcga ggtcgcgaag 600 acgatcgttc ggattcggca tcgttgcttt gggagtggtt gaaggctttc acgagggtgg tcgtaagaat gtgcagaagt gggtggtgcg atgtgttgtt tacttacccc gaggacccat 720 gtaagaaagt tcgtgctcgt gcatgtgtat ataatagcat tactgtaagt atgccaaaag 780 cacagtatat attctcccaa ctagtacggg gccgacccag atctccagtc tatctaataa 840 ttagcactta attactgcat tccagagctg aatcccctat gcatggaagc ctgatgtaca 900 tgccgaacaa caggtagaag acagcattac ttggtcagta tagtctagtt gctatagtaa 960 acacaatgtg tataaataag catgctcgca tccattgagc accttttccc atgaattgtc 1020 ttaagcacag gcggtacaag ccctgtatat caatacattt cagatagtat gagcgaaaag 1080 gtattagcac acctttgttc tgcccagtat aactacggtt gagagcatac tgcgcaatca 1140 gacatgtaca tacaaaacaa cgagacccat aacataagcc caagaacagc gtccatgagc 1200 1224 agggtattgc cgtactaatg gtga

<210> 2497 <211> 891 <212> DNA

<213> Aspergillus nidulans

<400> 2497

gcatgtcctg tactactttc ttgagtccga caccgcacgg ggtgatggcc ggtctggact 60 gggcgttggc ggacatctcg atggcgccgg cgaggaaggt cgaggggtgg ttccagagat 120 180 agtggtcaac gtgcacgccg ccggaagagt ggccgcccag gactatgtgc gatttgtttc caccaaaggc tgcaggtcgt gttagaagtt aaaccttagc aaacgtggag gtaaacaagt 240 300 atcaggagaa gactagatct cgtaccttca atgttgtcgt agacccattg cagcgccagc 360 tcgacgtcca tgatgccaaa gttctggctc tgcccctcca gttcgggcgc attcggcgag gcgtacaaac tttcgcggta gttgaagttg acatagatga catccttgcg cgcgaagttg 420 tagccctgcc actgggcatt actgctgcct ccagtaacca tcgcaccgcc atagatgtag 480 acaaacacgg gcagttcctg gttaccgctt gcagcatgcg gggtccagat gttcaggctc 540 aggcagtcct cgctctgcgc cgtaatggcc gtgccagaca tcgcctgcgc gcacgacggg 600

ccgtacgcgg	tcgcgtcgaa	gcttccgccg	gggaacgagg	tcagcgggac	aggcgccttc	660
cagcggttct	ggccggcagt	cgactcagca	aagggtatgc	ccaggtagac	gttggtgtcg	720
ttctgggtga	agcccttgac	cttgccctgg	ttcagctgga	tggttggcgt	gcaggcgcat	780
gcataaacag	cgcccagcag	agccgccgtc	acgctgaaaa	taacgcggat	gaagcccatg	840
gtaactggca	cagactgacg	atctgcggga	aggtaacaag	aaacagggca	g	891
<210> <211> <212> <213>	2498 579 DNA Aspergillus	s nidulans				
<400>	2498					
ttttctgcca	gcatgctaat	taagaaatta	aatagtactg	cgtgcatcaa	agtcttcctg	60
aaccattgta	tacaaagtat	gttcatcaca	aagggtaccg	ccacgaggtt	gaggtaggtg	120
gaggtgcgta	ctttgcaccc	ctcaaatact	atgcggcgga	gctgcaatca	gagcagagcg	180
cagcacacgt	ggctctctat	gacctgctcg	tgagggagga	ttatgggagt	gccgataccg	240
aagaccctcg	agcttgaaaa	agtccaatga	ggcacaacga	ggctctgttg	actgccattc	300
cccaggacca	tcatcgtaag	tctaccgago	gaatagggcc	ggagtgtcct	tcgaatagga	360
aaaggtcttt	tgaggcgctc	ctggatgaat	ctgctcagga	ttacctttgt	tcgtctattg	420
gcaaacgtgc	tccggcgagg	aaattggaag	actacaaaca	tttaggaaga	gcgagagggc	480
acggcggcaa	aaaccagtcg	ccgccaactt	cttcgcaggc	caaacctgcc	ccaggcgacg	540
ctaatctgca	gccattgaaa	aactgcaggt	tagcagtag			579
<210> <211> <212> <213>	2499 1186 DNA Aspergillu	ıs nidulans				
<400>	2499					
gtgtcgatgt	acgggtaggc	catcttcgga	a gggaaaacgo	gtaataagat	gctgtacttt	60
agtagctcaç	g taatagtcca	a aaagtctcc	a gcgtgcaaac	c atccccaaca	a ccgcgaaaga	120
atgcgttatg	g ctctataged	tgaaggaag	a cgcattgaag	g atggacgtgt	tttgggcggt	180
gagaatagtt	ggccagccg	c gctgcgagc	t tgttgatato	c taaccgatct	tggcttagta	240

taaacggact gccaatgttt atatcggacc ggtgattttc cgtgtccttt gtatgaagtc 300 ataccgaatg gtaattttag cttgactttt ttagttgccg caaaatagaa ctgtgaatag 360 cttctgtgcg aagagaaagc ttatgacgcg caaatcatgg cgcctatgtc gcaggaggat 420 atcgaatggt ttaaatccac ctttcgcccc atcccaaaac ctgaactgcc cgacgactgt 480 gtcgaatact ccttacacta catctcttca aaccccgccc ccgcccttgt cgacgaagcc 540 acagatactc gggcgcgctt gactgaggtg cagaagtctg cagccgaatt gtcgaaacag 600 ttactaaagg attatatctg gcaaagagag gcatttcgtc ttgaagccac aaagaaagac 660 720 ggtacgcact tgatgcggct ttctcccaag tcatgtctaa tgaaatcatt tttagggaca 780 acgatcctga gcgggcgaac gaactttggg gactcagttg aggatgaatg ggtaatcgtg tatctgttgc gcgaattgac aaagaagcat aaagacattt gggctacggt gacagacaat 840 gatgggcagt ttctccttgc agaggcggcg ggcgcattgc cctcctggct tgagccagaa 900 gttgcagaca atagagtagg ttctcagtat gatatttact attctagggt atattctaag 960 gaaaacaggt atggatacat caaggagacc tcgccataat aaagccgaag aacgaaaagc 1020 gcacgagagt gacggaaacc atatcactgc tggaggcgag aagcataatc aaagacgaac 1080 ccaatcgact gatgcactca accatgatac aagaggaggc gttctactgg ttgcgaaatt 1140 1186 atccgaagca aatcagcgag aacatgcatt cagctctagt aattat

<210> 2500 <211> 706

<211> /00

<212> DNA

<213> Aspergillus nidulans

<400> 2500

taaccctcac tataaaggaa tcgctcccgc cgccccgttc gtgtaaaacc ggaagtctgt 60 gcgtcttaag cataccctgt ggaggttcct cgtgtgatgt ggcagctcca gacgtagata 120 gagcatcgga cgaatgcggg aaagggcaaa gctcaatgac accatcgctt aatatctcca 180 tccaccgcac aaggccagaa gaccgcggga agagggaaag tggaattgtc atcattaggg 240 ttatgcgact gctaggcga ctcgctaaag cccttagaga gtgaaggaac ggcagcacgt 300 tttcaggctc gctgacttct ggtggtata acgtggggt taggaaggaa ggaatgacaa 360 tgcggtggac tatgtgcgga ggactggagg cgatgacggt ttgaagcttc ttcaggatgg 420

aaacaagcaa	aggctctttt	gttggtatga	ggggtatata	tgtgatgttg	ccaatagacg	480
gatgtgtgag	gcgtttggtg	aggtcgaatg	tgtgacaaaa	tgccggttta	gctgtgccat	540
cgtcaacaga	agataggctt	tgatcacttg	gacctgctgt	ggagttaact	gggtcagcgt	600
gagacaactg	agccaaacta	tgctcgggta	cctacctttt	gcgccagcga	cgcccgctcc	660
gaatcaccaa	gacgctcgta	cctcatgcat	ctcatgcgct	cccttt		706
<210> <211> <212> <213> <400>	2501 1581 DNA Aspergillus	s nidulans				
		ccgactttgc	ccacccggga	cgttgggggg	agcttgtgac	60
					cgcagaccac	120
					tcttgcgact	180
					tctatctcaa	240
					ttttttgacg	300
					. agttagatcc	360
					ggaacccact	420
gcggaagaag	ctctgccgga	gctcaatcgc	accaccactt	ccaggctgcc	: ttatcaggtc	480
cttatcacta	ctgtcacgtg	ctttactctt	gcccgttgaa	. aaagaacgcg	ctcggccagc	540
tttgtcgcct	tcaactttgc	: gtcatccaaa	tttgctttaa	aatccacgta	cctgagagtc	600
acccttcgag	atctcaccat	: atactcacgo	: tcattactac	: tatatactto	agtatgccct	660
ccgcaacagg	taccaagcgt	gtcagggtga	ı gtaccagcga	ı atacaacaca	a ggaagccaag	720
actgaccaaa	actgatcagg	g gagtctcgat	atttagacct	ttcggtgcgt	catctgcttc	780
tagttgactg	actatggtgt	aggtattaac	aacctcatta	a cagttttcgg	g tagcgaagcg	840
caacccttcg	acccagccac	gaaaccaago	aatgtatcct	cagatcatac	c tcaccaatgg	900
cgtgtttacg	teegeggggt	caacggcgaa	a gacatttcct	actggattaa	a aaaagtccag	960
tttaagctac	: acgaaacata	a cgtgcagaad	gtccgcacag	g ttgagcatco	c gccctacgag	1020

gtgacggaaa ccggatgggg tgaattcgag atccagatta agatctactt cgtcccggaa 1080

tccatggaga agccacagac cctctggcac agtctcaaac tacacccgta cgggcctgat 1140 gcggagggga agaaggagcg gagagaagtg gtggtcagcc agaactatga ggaggtcgtg 1200 ttcaatgaac cagtggaaca gttctatgac tatcttactg gaggctccgg aacgcagcag 1260 atgcagaagg ggaagagtgg gaagaatgcc aaacaggcac aacaacagcg cggtggcagg 1320 acggctgaaa ttccgtttaa cgagacgccg gagaaccctt acagtcggac ggccgaaaac 1380 aaggagct&g atcgattagc tgaggcaaat aagaccgtgg agcagatgat taaggatgag 1440 aaggagcgc ttattgctcg ggagaaacga ttggcggagt tgcgcgcag tgaaggtgt 1500 cccgcacagc cattgaagaa aaggtaactg gcatcaggaa agacgcctc ggcgcctgaa 1560 aggaccctta atcaatttct g

<210> 2502 <211> 1636 <212> DNA

<213> Aspergillus nidulans

<400> 2502

cgtgcaggat tgtggccgcc cagccgatat cggtaagttt tcaaacgtgt gtgctgaagc 60 tccctttaag cttggttgtg gctctgcaag tgatgaacaa tggatagtat aatttgaggc 120 atatacaacc aaatgtacta ggctggaact ccagctttgt tcgaagcaat atgaacagac 180 aggacattac aagtatgctg acatgcgagt gcgaacaaag aataaactcc atgctagctg 300 gattgacccc cgtttatgga tatccggtca agaggtgaag acggtcggtc ggacttcttc gtccgaaggg tgagagggta aaagtggtct tccgcatcat cttcctcgct tgttctgatg 360 ctgaattagc tcgagcttcc taggtagatg tgcaggactt acggaaggcg ccatgcaaca 420 tagtettegg tegagagace etecttgact tettgeagtg atgegaaate accgggtgte 480 atcataccaq agcqatcgcg tggtgatccg ggaaccqaca atggtcgcga tatcttctgc 540 tctgtcccgc caataacgtc aaagtaatct tcctggttgt cgaaagacga ggggtatgct 600 660 gcacgtagte agtaagcaaa caaagaataa cccgggctgc gagaaatacc tcgtcgaaga 720 agacgttccg tacggttacg ctggttgatg cgttgccgtc ggctcttgag ggtgaagttg 780 tacatgaaat cggtcagctg gttgactgaa tcgtctacgc ccttcatccg gcggtccaca 840

atataaatgc cgtagtccga ggagttctca ataagctcct ccatatagca tccgaagccc 900 gagagattgg ttgtaatgct gggaactccc atgactgtac attccgcggg agtgtaaccc 960 cagggctcat agtaagacgg gaagactcca aggtgtgtac cacgaacaaa gtcatcgtag 1020 tccaaaggca acactgggtt agatgagttg aggaattctg gatggaaaac gattttgacg 1080 cgatcagaag attgattgaa gagctggaca cgccggatct ggttaaggat cggatcctcg 1140 gagtcattga tcatgttatg agtaacgatt ggaggaagag tatgacgtt catggcgaaa 1200 agcctacgtc gcaggaggac gcggtcttgg ctggtgataa ggtctttcc atccggcata 1260 ttgtcaccct ccttccaggc tagacaccgc tcgtacatgc gctttccaat gccttggtcg 1320 atcatatgaa tcgtgtcgc aagcgacttg acaaccgctt ggcctttag tgactcgac 1380 gtgagtgacg aggtctgcc tggcatgatg atgaatgcta caaccgtggt cttcgatccg 1440 ctggacttga gacgatgatt gagacgccc agcccttcga taaacatgtc acacccttg 1500 ttgcgaaatt cgtaccgacc ggatgtaaat acgtaaagag tatcgtcaaa atcaaagtca 1560 ttgtgtccat agaaatgccc tctgacaaat tcattgatct tctcttttga ctgggagtgc 1620 aggttttgga ctcatg

<210> 2503 <211> 932 <212> DNA

<213> Aspergillus nidulans

<400> 2503

gggcagcgcg tggttatagg agcggactca ctggctcacg gagccaaatt tgtaggtcgg 60 aatagtcaaa cccagagcgg gagcctcggc gaggtctctg atccaagaaa agacagatta 120 180 gctttcaata acagaaaacg gcgtagtata tatattgatg acctacatga tcctgaggca 240 eggaageaag gggtggtgtg geteeteegt aatgatgetg gtacateece tggggtggtg 300 ggagcgttgt ctccggcccc gcttgaggtt gttgctgggt aggcaggggt tgaccatgag 360 caccgtaaag tacaacgggt tctccaggac gtccgttttg gccattcctc aaatgtgggt 420 atgeggettg aacagggaeg aaagettggg ettgagaega gaegggagta aacaegeatt gctggctgaa gcgaacgcag ttggtgcaac gtccatctga gctatgctcg aaaccagagc 480 ateggatetg egaegeegae teateageta titatteetg eataaeagtt eeggtgtaee 540

gtacctttcg tctccga	cag tagcgacacg	caatagcagt	tçtctgtcga	ggagcagcct	600
ggtagacgac acctccc	ggt gctggtgcgc	ctgaaggcgg	aggttgctgg	ccgtatgggg	660
gcggcggagg cgggggc	tgc tgaccgtatg	cgacatctgg	acgataggcc	cccgggggag	720
gaggaagttg gtaaggc	ggt tgctgggggt	gcatgggatg	cacggaagcc	atgttggatt	780
gaggcggtgg gtattga	gac tgaggaggat	actgcgactg	agggggaggg	taatgcgctg	840
gegggggegg atactga	tga gcctccgcgg	gcgaggatac	gacgctggag	ggtaggatga	900
tggagggtac tggacga	tcg aagtcatgat	ta			932
<210> 2504 <211> 914					
<212> DNA					
<213> Aspergi	llus nidulans				
(ZIJ) MSPCIGI	itab miaaiam				
	at all n locat	ions			
<223> unsure	at all n locat		atgtcgaggt	ctttcgtgac	60
<223> unsure <400> 2504	at all n locat	gctcctttta			60
<223> unsure <400> 2504 ttcttacctg ggttttt	at all n locat caa aaacttcgcc gaa atctggagcg	gctcctttta cattccgtca	gcaacgaaaa	accagaacca	
<223> unsure <400> 2504 ttcttacctg ggttttt ttagcttcaa gagtgaa	at all n locat caa aaacttcgcc gaa atctggagcg tgt cccatctctt	gctccttta cattccgtca cgcctttggt	gcaacgaaaa ttggtgtaac	accagaacca aggcctgtca	120
<223> unsure <400> 2504 ttcttacctg ggttttt ttagcttcaa gagtgaa atgtcctaat aacatac	at all n locat caa aaacttcgcc gaa atctggagcg tgt cccatctctt cag aatttatgag	gctccttta cattccgtca cgcctttggt cggctgcaag	gcaacgaaaa ttggtgtaac cactgcgggc	accagaacca aggcctgtca tcaccggact	120 180
<223> unsure <400> 2504 ttcttacctg ggttttt ttagcttcaa gagtgaa atgtcctaat aacatac tatccacaag tcagccc	at all n locat caa aaacttcgcc gaa atctggagcg tgt cccatctctt cag aatttatgag	gctccttta cattccgtca cgcctttggt cggctgcaag aaccccagca	gcaacgaaaa ttggtgtaac cactgcgggc ggcattgggg	accagaacca aggcctgtca tcaccggact cgctcttcgc	120 180 240
<223> unsure <400> 2504 ttcttacctg ggttttt ttagcttcaa gagtgaa atgtcctaat aacatac tatccacaag tcagccc cttgaacata tcactac	at all n locat caa aaacttcgcc gaa atctggagcg tgt cccatctctt cag aatttatgag tgg tagcaggagc	gctccttta cattccgtca cgcctttggt cggctgcaag aaccccagca cggcttagga	gcaacgaaaa ttggtgtaac cactgcgggc ggcattgggg gcgccaatgc	accagaacca aggcctgtca tcaccggact cgctcttcgc cgttggtatc	120 180 240 300
<223> unsure <400> 2504 ttcttacctg ggttttt ttagcttcaa gagtgaa atgtcctaat aacatac tatccacaag tcagccc cttgaacata tcactac cctcacagca gcaattc	at all n locat caa aaacttcgcc gaa atctggagcg tgt cccatctctt cag aatttatgag tgg tagcaggagc cat cgacagtcaa	gctccttta cattccgtca cgcctttggt cggctgcaag aaccccagca cggcttagga agtgctctcg	gcaacgaaaa ttggtgtaac cactgcgggc ggcattgggg gcgccaatgc	accagaacca aggcctgtca tcaccggact cgctcttcgc cgttggtatc aatgtgaagg	120 180 240 300 360

ataattgatt atttgacgtg gtttgatggc ctccacgcac gttgtgatat gtagatgata

atcattatca ctttacgggt cctttccggt gatccgacag gttacggggc ggcgacctcg

cgggttttcg ctatttatga aaattttccg gtttaaggcg tttccgttct tcttcgtcat

cgagettttt ggeetetgte gttteettte tetgtttttg te htggaac gaacaatgna

aacccctttc taattttttt ttgcaccctt ggtaacatca attycccgga tcaaatcggt

aucttaatgt ttttatttaa aataccctct gaaaagaaag gaaacgac

ttcacaaatt gatc

600

660

720

780

840

900

914

<210> 2505 <211> 2927 <212> DNA <213> Aspergillus nidulans <223> unsure at all n locations <400> 2505

agtggtacag ggaacaaatt taaagctaga atggggggct tctgcctttc gtttaccctg 60 ggcaaaacct taaagtttcc ttgccgccct tttaaatggt ttttgaacct cgccaatttg 120 180 aaaccgatag gatataaacg gcactaaaat tgcttaatcc ctattaccaa aggcgatccc aacattgaat cattccccgg gaagtccaag attcttccca tttttccggtc ctccacccaa 240 cttcgcctgg gtcatgttgg agttagccaa aagacgtctc ctacaatcca aagccgagtc 300 aaaaccggct cccgcccatc ccactttagt tccgcacctt gtcacccgct cgtCaggaat 360 cttcccgtgg ggcacagaac cacatgttgt cgaggagaat gcggcgtctg aggtcctggt 420 gcttcccacg ccgccgct ttgcgcgttc gtatggatgt gaacatcaaa gtcgacagag 480 cqtaatttag gagaaaggtg aagttgcgct atagacgatt ttatgagtat acccatgaat 540 600 660 cgcagcctag cccagaagcc tgagagcgcg caatttcagc ttgcaatcta gtatgaactt ctccattcag cagtggcctg cgatccttac caaacctggg tgaattgcat taatgcgcct 720 attattattq qcqatccata catactcqaa actacatatt tcacaqcact qqataqcqtq 780 atcttgaaca cgtaagacgg gaatgaagac aggcacaaga cgcagtttgg tgactgaggc 840 aatagttggt cttattgctc tatcgaagcg acctctgggt gatgatcagc cttacctatg 900 ttqtttqaac atcqqcaqqt aqqqqttccc tcactatctc aaccattccq tcaatcatta tgttatacta taagaaactt aaatatacga gacttctcgc tccgcgaatt gagtatccca 1020 gggttcctaa attgcgattt cacagcttta tagttccatt tgtattccta tttaaaagga 1080 acagacette egtaagteaa gatgeaaaac eggaaacatt eetegegeet etggetateg 1140 gcaagcaagg cagcagcgca atcaccaata ccatttagca agatgtctat atcgaaatct 1200 tagcctactc tatcaactcc ctcagcgcgc aaaaaattgc aagcagtcgc taaagatcac 1260 ttagtctaaa acaaaccaga cattcagcca ttcctgttct caagatggtt cactcaggtc 1320 ttaagggctt ccggctcgat tagtgatata agagaggatg ttattgaggc gtgtaatggt 1380 tatcgactat gcaccgaggg tgcataataa tgatgcataa taacggactg aaatttgaga 1440 gaggatgtat aagaagtggc cagtettttt gteetgatet gaeccacaaa tacaaactet 1500 ggtcttggca caatatattc acccatcata gtcacaacac agataaccct ctggaaggca 1560 agcagtatcc ctctcgaagc acacattaaa taagaaaata ttgttgtcaa gccaattccc 1620 agttcgacca ctggcattcg tgccttcccc attcgcacac agccggcaac accagacgcc 1680 ataggtcaag taaaccacaa cccactgctg ttctgcgacc tgccaaatga cctactagcg 1740 agaaacatat gaaggcaacc gtaaggcaaa atgctggatt ctgcagccgc tcggttagac 1800 gactcgcgag attgttctct agccctacgc ggtcgaccat aggcatagta gtaccaggta 1860 ttaggtatca atagctatct agtgcaagta aaacttgccg gcctttttag actcaaaatt 1920 gaaaagtett tatgtagete acteateteg cegteetagt tgteatagga gatgageggg 1980 aagggctcag tgtagctgac gttgtctaac agacctgcct ccgcagagat ggggttgggc 2040 aatattatgg agatatggag atcaccgaga tctggccctg ggccctgagg agcccgaaga 2100 tcagtctcag aaaagtggct gtgctaagct tgttgaggcg gccacgtttt atcacgattg 2160 tagtcggcgc gggcctttcc gcaggggaag caatcggaaa tgtcgaggaa gatgggaatt 2220 gctgaggcta cttcgctaga attagcaacc gcatcttgtt ataagcaggc aaaattggca 2280 aagcttgggg caaaagtata ggtttcggat gaactagtcg ggtttgtcct atatctcccg 2340 gtatgcttga ttctgcggcg ctacatagga caaggatgac ggagatcttt tcctaggggc 2400 tagatggtca tcctttcagt acaagacccg caaggtctag ggattgatcc ggtcaagggt 2460 ttgtgcactc agggctgttc gccggctggt ggtatgggca gcaacgtcac taataccctt 2520 taactcagat ttaaagatca aagcttatgg accggcgttg agtgtctcat gatgttcgag 2580 agatagcatg aaatatttat tggcagcact atttgtgtat cctagaagca gacgcggtag 2640 tcgttggata tgtttataac cttgtgctgc caatgaccat tcctgggtat catcaacgac 2700 ctggtgacga gctgcaaaag ttctgcggtg aaagaacgat ctggctttgc catctatacc 2760 ccantatggt attagcatat tcctcggact attggggtca tgcattaggt tcttgcacga 2820 cgaaccatca tatggcaccc cagggtcata aaccatttgt gaatacccga aagctctggt 2880 2927 aagatacccg agcaaagagc aaattagcac cttgctctag ggaactc

<210> 2506 <211> 1256 <212> DNA <213> Aspergillus nidulans

<400> 2506

60 tatgattatt ataattctac cccgcgcatg acgtcgacag gctacgatcc atacttgata cggcacgccg atcgatagat gccaggtata tttatagaac aattatccac acagaatctc 120 gtcaagagac gegettgegt eetcaatgag tetgacaett tgcagcaege teggegagae 180 240 cccctggccc ggcacttgca tccaccgcag caggtgcttg gtcagattgg gcccgatctc ggtcacatcc tctgggagac atacgcgtag agagctatct gctgcagtcg caagcgcaat 300 cagcatcacg gacgccatac taggtatgag tattcagtgt tagcatattc tcgccctgtg 360 cagagagaaa tgacatacga gagcgagcaa atccacgtgt cgatcataac cgtctgcgga 420 480 aacgcattca ggttctgcgc gtggagacaa caggcctcca ggcaggtctt acatccttca tagaccatcq gcqagatggg gtccgctcgc gtggtgagtg agagcgccag agtgaggtac 540 ggccggtaga tcacgctttt acaggtcaga tagcgttggc ggaggaaacc cgcctccatg 600 gatccggcgg gagcgcgct aagatcgaag tggaatgcag acggcagcaa gtccctccat 660 ttattgagct ggtggtccag ttcggcgacg accggcggga actggttgat atcggaggcg 720 acgccgttgt tgcgtgcgta caggagatca tgcacgcggt tgagcagacg gcgcatcgag 780 840 atgcaggcga ggaagtagag cgaggattcc tettetgtge tggaggaage gtgtgtgtgg tattqtcccq qtaqqqqqat aqaqqattcq atttctqcqa tcccagtatq cggaagcqcq 900 gcgagctcgg cgaggtagtc gcttagcaat tagctggaag acagacctta aggtaaatct 960 gaggetetaa aataaagaca caeettteea ggatatagea agaceagaag atgeggegaa 1020 ggcattcgag tttctcgcta ggggtgtcgg atgtggaata cgagagcagc aagcggcact 1080 tggttgcggc cgcgctgatg aacgaccagg cctggattgg ccgttgcaaa aaggcgaaga 1140 agageetgaa ttgaegeeat tagggteatg gttgaeeege aeegaggaag acaettaege 1200 1256 tgtgtagaaq agacactgca ccgcctccgt gcaggactcg gcctgggcga gataga

<210> 2507 <211> 2805 <212> DNA <213> Aspergillus nidulans

<400> 2507

tettetateg atttegacea cattetaett gaaetgagtt ttgetaagga attageaeet 60 120 tggctagaca ttatgtacaa tacgggtggt agggatggtt gagtgtgcaa gggtgctggt gagcaagggg ggtattggta atgacgttat aaaccaggag tctggacagt atacacattc 240 gtcttagata gttaaacagt cgggtgatat ttcgtagcta actagataag ggacggacac 300 ggtttgttag aggcaccatt catcgacatt gtcggttgca gttatgaaag gcttgtcgat 360 ttgtttgatc gcgtggtcac cgcataggat actaagtgct agcaattagc cttggctaga tcaaacctgt tccatgaaac agaaggtact taccaagctt ccgctatcta cccgtccagt 420 480 tectteacaa ectecteacg etgggaegag gtgagtgege etteatteag etgagaetgt agatetegta tataettett eteteeteeg gegeeetega geaeeteaeg acetaggeaa 540 600 tegetgtgga acgegtgetg acatgggaaa acgaaqaact geeggetaag tactggaage gagcaagtcc agcacttctc gccaggctca acaatcgcgt accgtgtgtc gagggcggcg 660 atttccgacc ggatctggcg cgcggtttgg gccgagctgt ccatctcctg tcggagcgca 720 tcaatgtgcc gggagtagtc ctctagggca ctgcagattt catctttgaa gtcgtcaatg 780 acaacgaagt ccgggaaaaa tgggatgaga tcctcaatcc gaagcagctc gcatctacga 840 agaaactcga tagcgtcttt gatgcctgtg tctgattgcc ggattttttt ctccgcaacc 900 aagagccaaa gcttcttccg tagcttattg tttccttctg gtcggtcagc aatgatggcc 960 gccagctcaa tgtcatcgtg ctgtaaagcc agctcaacag cctggagata ctgtcccata 1020 gcgctgtaaa tatggataca tgactggaac cgctggtgtt gtatgcaaag gcgaagcgca 1080 aagtcggcat catatggagg cggggatgat ggctgtgact gaaggtatgt aagaagtcca 1140 gcttcagagg acgagcggct tgaagcatga attgatatga gcgtgttatg cactgcagcc 1200 gtgggtctag ggtggttgac gatgataaag ttaagataac gcaccgcttg gttttgactc 1260 ageggeaceg teactgtget gttatagttg ageaacgegg tatgagette tegggeteaa 1320 ggttggtctg tcgcatcaag atgttgacta gtccggtcgc tgcgtgagtc atcaagacac 1380 tgctgtgttt gtagaacact tcagggtcac tctgcctctg cagcacattg agcgcttcgg 1440 accagttttc ccgttggatc cagtacgaca gaacgtagtt gtgatcgttt accacagtgg 1500 caaaqaataa caatteette teaegteeat gactgetgat gatgtegtat getgtettet 1560 gatccaggtc agacttgtat ttggtcacaa actcttgaaa ctcatttcga acggcctgca 1620 gttcgtgctc gatctcttca gtgcttgacc cctcggcaag ttccgctttc gttgtgatat 1680 tgtcgtcaag actattcagc ttggtcataa agacttctat aagccaactt gccaccatgg 1740 teetttgeat egaggaggae titttataaa eegagagetg egaaageagg taetttegta 1800 gggcgtcgtg ctggccacgc ttgatgagtg ttagacacac atcttcaaat gctttactgc 1860 tettgeecea aacceeggeg gettetatat agegacettt getegegagg aaategeegg 1920 aaqcaqtaqa aacaqcatct ttctgggagc ttgtacgggc atatcgaaga gcctcctcaa 1980 actititgett gegeaagaag attiteeaca egicteggie etcateetgg acacatatet 2040 caaaaatqtc ctqactqqtq aaaaqccaqt aaqtqccttt cattqcqtct qtcacaaqac 2100 ccagagcagc ttggcctggc tccaggacct cttgatcaaa tacaatttca tcgttcatgc 2160 gattgacage aagcactege cettetacea ggactagtat gtgecactet gataacgtea 2220 tggcggttag tgggttctga atcagcttct tgcctcctct tgcggattcg gttgccggga 2280 aaatagaccg cggaagcata cttgagctct cgaagggctt gtgcaacatg tctaatgaat 2340 atggaagttg tecatggtat acacetteag aactaageea tgeaaactet ttgteaegat 2400 gaccatttag atggtgagca ttcgagctag atggcgaaac aaccaaattt gacggcgcgg 2460 aactagacgg ttgtccaatc tagtggataa cgggagtttc tcgtaacagc aggtcggcgt 2520 atatagtace egeacettet ttegggatga eeggttegee eeaagaaace gatagtttee 2580 atgegtagec accaatatec gtetttgttg gettttgggg cacegtetec geecatatae 2640 cagtcatgta gacccatccg acgttatgta tatcagtggc atatctctcc tccgacggta 2700 aatcagtaga tggctcaata tacgtttcca gactgcccac accgtgccaa tattcttggg 2760 taaatgcaaa cggagggagg gactccatgg cactccgata ggagt 2805

<210> 2508 <211> 2173

<212> DNA

<213> Aspergillus nidulans

<400> 2508

atatgaaaga gtctgcgcaa ttcagcgaac cgtgtgaaac cccagtcgcc ctcgtcctgg 60

ttgaatctat gagtggcggc tataatatat ttagtgaaac agttctgcaa taaatatttg tagactcact atggctgatc tgaatggttg gatcgttcgg gttccagaga accagggcga 180 actgcacaca tgcgtaccaa ttctccggca cctcgtcttc ccacgcatgc tctaggtaga 240 aggaagcgtg ttcgacgtgg ttcccgtacg gaaagaaaag tatccgcctg caatgagtaa 300 360 gcaagccact cgagcggcaa tgcctacata aactcaccat ggtgaacctc cgcactgaaa gateggteea tgeteettet tgettagett eegeeagttg etgatagace aggtatgeea 420 agtttcatcc gcagtttcaa gatccgggtc tttcgggaga acgcgagcca tcatagccgg 480 540 gactgccaaa caatcatatt ttagaacaat ccttgtaaat tatttgagcg catttatagg tcgccagcat atgactgttg cggggacttg tcggagcagc cataaattct ggcaggatag 600 atgtgcattc gccgcgacga gaaaggtgtg gtgggaaggc ccttacagtc atccgcggag 660 720 ggttctgcgt ttagctcctc agagccggac tgcgagacaa cgacatcatc ggccctgtca ttctggtact gttcgtattc atcaaccagc attttactat ctgcgagcta gacgtattta 780 ggcatcctgt cagcaaaggc tctcccaaca cacagattta aacttcggta ttgccgcagc 840 900 aagaaaatag tcgaggactc acgttggcca tgagggcaga aaagtgcgct cgagcactcg aactacagga agttcgctgc tcgagaatgg ggtatagagg acaagatcta agacaaaaga aagattgttc tatcccaccg gtcggggcaa tgaaaagatc ggagggagag agcggagatg 1020 caaagaatat ctggttctga cgttccaggt caagggagtt gcctactcag accaatgata 1080 gcgcatatac ggcctgcggg acaaagagat tattaagagc gccagcccgg caaaggaaac 1140 tgtaagaaca gacctcctac ttgatattgc tctatccttt attgctcttc cttttcccag 1200 cctaacaaag tacctgagtg ggcctcccct ttcctgcttt gatctcttcg ttagaacgag 1260 aatccagggc acgcacagtg atatcataat attttggccc atggtccacc cgcaattatg 1320 aacaccaacc gtgggcataa ctatacaatg ccaatttgtg aaccatacca tcaattaggg 1380 ctacttaggg teettatetg gattteatag taccagtate getteaacat ttgetgagge 1440 cagtttactg tccttaaaac ataatactga agctctcgag ataccaccat ccagtagtgg 1500 tgggatatgc agagagattg qctgatacag aacggtcgga cggtcacatg tcagaccggg 1560 aggteteace geocagtgaa etgecatgae teetettgeg tteagecate atgegageag 1620 caaacaactc ctcagcaacc accagggaga tgtgcgagac tcatcatacg agcctagttt 1680

cteatecgge ttecegagae tettgteate eeggaacaee eeeetteaat eeatgaagtg 1740
ceettgatae aatecggaeg agatgetgeg gagttggeea aacegatgte ggegeaaeet 1800
geggaeteaa egaggteate teteagtaeg agttetgeat teggagaget ttgtgeataa 1860
teeteegeeg tggagaeetg tateagetet ggaegagtat gtttettget etateggatg 1920
acattgttge taatggetgt agataegttg aacgeeagat tegaeegate agtttaegae 1980
aactgaettt etttgggegg aegttgaeeg agteaagaet tttaageteg geeaaetatg 2040
tgegeaeaga getteeaaeg aggteagteg tteateeege gtettagett etgetaaeag 2100
ttatatttge agaetageae aeegteteeg ggaeataeaa aagetgeett aegetgtggt 2160
tgetaaeeet eae

<210> 2509 <211> 971 <212> DNA

<213> Aspergillus nidulans

<400> 2509

tctcccttgg cggtatagga ttttccagag cgtccacaat ccaaggtcat cgtctggcga 60 ttattcccga agtgagacgc tgggtgccgg accgagttgg cgctgggttc ccccctttt ttgggagctg atgagtatcg gcgcgaacag ggccttgtct caagccttag gctaatagga gttttcttag gaaacttgtc tgttcactct ccagattcca gcatttgtct ccgctcaatc 300 tcagcctcta cctcttcaac atccagcgga acggtgcgac ccttccacct ctccatttct gctcgcgcaa acccttccat actctgcatt ccaacaacca ggaacccaag gtcctcccgg 360 tocacatcaa acacttocca coactotoca toaacaagtt ttactootot ototogogoo 420 gctaagtaga tggaggctac cgcaagggca tttggctgat gcgtgacaaa aagaagttgc 480 ggggagagaa ggctcgagtt gagatgctcg aaggctcttc gtgcaacctc cgttgaagag 540 acacctagcg tctgaaggta ggttagggtg atggtgtagg gtaaagccac gtgcgtattg 600 aatcccagtg tgcgtaagat aactgactcg atacggagga ggatttgacg ttgggattgg 660 tatecgeett eggtaaggtg atagegegta ggaatgggtt catteggega teettteggg 720 ttcacgaacc atagaggaga ggcctctttt gctagaagaa acgcqtagac agtcaaaaca 780 gaacgcggag aagtcggttg gaatgagagc ttcgctgtca agtaaagggc ggcggcagag

acgtcctact	cacaaatcaa	gatcagcgac	ggcttcttct	cgcataccac	gagaatatta	900
tacctttgca	gaatatatcc	ggagacttcc	tccctctgga	cccagccaga	aacgggtgaa	960
ggcaccaatg	g					971

<210>	2510
<211>	3151
<212>	DNA
<213>	Aspergillus nidulans
<223>	unsure at all n locations

2510

<400>

60 aageteagat tggeeattge atggaaceaa aaaagtgttg gtaeatteta gtgeteaegg tcctcgggag gttgggggta agacggaggg tcttgtcggt catgagettc ttggtgctgg 120 180 agtaaatggc agctccaacg gcgacgctag agttgaggtg ttagtgagag ataagccacg 240 acattgcgga tgtgacggaa tcgtgttcgc ttcatgggag acagtggagg tcatatatca 300 gagaacatac ccaagaacga gacctgtaaa taattaatgt aatgtccaat actgcgacgc aatggtagat ggaaattaca taccaagagg gagcaactct ggagggatct tcttcagagt 360 420 acgcagacgc tgggagatgg tgtgagctag caagcgcgtc agtccagtta caccagcaaa gtcgtatatc aattgtcaat ttcgattccg aagggagttc ataccgctct ggccttcctt 480 540 ctattatgtc cagttagcaa ctgccaagcc tttttttcac atcatgcaac tagggattgg 600 aaacaggtac gcacaggaag agcaaaagag ggccgagtag gctgcatcct caaaataggg 660 gaagggtaca tggcggacga agagtggtga tgggagccgt agactcaaga acagccctgg agtgggatga ggtcgaagtc gagaatcgga tgtggtgacg gagctctggc gatgcaagtg 720 acttccaagt cgatggcttc ggatgttggc ttggaaatct cggcttttga gtggctcgtt 780 tactaggegg teacaceegg catgggactt caegggtegt tecaceeteg etettaceae ctcctctgtc aacgactcga acctctccca ctccatctcc acgagtttac atccactgcc ttccaattct attttcttaa tcaagcttcg ttgcttggac gactgccgca aaaatgggtg ccattccgga agccgaccct gatgagcccg ttgagaccaa gcccttcaag ttcgtactgg 1020 tgagtttctt cttccgagcc caattttgtt caattgcgct tcgatagatt caattgctaa 1080 ccactctcta gccggtacgt tcttcacagc tatccgaacc gattgaatcg cttttcaatc 1140 atttccgcaa ggtaaccgag gttactggag ctgacaatct cgtttaatcg ttgctaggct 1200

atgacgcccg tttccctcaa cagaaccagt acgttatctc accaaattac ttccgggtca 1260 atatagtaac actttcctag gaccaagcac tgctggcaaa actacgttga ctaccacaag 1320 tgcgtgaacg ccaagggcga ggacttccgc ccatgccgcc aggtaaactc ccccaaacag 1380 ctctcaaatt tatcaggcat gctctaacag gaatcatagt tctacctcgc tttccgttct 1440 ctctqcccca aaccttqqac tqatcqqtqq gatqaacaac gcggtacgtt ccatttcccc 1500 gtaaattcgc taagcaaaca tatactgata gcaatcacag aggctggtaa cttccctgcc 1560 cgcctggacc ggtaaattat ataagatagc acctagaact caagcgttga tttaaccttg 1620 aatqqttqtt cttttqtcaa catgtatact agctggtctg cggggatcct gataaagccc 1680 cattattete ttetteetee ceatteegtg agetagttga ggatgaaggt gtetatagae 1740 tegeogtagt aegaaatgtg egeatteteg tgttgattta ttatgattta gatagtetgt 1800 agactaataa cttacggcgt gttggtattg gcaatccctg ctatctgtaa tagcgtctca 1860 ttcgcatcaa actggagcgg acaataaata ttaggttccc attattgctg ttcggccgct 1920 gcagtataga acttcctccc catgctagct tttcatttta tcaggctggc cctttataat 1980 ctctaagccc atctatgaat caaatctagc gtagtgctgc taaaaagcgc ccgtatatac 2040 actaaggtca caaaaccaag aaaggaagca aagtaggaaa accaaagaac aagatgcggt 2100 atccccaaag ggtaaacaat aaaaaaagca gctacccgcg ctctcgcgct gtgcggtaac 2160 ccaagccaat gtatgaaatc tatctgcgct gagtaagttc gtgatagtga tgggctgaga 2220 orall otag aattggagag agest of the control a hash detainstate 2280 tat 2340 agaagggag tggaaaaggc cg lyy. , aga acquatcaa qatatctaat atctctqtta aqtatcttqq tttcqqqcqt aacqtatqcc 2460 racaagacat attgcatcaa tagagacgaa gtttagttgg cgttattaga tgttgatcag 2520 laat accettcagg taccgataaa gettettgtg etectcaagg aagataasig 2580 tggcaalegt gtgeggaeee aggegaataa aactaggtae eeaaceeega aa caaqtccctc tttccqagaa atttcacgga gaagaccgac gatattgtga coscgggtct 2700 teactaggeg aageacteat gaccettgte ttgatgaegt caacaggaet geagacegtt 2760 gttgtgacaa accccgcagc gaaagacgcg cttgattgcg taacaccatt gtccttcatt 2820 actaaattt taagacacaa gcgctngaag actttatatg agacacgctg taggatggca 2880
ttgggactgc gccatgaggt tcgtcccacg ccacggagag actcaaaatc ctcttggcag 2940
tcattggcca ggcatgattg catgtgtagt ccccttggcg gcgaacccga tcgatttatc 3000
gacttaccct gctgttttt accttctta cctgtgtacc ttcctggtta atatttttt 3060
ccttcgcact ttatttaatt cccactctta ctttcttaa tctcaatcat tatatttaa 3120
tttatatctt ttattcctat attattctt a 3151
<210> 2511
<211> 688

<210> 2511 <211> 688 <212> DNA <213> Aspergillus nidulans

<400> 2511

catgcggggt ttgttttaag cgaggcccgg gtgtggatcg cttatactgg tcagctgcag 60 tttqcaqctq tatqtqqcqq tactgcqaaa gcaagtcttq atqcqqcaqc cgqtttgtgg ataggtggct attcatcctt gatactcgaa aacttcgtgg ttttgaggag gaaggaataa 180 gatgaggcca attgcaagtc ctgtgcagag aagcgtatga aaccagaaga ctgagtggca 240 tacgaacgac catagaataa agtcatagtc agtttacatt tgagggaggc ttatatagac 300 caagttttga atcttcctga atataatgta ataacactgg ttattcctcg acaaccgtcc 360 aagcaaccte caggacccgc ggaggcgtct cagccgttgc attaaacaca tagatttgcc 420 tcacctcctc tctgtctgcc tccgtctcct cggcaacacc tctcagatag aatgagacct 480 tatectegte titecteett ageggeecea gaetatatge aaatggateg teaceettgt 540 atttactctt ttgccatgtc tgctccatag gtcggggctc attccacagc gtccgatcct 600 gaatgacqct qtacccatta acaaggaacc agtccttcgt ctctqacctt gctaggtaga 660 acctgcgaag caaacactca tcaccgca 688

<210> 2512 <211> 785 <212> DNA <213> Aspergillus nidulans <400> 2512

gcaccaaaga tettgcacat tttccatatt cetagaaget acaaaatgte etettecage 60

ctgaaagtgg ctttagtcac cgcctcgtcc gccggcttgg gggcggccat cgcgaaggtc ttagcagcta atatgcgagt cattatcaat tactcgtcag acgcccaacg tgctgagctg gtacaagaag agatgagcag tattgctggt agcgaaagtg tccttaacga tcagggggag 240 aaacaqcctc gcttcqctqc aatacqcqca qacctqqcaa accgaqcqqa catcaaqaaq ttagttgccg agacagtgag catgatgggc aggctggacg ttgtcgtttc gaatggcggt 360 tggactcgca ttaggaaatt cgatgatttg gaccagaacg tggatgagga agactgggac 420 cggtgctatg agatcaacgt caagagccat ctatatctcc tgcacgaagc tcgggtacac 480 cttgatgcaq cgcagggatc gttcgtgacc gttgccagtg ttgctgqaqt aaaaccaaat 540 ggtagttcaa tagtaggttg tggtgctacg cctacctggg cgcagtttat ttttccttct 600 tttttcttaa ccgtcaacta acataattcc cagccgtact ctgtaacaaa agcggcccag 660 720 atccacatgg ttaagtgttt agcacatgca gttgggccta acatcagagt caactctgtg 780 tegeetggta teetgetgae agtaagagag teetaagega gegteeateg ataetttgta tacgt 785

<210> 2513 <211> 1514 <212> DNA

<213> Aspergillus nidulans

<400> 2513

taccctaccc ctctccaaac ctagggcttc ccccgtttcg tgactccctc gtgtqqqqqt 60 actgcaggac ctctatcaga cacaactaga atcaactcca agtcatccct gccaccgcta 120 tecactectg ccaactgcag ctgcatetgt teaagtgaca acceattagg teageecagt ttgttcgaca ttcaacaggt ccctacagca ccatttcgaa gctatattta gagcccttc 240 tetettette cetetgaact egactggcac cataacetet gggtttagaa tagacecaaa 300 acagatecaa gacaatgage acteageact teettegeee catateceaa geaggeegge 360 tragacccat taaattctgg aagagtagca ctattccctc caggcaaatc ggcaactacg 420 ctggaaagac atttaccgtt aatacgggtg cccagatccc cgccattggg tgtaggacat 480 tccaagatga agagcaacaa gagggtgccg tacttgaagc gctgaaggct ggtgtgaggc 540 tcattgcgag agtgtatgct cttctacatt tccttcttat tttctgctcc tacatgccaa 600

ggtataatac taatccccat ttcagctatg acacagagtc tttcatcggc accgcaatta agagatecte gattecaega gatgagatet tecteaecae aaaaetetga tgeaaeteet 720 780 tccacccaga cgacgttgat tctgcactat atgaaactct gagagacctg caaaccgagt aggttgatct atatctgctt caccacccat gcacgtttgc gcgtgggaaa gaccgctttc 840 ccaagggtga agatggactc atgcgtatgg gagagacgac ctacgtcgat acatggaaag 900 cactgcagga gatcatgaag aggaccagga aggccagggc aatcggagtc tcaaacttca 960 gtagggatga gactaagaat cttatcaatg ctgaaatggt gagcttcttc ttggtcccac 1020 tcagccagge atacgatgga ggttaggget aatgtegtte gatgggegea gaccccagea 1080 gtccatcaga tggaactcca cccgttcctc tctcaaaaat tcttcgcagt ctggcacaaa 1140 agtettgaaa teeacgegea geagtteagt eetataggta atatgaacte gttetacege 1200 gatgtctact ggagcaacag gegegecaac eteggeegee teetegaega geeegteete 1260 tccgaaatag gcgcaatgta ttccaagaac cctgcacacg tggtattagc ctggagcgtg 1320 aatcatgggc gctctgtgat cccgaagagt acgattcctt ggcagatcag gcagaatgtt 1380 gagagtgatt ttgtgcttga ggaggatatg gagaggattg atgagctgaa tgcggatttg 1440 aggttcaata cgccgcaaga aacttaccgc tggctgctat atgaaggact ggattgagtc 1500 taatttgata acac 1514

<210> 2514 <211> 2031 <212> DNA

<213> Aspergillus nidulans

<400> 2514

gaacgtcaag aagactgaag aggaggaga tgatgagatc tccgaggacg aggacccat 60 gatgctgcag aggatgcca aggactggaa ggtatgtttg tgtcttcgat ctccataaca 120 cgataagcag actgttaact atggatatag agccaagacc actacgcagt cctcggcctg 180 agcaagtacc gctggcggc aactcccgac cagattaagc gtgctcaccg caagaaggtc 240 ctccgtcacc atcccgacaa gaaggctgct ctcggcgacc gtgatgagaa cgatagcttc 300 ttcaagtgta tccagaaggc taccgagatc ctgtcagacc ccgtcaagcg ccggcagttc 360 gactccgtgg acgaggctgc cgatgttgaa cccccagca agaaggagac tcagaagggt 420

aacttctaca agctgtggcg ccctgtattt gagagcgagg cccgcttctc taagatccag cctgttcctc aactaggtga cgagaacagc accttcgagg aagttaacga gttctacaac 540 ttctggtaca acttcgacag ctggcgtact ttcgagtacc tcgacgagga tgttcccgac 600 gacaacgaga accgtgacca gaagcgtcat gtcgaaaaga agaacgccaa cgcccgccgc 660 aagegcaaga cegaggacae tgecegtete egeegeettg tegaegaetg egetgeteta 720 gacgagcgta tcaagaaatt ccgcaaggcc gctcgtgccg ataaggacaa gaagcgtctc 780 gagaaggagg ccgaggcaag cgcattgccg aggagaagga gaaggcccgt ctcgaagaag 840 agcagcgcaa gaaggaggcc gaggaggccg ccaaggccga ccgtgagaag gcgaagaagg 900 ccaaggaggc gctaagaacg ccgctaagaa gaacaagcgt gtgctcaagg gctccgtcaa 960 ggatgttaac tacttcgccg aatccggcga gccctctgcc gcccaggtcg actccgtcct 1020 gactgatgtt gacctcatca acagcaagat cgacaacgag gagcttgctt ccctcgctga 1080 acgtctcact gctgcaggca aggatgctgc agctgtcaag aacgtctaca ctgaagagat 1140 taagcgtctt gttgccgctg gcaaagctaa ggagggtgag gtcaagttct ttgtttagtg 1200 tgacggcata ttgcgctttc agtacataaa accacctaca gaggtggata gagatagagt 1260 agattgtcat gagtggtatg aaatttacga ttcataataa tacattgcgt ttattgtagt 1320 ctatgagcat cccatgcctt caacccatgg acaattcatg gataatcggt attttgggtt 1380 tggcccgtga taagcatcgc cagcccgtct tgactgcgta tgcttgggaa gcttgtcaat 1440 gcgtcctggt gccggagggt cagaaagtgt ggactagaga ctcgagtcga agctcagcag 1500 cctgccagac ccgcacgtgc tcagctgccc ccacactcca cttcctgttc ctctatcata 1560 ctacactctc ttgtccactc atggccaatt gatatgcaac gtgcgagcat acaagctacg 1620 cgaggtggaa cctcgattct tcgcgaagcc catcttgatg ctcgaacgcc gcgatgtaac 1680 caatcgcgat ggcgatattg gttggatctc gagccgcctg cctcgacagc ggcgatgagc 1740 gacgatggca caaagctgca gctttaggct atctgccgtg actggcaagc tatataagag 1800 agaaaatccc acgtcgatct ctgtcctcgc tcagctcact ggtcctgact gccaccgaac 1860 atcaccttac ccaatagtgg tcaactttgc cggtgccagc catgtatacg aagaccctca 1920 ctgtccttct tggaggcctg tctctggcct tagcccagac ttcgtcggag cagaccccgt 1980 cggcacctga gattgcagct gcccgggcta ccgtcatgcc cgattcccct g 2031 <210> 2515 <211> 3488 <212> DNA <213> Aspergillus nidulans <400> 2515

gatagaacct ataaccgaca gtcagagctg gtataggtag agtcacaggc gccttacata 60 taaatatete gtetatetea tegecaetea gagtgaegee geetagggtg egeggtageg tgcgatccgg gtcaactcca gccatggcaa ggttcttctt cttcgacacg acgggtccca 180 tgccgacggg cggctgcaat ggctggagac gtgtctgccc actggctgtg ttcttgtaga 240 tggatcccgg caccatctct ggaagcttcg acccgttaga gctaggactc tcagacgtag 300 cggcagtgag gtgaggtagc ccgtcggaag cgatgtcttg aaacagcagc tgcagactct 360 cageteegtt agageaacta ateteegeat egttegeate aatgeagaea eeggttgett 420 tattgcgctt gacgttgtcc gcgggattgg gcctgggcat cattgtagta gcggattcgc 480 ggatctggtg taggctggct gtgtgggcgt tgagctgctt tctcaactca tcagtttcct 540 tetecaacet etegtaette etattegetg attaacactg eteatgtegg tageggegtg 600 ggcgtactgg cgtttgtgtt ccctacggaa cgcttccgat aacacacat cgattcctag 660 cttctcacag cgcgaacaag gctgcttttg gtacgcgtcg cagcgcgcct aaacgcagag 720 gaagtgttag caggcgacta cctaagctcg cgtccaggtg tgagatttta ccttctgctg 780 gcgacactgg gtacaggcct tcttgctcct cttcgaaacg ctagtcggtc gcgagtcatc 840 agcatcgggt attcccccac cagaatcaag catctcataa agagacaaca tcttcacaga 900 aattccaacg cagaacgaag tgattgaggg cttacgggag tgggtggaag tcctccatca 960 cgaggaaacc gcttgacgcc agcagtgtta tgcaggacac aactgagaga acatcttctg 1020 acagtccagc caatagtata gtggtatagt ggttttgttc actcgcagtg ggacccagag 1080 gacattaagt acatcaaaga tggcagtggg cagtgaggct ggagctgcag agaacaagct 1140 tttgggtggc cactcactgt ctcggctcac cacgcacagc caggaatctt ccggtctgat 1200 ggaatagagg agtatcaccc tgcggacagt tgcctagagc tggtctttga gtatctttga 1260 ggcccgtaa gacagatcta gccacagtta gcgcttaaag tccagttggg aattcaagag 1320 gagttettte aatacteagg agetetttaa teeaaaetet tigateeaag etettigate 1380 cagcaagtcc ctcaaactag ggatgtccat ttagccaagt acaaccatca atagatattg 1440 gagaacgtaa aatccaacca gattgatcgc gtacttccag gtctgaccgc cccaacagaa 1500 catcctaggg agtgcggaaa gtagccacag tggttaccgt agaagtcgca gtgcaaggca 1560 ggatggggaa ttctggaccg gtaccggtgc tgtatcgctg tgatcaggca atagaccgga 1620 agggccggcg tcttttgctt atcttcagta attatgagta cagctaagag tgagagtgca 1680 agggtttcgt cgtcgatgag gtgagccgat cgttcatctt agcccaaata tgtcgccggc 1740 gtcagaatgt gcattggcag taagcatata tatacagcgt ctggcctcag gagtagcacc 1800 accagtataa teetetaeea agtttgattg actaattttt gteageteat tttetatatg 1860 agatecagee gacegataga cagegeeetg ettgteagee eeeteeteet eettgtgtea 1920 gacctctagc tcaccgtggc agccccattc ctcaggctga caggctgcac cacgaagaac 1980 tgacattega aggeetteea tgteattgea acaatetege agaettagee eetgtteagt 2040 cacatgtgcc gagcccagtc acacaaggcc gctggcggga acactcctat gcgtctcaca 2100 acggtgcacc tcagacaagt caatgaacct gatcacgacg cccagagaca tcgcatccaa 2160 gtgaagegge actgatgeta cagtaceaeg ageattatet geagttaett etaeeteeag 2220 tgacagtgac attgaaaggt gcctccagtc gcgcgcgacc ttcccaggat atggttcctc 2280 teceggtaca agggttgtaa eegggeggtt gaeageeeat ettaegtteg tggaetggeg 2340 gacggagtgt gcttggcctg tttctgcagt tgctggtcca agacatacga ttcatctcgt 2400 atccaqcete tittetgteg gacageacet getegtegte agegaactee tgtgeegatg 2460 taacacgggg atatgaccac ggcatatggc ggttcgcaag gcctgcgact actgctggaa 2520 atcgagggtg tagtcgtcga acagtaaaaa tcatgtttcg cttttttcaa agtcaatgcg 2580 gtggtgtctg cccaggtcct gtttgagtat aattttgctg gcggctagaa agggtcgcta 2640 tagcacgett tetecteatg egtaggette aggacactee catacttete tetegaaate 2700 ggcgtcttag ttcatacgca caatcagact cagcaattca ggaatctgcc tctcaaaaagt 2760 tttcaatccc tcaatgcaca gatctctgca gactgggggt taagaaaaga tgtcatttaa 2820 cttcgaattt gattttcgtg ttaggcgata ctgacatcac ccttgccacg acaaagacaa 2880 acatatcacc aacgttcatt tatgtctcaa attcagagtt ttattgaaac aagaagacga 2940 aagcatacca tcatgtcttc tcctgaattt tccacgatcg cggacctcaa gcgcgcagtc 3000 gaatgeggee aacgeateac geeagaagae gttteggtaa ttggeeagat egaacgeggaa 3060 ctgagtggtg aageaggaee aatgeaagag actgegeaga caettgeaca egacagatga 3120 attttgatge gaaacttgat gagttgeggg gaaaceeeaa geeatttace gtggagatge 3180 geaggagatg aagagatgga ggteaetett attetataaa ggttgetttt attggtttat 3240 gaagaceteg gtteaatage teegtggttg etettgegae aggaggeatt geeggtgaata 3300 ttettegtte ttegtatett etgetgggtt etettteaa ggeataaggt ageetettte 3360 tatateette gaggettate tgtggeatet teatteette teetetgege ttettgettg 3420 ggattataet eeacettete teetettag ttettetet taeteettg aatgeetaet 3480 teeteetee

<210> 2516 <211> 4387

<212> DNA

<213> Aspergillus nidulans

<400> 2516

tgtcattttc cgggctcgaa attaatgctt ctcagaatcc tggctgccag atattaagtg 60 ccttccagct aagtgaatta acccgtatgt acaagacaaa atacgacaga acagaactga gtggaatggg taagctctcg acactcttta acagctccgg ctcgtttctc taagtgagct 180 caccattgag tcgcgagtag tctccatact atttggacgt ggctgttgac gtcgctgttt 240 aatgtcaaat taggtaagtc aaattagtta actaggtaag tcaaattaag aagtcaatcg 300 agacgcttgc agagcttatg acagagtttc cagggttggg agagcttgag aggtcaacct 360 tegettactg aaggetacag ecaagateta gatataaggt atgetetgta geecaaacae 420 gatctatcct atacattact ttgccaaaat ttacatgggc taattgctat gaatacggcg 480 540 aacgcttgga gttggattat atattccact agcaaggacc tatacaagaa acacgtgtaa 600 tcgtctgtct gttcttaaat tgagtcgatg agctcgctca ctgagtcagc attcagtaaa 660 tttaatcacg gattctgcta caacttaagg agactattga gatagaaaat ctcacctgga ttggacttcc aaccttagta cgcagaccag acttggtggt ccacgtctct tctcagtgca 720 tgcatgcaga gaaaatgaag ctgctaggat ggacatattg accgagattg gtttgcatga 780 ggcacgtcag gactgagcgt ccagtcaatc gagtgaaact ccggcctgac ctgacacgta 840 cactttcagg tccaccatgg gtgcttagcc ttaagcagac tgatgcctat tcgacgaatt qtgacccagg tqcqtatatg taatctagcc ccggtcaagg tccgcacgat tattctccgg gtgttggtgg agttattctc gatcatgatt ggcgtcgagg tctaatcctt cgctcgtaga 1020 agacaaggtt gagctaattc ctcatagcga gtgctcacct aagattatag cgcagcgatc 1080 cggtatacaa gcaagctatt cccggtcgat tcaaagcccc gtcaaacgtc tcttcgtacc 1140 ctagatcatt tcaattgacg cgagctctcg tctaaagtgt gcaccaacta ggactctgct 1200 cgagcgttgt taacacgaaa gaggatgttt gccttcagtc caatccccgc gtactccctc 1260 ggatetette teaceggeat tgggetacae agttteetge gteegttaga ggagtaegag 1320 eggtteggte teectegega gtegtegeeg ttgatgtace teaaggegat eegggaateg 1380 acatacggcc ttactctggt cgcgttgcag catcaaggcc atgccaacgc gctgtccaca 1440 attgcggcgg ttatattact tgccggtctc gcagatgggt tcgtaatcag ggcacatggt 1500 ggaccgttga agtggaaggc ttctggccat tgggcctttt tcgtggtagt agcggggtgg 1560 gcgcggtgga ggtcgtcgtt tgcttgacgg gcggagtctg gaagagaagc ggacagtgtt 1620 aattccgatg tttgcaagag ccaggtggaa gaagactggg caggtgaagc ataggtaagt 1680 aaagaggtac tgggtgagag cettgeggeg gecaaaegaa egategettg teatggeaag 1740 tgaatttgga atatcctcag aaagaaaatt tagtgaggct tatttttgaa attaatctag 1800 ctagttccaa atagttatac tagtaagcaa agaagcccag ctgcagcttc tctggttatt 1860 gattgataga accatggtca ccctcctgtc cctcttgact tacagcccta atagaacgcc 1920 ctcaatatgg cagactaaac agtccatcgc tctagtaacg aaaatatttc tgcttgtatc 1980 ccacttcctg catattttga gaagattatt ctatacaacc aaagaggggt taggctacgg 2040 actotagogo atatototot tattgagtto aactatgoga atagggacaa taaagottto 2100 tggttccaca cgcgtcttgt gacagttgtg catgaatagt tcgaaaacga gggttaggga 2160 agtagtegee aegatgtegg gtggageata eggttaeeee ttgaeaggag eeggatggta 2220 tttcacattt aaacatgtaa accgaaccaa gccatggccg atcagtgtcg agtttactat 2280 ttccagaggt tatcctgaat gtattatcct cgttgagaca gatataagcc gctgcacctc 2340 ttccccaact gagctatgcc tggagtttga tatcgaccat cgaatctgtt ccctctttaa 2400 gcctatcagt acagttttac gtcaacaata actccaatct gttcttggaa aacatgcttc 2460 atgctttctt cgcaacggga atagccaagc cgcggaatac aggacttgaa gacagcaata 2520 gtaggettat etttattace tactaaatte atagttagga acatttette teagagetgt 2580 tgtatttctg tgatcgtttt tcaatctgtc tcgagcggca gtggttattt ttgttgttca 2640 gggctcgtgg agcactctat atttaagtta gactgctaat acggcccact gtctcaaatt 2700 tragacatet etgtatatet tgraagttag agatratrag caartgrege getageragt 2760 cgcctgactc ataataaggc ttctctagca ggactgggta ttaaatatgg gctgactttc 2820 ggcgtttgag ctgcggccac tgacctgtgt tcgtacgtct aggttctctg ctacgacgaa 2880 acgactcggt cttagactga aagcattgct tgggatcaac tgcaaatcat gataatcgcc 2940 geogtttgcc geetgeagtt tttaattetg atgeacettg tteaceggea taagaetgeg 3000 gcagtgctag ggaagaggaa gtgtctgcta aagtctgttg tttctgacct tttgtgagct 3060 gttccgcttc agattcccat tcgttaaggg tactgagcga gagtatagcc tgcggatgat 3120 ttgagcctaa caccttgttg cagaggcccg cataaccctt aataagccgc agggcatcta 3180 ggttatttcc cagattcttg aatgtaaagg caaggttgag catgctggtt agcgtgtgag 3240 gatgetetgg ceetageace tgttteegag tetecattae etgeacetgt agettttetg 3300 ctttgttcca ttgtccttga ttatagtata atgatgcaag gttggccatg ctgattagtg 3360 tategggatg etetggeeet aggaeetgtg tecaegtete cateacetgt acetgeaact 3420 cttctgcttc attccatcgt ccttgcttcc ggtatgtggt tgccaggttg tccatactgg 3480 ttaaggtgga aggatgettg gaccetaeca eetgttteea ggeeteeate aetegtaeet 3540 gcaactette tgetteetee aategteeet ggttetggta tgetgatgee aggttgtgea 3600 tacaggtcaa tgtagaagga tgtgctggtc ctaatacctg tttcctggtc tccattacct 3660 gegeeacaga cecteegett cetteeagtg cectatatee aggtacettg atgeeaggtt 3720 gtgcaggctg gaaagagtgt caggatgctc tggccctaga acccgtttac gggtctcaat 3780 cacctccgtc agcagetett etgetteett ecategeeet tggcaccaaa atategagge 3840 tagattgtgc atgctggtta gagtggaagg atgctcggac cccatcaccc gtttccaggc 3900 ctccagtatg tgcgtcaata actcttctgc ttccttccat cgcccttggt tccggtatgt 3960 tgatgccagg ttgtgcatgc tggttagagt gtcgggatgc tctaacccca ccacctgttt 4020 tegggtetet actagetgea caaataacte ttetgettee ttecategee etetateeag 4080 gtatgttgct gctaggttgt gcacgctggc gagagtgtca ggatgcacca gcccaagtac 4140 ctgtttccga ttctccatca cctgcgccag cagctcttct gcttccttcc accgtcctcg 4200 attccagtat attaaggcca agttgcccat gctggtcagc gtaaaaggat gctttagccc 4260 aagcacctgt ttccaggtct ttatcacctg ttcctgcagc tcttctgctt cgctcaaaag 4320 tccttggttc cgatatgttg atgcaaggtt gtgcacactg gtcagagtag aaggatgatc 4380 aggccca 4387

<210> 2517 <211> 2442

<212> DNA

<213> Aspergillus nidulans

<400> 2517

60 gccattcgaa atgcaggagg agccttcgtg gcagctttgt ggaacgttgg taccggttac cagcgcctta gtttgcgggc aaacggagtc agaaatgggc tgcagttgag aaagaccttt 120 tctacatccc gaaggttcgc ccccggcgga gggcaaaatg ggttcgggag gtcaccggcg 180 240 gccgcagccg cagaatctgg ggttctcgtt ttcaggtcgt aacttggaag gccggagcgg ggaacccgac ttggacagac agagaagcag acggcgtcta gagcgaggca gaaatggcaa 300 tgatatgtat gcgggctgca gcgaatttca aatcaggctc gtacaagagt cgtaacaggt 360 cgtagcaggt cgttgagcgg gcgagtctag aaagcgagca aagcacgagt gagttgggag 420 480 gtcattagtc gtagcgggca caggcaaagg tacaggcaca ttgaagggac gaaaaaggat gagcgacgaa gaccagacgg aaccgacgcg aatatgtata aaaggcgtca cgtcaaacga 540 aagggatgac ggagcagagg gagaggagaa ggaggaggtc ggtggagaag gcgaagggaa 600 gggaaaggga aaatagaaga ccgagaaaaa atgggagggg agggaaaaag aaaaaacagt 660 gacggtgaaa tcgcaaaaag gtaagtaggt atgcaggcgg taacagagag agacattacg 720 cagtagcatt gaagaagatt catgctaagc aggcgggact tgcagcagat catcggggtg 780 gagaggaggc tgggaggctg gagcaaacgc aggctaaggt aaagagggga agctgttgag 840 ggatgggatg aactotgaag gotggogoog gogooottga ottacotaog atgtactgag 900 cactgtcttg gtcgtcttgg tcgttttggt cgttttggtc gtcttgctcg tcttgtctgt aaaggcacgt gtgctgctct gcgtcctgag tctgtctgag acggatgtag ctgcaaggca 1020

aggcaaggca atttcctgcc agactgactt gagtcttgac tgtctctgcc gctgctcttt 1080 aagaccgggg gaggcgaaag agaaaaagga aagaagcctg ccataacatc ggtcgagctc 1140 ttgacttatt attatgtctt atggatggtc ggagtcagca tcccagcggg aattcaaaat 1200 cccaaaaatc cacqtccacc cqttcaqacq cqqtaccqqt aaatqaaaat tqcaqcqqaq 1260 cgtgcacaga ctatactcca ttgctcagta ttgtcgccac gaagcaagga ccagccccgc 1320 cacgatgtgc aaacactaaa cactaaacac tagacactga tctgattagg acaaataata 1380 attttgactq ctatcqaacc atqqatqcct ctgagctaaa gagagctaaa gcactgctgg 1440 caggtttggc cccgatccag ctgtaagtca tcgatcggtg gatcgacggg atatggcgat 1500 gctggattta tggaggagca gtactcagag tatgctcgcc cgactctcca gagtccttcc 1560 ttccagaaac gtcgttccag tcatgcttat cttctcacca actttatcat gacaccgtac 1620 caattgccag atccagggcg actccactgc cctgagagga accacggacc agcgaagtat 1680 acagtcactg tatgttccgt acgagaaatg gcggtgactg gacagggagc ttcaagatga 1740 cagggagagg aatcgtcctg taataatacc gctcactaag cgactccaga tcggtgtttt 1800 ctctcgacgc gattcatttt ttcgagaatg gcccgattcg atgatcctgt ttgatcgccg 1860 gactacggag ttccttcatc cttcatctac actgacactt ggagatcgtt attctacgca 1920 gcgagtattc taggagtcaa aacaacgete eggcateece gtegtegage aaatgecaeq 1980 cccaccgatc aggaatattg ccaaaaqgac caatgcaagc acgcgggaac cacccaagga 2040 ggttacacgg ccaqaagact ggcagggatg cgcacagcag caaagaaatc cagtggtcca 2100 gaatgeteea egaaaceagt ggeggegate ttagecaget ggecagtage ggtecagteg 2160 acggtggctg aagaagacag gattgcagaa cactgaagcc aggacgttga ttcttcacgg 2220 cagattegae cetgtactgt tgaatetgag gttgagette teeetttete ggegtetate 2280 taggegeegg gggegeegee cagataeget agacetgtea tattgaegge caaceaeege 2340 tggccagcct cagtctgagc agcgaccgcg tcagttcagc ctctcgtgtg tatgtactgc 2400 acatagatet gacegegeee aceggetgat tggcetgetg eg 2442

<213> Aspergillus nidulans

<210> 2518 <211> 2147 <212> DNA

aagtatttgt acctaaaact atggagtggt cctcatcacc tctggacgat cgatagccta 60 ctttctattt atggaatttg ccttttcgca tttctggagc cgcctgtaag agtgaaatga aggaccatgg gtggaaaaat ctaccatgac cttttggagt aatggtaaac atgccacggg 180 gatcatcggg aggtgattgt tttcttccag tggacttttg gcctcaataa ccctgtctaa 240 agagttctgt cacaaattgg ggcaattcgt ggtactcatt tctaaataga ttcccaatcc 300 agtaacatec gaggattgag atacgeeteg aagtataacg teacgeeett cetgeagtte 360 catggcgtgc tttcgcctac cgaccaaact gacttcatta ttgaagggcc cgaaacgata 420 cttacaagga aatctegett etcactcatg gcaaatccat aatgtagate getgegteat 480 gtgatcacag atcagtggga gcttttctca ttacatgagg aaagtccgaa gattgcccgt 540 ecceaaacte aagettaett geteeaacet eccaaaggee catetagaeg ggtgggggtg 600 660 atagtggata tttgccagct ttcgtgatgt ctaaccgcac cgggaccctc gtattcggca tctaccgcca tgcccgatat agaaagcgac tgggttagta tcctctaacc tattttggct 720 780 agatttgaaa attaatgcaa acaggacaaa tagaacaaac atttgcccca atgtcatcac atcgtcgcaa acttgtttac agagcatgtg tctagatagc caagctatac agctcagcac 840 ttcaaaccag gaaaatggcg gacactgctg gctggagcac aattgagtct gatgaggtgc 900 gcccagatct tggtgtaatc ggttaagagg atggactggc tgatgtgctt ccgtttcgca gggtgtette acctetetag tegagaacet eggegteaag ggegtgeagt tegaggaget 1020 gatctcgctt gatcctgata ccatacgctc actggggtgc atactcaacc tacacttact 1080 tectetecag aagaetaatt teacaetgea acagaacagt ttaeggtgta atetttettt 1140 tcaaatacct ccgccaaaca cccgacatta acacatcctc atccgccgac ggcaccccaa 1200 ccgaccette cacgetecca ecetecttet tettegetaa ccaaactate caaaacgeet 1260 gcggcacaca agcgattete teegteetge taaaceacga cacceetteg ccagagaaca 1320 acaatgaccc catcaccctc ggccctgagc tttcctcctt caaggatttc acgacgggat 1380 ttccctcgga cctgcgcggc gaggcgcttt caaactctga agcaattcgt accgcgcata 1440 atgegtttge gegegegage eeettegteg atgagaeggt geggeegege gaegaagaeg 1500 aggaaggcga cgtgtaccac tttattgcgt atacgcctgt gaacgggacg ctgtatgaat 1560 tggacggatt gcaggcgagc ccgatatcce atgggccgtg tgatgcgagc attttccgg 1620
agaaggtgat tgaggttcta cagaagcgaa tcgcgcggta tcctgagacg gaaacgaggt 1680
tcaacctcat ggctgttgtg aaggatttga ggatccgggc tgcggagatg ggggaccagg 1740
aagcacttaa tacggaggag agaaagagag ctggttgggc ttgggagaat tctttgcgca 1800
ggagtaattt tgttgggttt attggagagg tgctgaaggg ggttactaag gtgaaggagg 1860
aggagggaag tgtggaggag tgggttaaga gggctgaggc ggagacggca aggagttga 1920
ggcgttacga gctttcctct atttcagta tggacgattt ggatcatgga tgaatggtct 1980
ttgtattata ctctgcagtc cctggcaagt agtctcttgc atttcgggt tcatgccgct 2040
ctttcttcgc ataggggga ctgcctcatg gaccgcaaca tagtcatccg attcgaagaa 2100
tggctttgag tattaacgat gccatccatg aatcaaaaaa gccaagt 2147

<210> 2519 <211> 874 <212> DNA

<213> Aspergillus nidulans

<400> 2519

agtgtcactt aaagactgcg ggaggtcaca aagcgggtga accgctcgcc gctcggtacc 60 ggtgcgctcg cgggtaaccc cttccacatt gaccgagagg ctatggctaa ggagctgggc 120 tttgaggggc tcctgtacaa ctcgatgaat gccgttggcg atcgagactt tgcgatggag 180 240 acgatgcagt ggggaagctc gtttatgctt aagatctcgc gctgggcgga ggatctgatc atctactcca gtctggagtt tgggttcgtc cgcttgtcgg atgcgtactc gactgggtcg 300 tcgttgatgc ctcagaagaa gaacgctggt gcgttttccc catgttctgc gttatgattc 360 tctaatcatt gtatagacag cctcgaactc ctccgtggca aagccggccg cgccttcggc cacatggccg gcctaatgtg cacqatcaag ggtctcccta caacatacaa caaagatctg 480 caagagagtg tcgagcccct cctcgatcac atcaagaccg tcggcgatag catccagatt 540 gcgactggcg tgctgtccac gctgaccact atcccagaga agatggccgc cgccttggca 600 cctgaaatgc tcgccaccga gttcgccgac taccttgttc gcaagggcgt gcccttccgc 660 gagggccacc acatttccgg ccgcgtcgtc cagctcgctg agaagcacgg cgttcccatg 720 gaccagetta geetggagea geteaagage gtggatgaea ggtttggega tgatateeag 780

gagtgcctgg	actacgagcg	ggcggttgag	ttgaaggatg	ctattggtgg	gtgcagtaag	840
agggcagtgc	tggagcagac	ttcggtgctc	aaga			874
<210> <211> <212> <213>	2520 1419 DNA Aspergillus	s nidulans				
<400>	2520					
tcctcagcct	ttttgttatt	cgagccaggt	catcattaag	ctgtgcacca	actcatcagt	60
cccagcatca	gtttccgaag	accccctctc	tgacgattga	tacgctgacc	ggttggacat	120
atcgaaggct	tgaatgcacg	taaatcaata	gcctcggcct	gcaaagaaaa	aatgcataga	180
ataggggcaa	aagaagtttt	aaaaacggct	cctttgcgag	gagtctggcg	gatattgttt	240
tccctgtcac	ataagagact	atcctagcta	ttcagatgtc	gctttcatcc	aagggctcac	300
aatgtaacat	taatttctag	aagacgagtg	aagacaagaa	aagttggaat	catgtcaaaa	360
acgccgccgt	tgacccgatt	cagagaggta	catagaaact	gactgatgaa	cgtcgaataa	420
atgctgcctg	aggcttcaag	tctcttcgaa	gggtcggtag	ccttaatttc	cggtagtata	480
ttagtcatca	acactaagct	aaccacgata	ggcatcaatg	agcttcatgc	atttccacag	540
cccctccaaa	agaccttggc	ttgttgagac	tccagcgtgc	cacttcaggg	accacttttg	600
aattcacaga	cccgtggtac	ttgatatacg	agatcccagt	ataggcgcca	gtgtgtgtcg	660
tgtcgtttca	atcgggatga	aatcataaga	tctcgttagc	tacacctatc	ctccctcgct	720
ccactggcag	tcatgcttag	ctggagcctt	cacggtttga	tatagattcc	tctttcttgt	780
caagcctgag	atctcagaat	taaaggagct	taaccgacat	tttgtaaggc	atcgtcgtat	840
gtctattcac	tctgttcctg	ttcctttcca	tccgccgtaa	gtcatacttg	tgggaaatca	900
tggcatgggt	gcagtgtact	gacggcttct	agacatttaa	ctgcaaaaaa	aaaaaaatct	960
ttgcccatag	caactggttc	tataaggcat	aactgcctag	tgcataatcg	ccgatactct	1020
tcaggacctc	aacccttaac	tttggaacag	aaatgacacc	tgctcctcca	tcgaaccaag	1080
catgacgcga	acaattagtc	cgaacctcta	acatcccgca	actcgtcgtg	gtcatagacc	1140
tttcttttga	atcatttact	tggactttct	cttccgctgt	attcgtactt	gtgacttaag	1200
caccgttcga	ggttgacata	agaaatgaac	ggagaagtct	ccccttgtga	ggacctattg	1260

agctaatttg tgcttatcct acacgttggt ttctcacgtt tggtctaaaa acgtgcaagg 1320 cccttgacta aatctgtcgg ttccatcaac gggtttaatt ggaatccata tttgcattca 1380 tacatacact tgcaagaatg ccttctgaca gtgagatgg 1419

<210> 2521 <211> 1217 <212> DNA

C12 DNA

<213> Aspergillus nidulans

<400> 2521

gataaggagc agcgaattcg gcgagttaag caagtaatat tgcagttata cagatcctat 60 tgcgcgtttg accactatcc ccaatctgag ttaagttctc aagagtagct catggttctc 120 acagattect gtgaactggg ctgtatttte aggggtaaat gatttgggag ceaaatactg 180 geoteteege tttegtggge cettgegggt caceegetga geatgactaa tgeetteetg 240 cctgaggctg gagactcctc cagagctatg aactgacctc cggatgaaag caaatcagcg 300 gtaaactcag cggtatagtc actattatgc attctagacg caaactcagt gctaacaggc 360 ttacagcaga agaaatacga gtacgcttga acactgtact ccaacctgta ttggtccagt 420 cgtactagtg gcatagaatt tgaagcgtac cctacgaaga aaaaccaaca ggaccgtaga 480 cagtgagtct acagaccaac agggtcaaag agcaaagtgc ccaatttata gtaatagacg 540 aaaacctcat aagagaattt tgaggctcgc ggggcagaag cagatgatgc catggaaggc 600 ttagcgccat gtggatccgg gacgacaagt ccgaataagg tcagcggagc ggtcgatctc 660 cttgatatct ccagactcct aacctcttat ccaacttgga catctaccaa ctctgcgtcc 720 tacatacccc accattaaga tgaatacgag gcaaatcatc gatgactcaa aaggcccggg 780 gtccctgtcg gcgagcttca atagtgacaa tacttgcttc tcaqtcggcc tcqataccgg 840 gttetgeggt aggttgaget acgacetata tatatgggat etcaaceeca atactgagge 900 catgaagtct atagggccaa cccatgcgag ctcaaggtgt ctaggagtat gcacatctct 960 accaacgttg ctttcttaca actaccgagc gcattgacac tgaccgcgga gctttctaga 1020 cttcggcgcc gggataggcc ttgctgtcat gcttggacag tcaaactacc tcgcacttgt 1080 tggcggcggc aggcaaccga agtttccaca gaacaaggtg cgctggcctt ctagtacaca 1140 tacgggctct gctgacggca taatcacagc tggttatctg ggacgacgca aagcaaaagg 1200 <210> 2522 <211> 1886 <212> DNA

<213> Aspergillus nidulans

<400> 2522

cccccgttga atatcctgcc cctgcaccct caccgtcaaa gcctgcaact aaagctgttc 60 cttccaagcg tacgctccca acaccgggcg gtgcactgaa aaagaaactt ggtgggccag 120 qaqqtttaqc ttcqcctcaa aaacgaqtta tttcaccacc ttctgaagag caacctcagc 180 aacctcctgt ctcaaagttc ggcctcggga gaggccttgc gggtcgccca attgctagac 240 300 egecagetee tgeegaacea geeceageae etgeegetee tgetgtgagt ggaettaetg 360 ctatagaacg ggctgagctc gaggagctcc ggcttgaaaa ggaacgactt gtccgcctaa atgaagagtt gaggtccgag aaagcgaaat tgagtacaac aataggagag CttCaaaaacC 420 480 aaaatgcgca gctcattgaa gatcatacga gagatgttct gagcatcaag gccaaagaga 540 cacageteae eeqageaega agtgaegeag aggeageega teagaaegte cagaageaaa 600 agcgggagat tgaacgtttg aagcgtgagc tatcaagagc ccttcgttcc ggatcgatga 660 gttctccaac tgctattcct gatcagtttg gcatggcgat gcctgacccg ggctccttat 720 accaagatcc gaacaatgct cattccgcag tggcgcgaag tggtctgcat atgggtcctc 780 ggttcgaaag tacgcggcca cggagctatg cctctgctag ccctagcgag gagaaggaaa atggccttga atcaccgggg cttggtcgac ggaagttcag ccctacgttt ggaaatcctt actegggtat ggetagteet acaaggteat ceettgtegg ategggeage geeteaggeg 900 aggaacagcc gactcgaagt acagaaccgg cagaaaactg gaggagagcc gctgaagtca caagccaatt gaaagctcga atcgaacaga tgaaggtacg catttgtata ccctcagttt 1020 actacagggt gccagcaaca tgaacatgac taaccettat cataggttaa acaaggeett 1080 attggacgac aaccagccca acgctaacga tctaacgccc gtcctttaaa gtttttgcgt 1140 ttctcttgtt tcagcctagc gagttttcac ccttcctgta cggtcaactt taggaatgtg 1200 cctgattttg attcccatct tctgtctaga atgtattatg cccaggagac tgtgagtttt 1260 cgcttgtgtc tcttttctat gttttgcttt tccattgggg gtcaaaaatg ggattctttt 1320 atgggatgat ttettaatat etecetggtt tgeatatggt egggtttett eattregttt 1380 tetteetgtea ggetteggag etaettegtt agetattaet tetgeaageg etgataetga 1440 ttggtattee ttgataeatt tteetatgetg tgateatgta ttateggtge teetttggee 1500 ttgteggagg eggggttaat aettaattgg etggeagtga eggaetaetg ggtaaagggg 1560 tgtagggagg gaeeetatgt teegtaggag gtattegggg eetgaggetg gtataaaaeg 1620 aaeegaggte ttgaggget tgtttaaag ggaeegtta teaaaeagee eetaetgagge etgaggetg tataaaaeg 1680 etatgtaatg ttatagagge ggteattaa ataeaeaagt agteaeaega ettaeaegt 1740 ataggaetgg tatgeaeage gaeegeaatt ttaaeeteeta gaaagttatg ggetttaete 1800 ageatetaeg eagtaegeea atttaaetat agegggeaga ggaeeteatga atgetagteg 1860 taeagattea ttaeagagge geatee 1886

<210> 2523 <211> 1044 <212> DNA

<213> Aspergillus nidulans

<400> 2523

tctgatggac cgcggaatgg aatgtgattc tggttgaggg gtcatgtcta gtagcgtagt 60 gagggggacc agctggagaa tgcgcgagga tgacaggatc ccatctgaga cgcctacagt acgaacaata tggcaattgt cttcaccgtc atgtagaagc ccgaggtacg gttgggtatc 180 240 ctgtacagaa ccgagcgaag cacagatgtc aaggatccga acagcgtctt ttggaatgct ggaagacgcc tctgcttctt ttcgactgct aacaatcgaa accttccgcc cgcgtttctc 300 atgctgtgga tctgtggtgc ttttcgagcg gacgctgact gccgttgaag tgtcgtcgaa 360 qcctqqctcc catqcctqqt tttcqqaaqa aqqaqcacac qccatttcca cttccqcqqc gtacctcatg ctgctagtac tggaatgact ggccgtgtga gcccagcgtc cggaaatcaa 480 agggaagtag acgtgtagtt ttaccccctg gatagaactg ctgagcccag actcgatatt 540 ctcactgccc ctggagagaa gtagctcaac cgagtgggga gcacggcatg tgcaccgcag 600 tgccctcgct attgccttat gaagacttgc tgcttgtagg cgaaattgat ggaagaccct 660 gggtaggttg gccgttcgtt tctttctcat cggttccaac cggtcactgt ttccgagcag 720 cettttegtg tetteattgg atttttegag etcacecate agettetgge gaegettett 780

geccaacgtg tacgtgaacc ttcgaaattc gaattctaat cgaacgaagc ttaccctgc 840 cacttgcagc cgttggtggt tctggctatt attagttcca cgattcttta cctaacggtt 900 gactctttc ttcgatatca cgcacctggt cacctgtaat atgcaacctg ctctctaact 960 tcccaagcac agtgtgaata aacaagatga tatccataca acaatcatac tcgtgtgcgc 1020 cagagaacct ctctataact tcca 1044

<210> 2524 <211> 3110

<212> DNA

<213> Aspergillus nidulans

<400> 2524

tectcagace gaaacgeetg cagettatte accageatae ggtatteete egteegeeet 60 ctgaatttgt ttagaccgaa atggtctgtt tccataagca aagattgcac gccatccagt 120 gtagcagaat ctcggggtac cagtctttcc ttcacaaatt agatgagttc cccaccataa 180 aatcgcagaa aaagataaac ctaacctttt ctcggttcat gttcactatt ttccagacat tagaacactg cgtctcataa caacaaacca tttgcggcat cagttcatga tcgattgcca 300 gaaaatcagt catcagactg aaaagcatct cgtttccagg tctgaggatt tccagtatgc 360 gctttataat atgggcttca cgtcgttcgt tctcgttttc caggctatca atttgctgtt gagcggcgga taagatttgc ctgtttgcta acgctccgtg ggcgcctcga aatggcacac 480 ccataaagac tatacctaag gtggcgctaa aaatccgagc ccatttattt tggtgaagct 540 600 cgtcgtggta tgctgtcaac aggctctggc cgacccgatc aataggctgt caatagcagc agggcagagg catgcctacc cttgctagaa ccagcccacc gacacagtgc gcaatgaata 660 ggataggtcg gtcttcaaca ccctgggggt tctttagtac gaggtcatga tcgggtgatt 720 cgcatgtcag aatttcctct cacctttcga gcccttgcca gactgtccaa caacctattg 780 gcgacttcag cagaagtcac atcgctcggt cgctgtccct tccattcgga ccgataacca 840 aatatcatga cacgggccgg agaaaggtcc gtcaatagca tatcttcatc tctcagccag 900 ttcacgatgc tttttctatt agggtcccag tatgaccacg ggtgaaatgg gtgggatccg atgccgtgga tcgccactat gcttttcagg atatgagaaa ccatgctctt ggagatgcaa 1020 gtgattgtga ttcttactct actgggtctg agcatagaac ttccggggact tccaaaatat 1080 cagtgcccct gtgtccatct cgaatgtcgt ggagaacatt caaggcgagg atgtccaccg 1140 agteatetgt catectetge cettactgat tecetettte gttagaagga ttttatteag 1200 tgcattcaac aaccactatg aatcaattta cttacattat tgacccagac ggggaggtgg 1260 taataatact gcgccatgca aattctcctt ttgcacaact ggacgaggct agagatgttg 1320 gragggtete acatectett ccaaaaaatt atgggataat gtecaatgte etgeegaaag 1380 ttttgaatac ccaacaataa gaatcgaaga acctgcccca gaggtcgtcg atgagccagt 1440 cccagaggcc gccgacgaac cggtcccaaa ggccatcgat gagtcagtcc gagagactgc 1500 agaggaacca accccqtagg ctgccgaaga agaacctgcc qcagccaaag aacaaccatc 1560 caaqaaccta gtcqatcctq aacttatttq taqaccqctq aacaaaaact gcttccqcat 1620 caaagtetee gegaageatt taataceage eteageagtg tteaageaat geteaetggt 1680 ggttgggtag agagcattac atatctgcta aaggacttag ttgattactc ggagagttgg 1740 gatatcaacg cgttcatgat cctacttcaa attatctatt gccaatccca cgatataccg 1800 eggeaacteg acettgagtt acttgeggaa gttgetgtte tageegacta etatgaetge 1860 ggggaaactg tagacatgct ggcgggaaca tgtattgagg ctctgaagaa aggtattccc 1920 acagcatatt geogggattt attattttgg ttatgggttt eetggtattt eeggeteeet 1980 teteagttea aagaagetae tteaattgee atgttatggt gtgacaatgg gattageaat 2040 ctagggette caateeegga atatgteaca agtaaggatt aggaaactgt teateettee 2100 cgtgatttgc tagtagcatt gtagaatcga agaatgtccg tagggaggaa gccatcgata 2160 atctcgttaa ccaacatcat gatacatgta acaccctcct aagcagcgat ggaggacgta 2220 gctatatgtg cagctcgatc atgcatggcg cacttacacc ttaaataggt cctccacgcc 2280 tegeaacteg gtettttgaa gggaetegag atageatget ggtaetetea tggagtgaga 2340 gtagttattc cagataggac tgcttttttt ttcttggagg aaaggaacgg ctttagcttt 2400 attccctggg ctaagaaatc tgagacttca agtcattgtc aaggagcgta actacaaatc 2460 cagegetgae gacaaagaca tacgaataca aateegagte aaatgagagg atateateee 2520 tectegtace ttgccagaat tetetgcaag cettgtgcca categtegta cacegettge 2580 cgaaactctg cgttgttaag gtcctgactc gctgcattga aagcgcaata tatgcaccgc 2640 cttgttatgt tatgcagctc tacgcccccc tcttcgagag tctgctcctg ccatttctgc 2700

geggtattga aateegtaaa eteattatte atgeegteeg gaeetaggaa etggttgegg 2760
aatggeaggg tetegatgee etteecaaac eaaageteea tgatgatgat teegagggaa 2820
ageagegaag teetggaete ttgatatgaa geaateeeg tgaeggeett tggagtgttg 2880
gttagegtet eegaeggee tgeaggetge tegatggega aatggetgat aageaegggg 2940
tgttgagttt egatagtgee etgtttegte tgaaataggt agaegtegtt ettgeteeac 3000
gtgtgtttea geeaeggaee eggetggage tgtagaaeag egegagegag agtaagegea 3060
atgeagagee tetettgaeg aggaatgata geeaaeggeg gageggagat 3110

<210> 2525

<211> 2405

<212> DNA

<213> Aspergillus nidulans

<400> 2525

aattggaaga ggctggcatt caggtcacct ggcaccaata cgaaaccctg tgccatgggc 60 tttctgcaga tggtcccttg gagctctact gccatgaaag cgctgcttca agttgcacag 120 180 gatttaagag atacaatcaa gagtggtcag aaatagacac tcaagacatt gcgtagtcag tgtagacgtc aactttgaag ggccaacact cttttgattg gagctaatga tagtccgaat 240 atacattaaa aatgtttaat aatagaggaa cgacgaggct tgatctaatc gcaaagcgta 300 gaacaaggca tcatgttcag agaagaatct tcttggctac ctcgagttcc tcaatctcct 360 420 teatgagtty taacegetge ettttgataa etggateate eeceaegatg eetgeeaget cttgctcgga taggcgatac acaaacgtag gtgacaaaag tttcagcgga ctgctcgggc 480 cactcagcaa aaagtagttt gcagactgca tgcagacgtt gtcaatgaag cggctcatgg 540 cgacqttqta atatqaqtqc aaqatatcqt qaatctqctq qaccatqtac tcccqattqc 600 ctateceegg gagegeeget ttgatateet egaceeggae caetttgeee agggeageat 660 tgccggcact aaaggtcttg tctgctatgc acttttgcat ctttgagtcc ggactggaga 720 ccattagtcc actctagcac ttacagggta agacttacca ggtttgcaaa gtctccacaa 780 acgatgggtg tagcgatatc agagtatcat ttcgttcatt ctccagcaga aattgagtat 840 gggcaatcgc attcgtgtac ttcttctgca gatcatccat catgatggcc agcaggccac 900 960 gagacatccg tccatcttgg cagagatcag tcagcacgct gacgatgcag gcgttgacaa

gggcaatgat atcgctgata taacccagcg cgatgctccc ccactttttt gactgccttt 1020 tcatgacagt cggtagaagg gagctgttga gtgtaccaag ctcaaaccca cgagaaccaa 1080 gatactcggc ctcaagccat gaatagatgt cgtcttccac aggagggcta ataagctcag 1140 ggccataaag aacgtcattc agttcgactg tactgtcgat cttgcgggtg ctgaccatgt 1200 tetecteatt teectegteg gteeggacee ttgetetega caacagagat tgactgetet 1260 cggtcccggt gcggaaattg tagacatggc cgagattcat catgtcggac ctaaactgct 1320 cattgcgctc gatgacagtc gtggcgaggc ggaaacqttt gaccttgtca aagatactgt 1380 ttgcaccgta gttaccgcgc aaggcattgg acatgacttc ctggtatttt gctacqagat 1440 ccaggaggaa gtcaatttgc tggcttcggt tcaatctttc ctggccaagt gccagcagag 1500 aggeetgagt etettteaac tttttattga tatecacacg tatetaggeg ceateageaa 1560 aaatcatagg cagggcgaag atcgattctc accetgggga attcccgtcg ggcattctct 1620 gtgacagttt cctgtagccg ctgcctgagc gattcaatac caaatcgatc tgcgggcaca 1680 aggececate eeggtetega tetgagetet geetetatgt eegegegagt ettgteteea 1740 gtagcgaget egetetteee aagaetgegg actagaacee ageegtgtet gagaggeatg 1800 gtcttgcccg taatcaagtc caacacattg tgctcagctc cgcgatcgac cagatcaggc 1860 tttgtgagca cgccaagggt gcgttgtcct tcaggatcga cttcgcgagc tctttcaatt 1920 acttcctgcg ttgcagcgtc gacgttggcg ggaacgacag ccaggataat tgaacgtggg 1980 ttgcccatgt gctcctgcac cataccgcgg accatatcga tatcgtgctt ggttgtcaca 2040 ccaggtgtca cacttttgaa gattcctgga acgtcaatga cagccagatg gtcctcattt 2100 gggccgctga tctccagacg aaagatgtgt cgggaaaatg ttggcttcga cttgtcatcg 2160 aggctgcgaa tgcccatcac cgtatgtacc tatcattgtc agcgacctcg cacgacagac 2220 tcaagaaagc ctacctegtt tatcatateg gagaacgect teggatetag gtaageegat 2280 tegeaceteg accatgettt cagtetggea aegeacteag ggteagaetg eggtgeegge 2340 ttgatggacg cccggatact gcgaccaaca tgaccggagg ctgggcggaa gatgtatggg 2400 tacga 2405

<210> 2526 <211> 2165 <212> DNA

<213> Aspergillus nidulans

<400> 2526

ccgcagtcct gatgctcgga tagaaaggat gcgacaagag gaagaagaca gccaaaaagg 60 taacactcag aatgatgatc gttttaagct gtttgcgacg ctggaaggtg aggaatgagg tgcgagcgta gggtgcaggg ctaaagccct ttctaggtgg aacggcaaat tgcatggtgc 180 ttaacttgtc aactaatgat cgcatcctgt tttatccttt gttgaaagag tctagaggaa 240 300 gtgggaqtca gaagtgaagc aaagcttcag ccgacatgat actactaccg gatgcggata acaaggetea gteecgetgg gateateett ggaeegaaag getggatgae taccaaeget 360 gaggaaaagc gcttgaacgt gcagattgcg aggattcaga agtattggtg aaagataata 420 tqqccctqta qaqtataaat acagcaqaaa agcaaagtga agaggagtcc cgcaaagtcc 480 cttcagagaa tctaagttcc catagattcg ggattaatgt ccggcaatca tcatataata 540 caaatactca acqqtaattc qcqctaqaat tqtcatqcga attqacqtta atqqttcttt 600 tegttgtagg ttggcttegt gagtteggea atgttggtat gtteeteeac ttgegeettg 660 720 acttcaccct ccttctgttt caaccactcc tcaaatgacg gcggttctgg cagtcccaaa cgctttcgct cttgcttaaa ttgctcttgg attttatcag tctgcatcac ctgccatcga 780 agottocato caaaaacaco caactoottg attogogoag googatogto caacaagtat 840 tgatcaaqgc ccccaqcctt tcgaatcgtt cgcaaagcct ttcttgtaac cttgatgaaa 900 aggaactgtt gaagtgcttc actccatagc ttctttcgtc gcacgttggg cttccagaac 960 cgacgcgttt tecettegtt ceggeectgg gagatettat ttecaaattg aategttgeg 1020 ccaccgtaga gaccggtgtt ggattgacga aacatgtaat tcgggccata aggatatggc 1080 ggaatgtagt ccggtacttt cgggagcttc tgggcaggtc gtgttgtcga gaacgatcgt 1140 ttcgaggctg tcaaggacag gctccggaaa gccgtgtaga gagaggattg gaaagacatg 1200 gtgaatggtc aggggcctgc caatgcttct gaatagagtc tcaaacaagc tggagcatgg 1260 caaggtcagg aggcaggacg agtagtgctg ttgatgaggc tagagacaat ttggttggaa 1320 gaatttggag ttgctgaccg ccttggcata atagcgaacg gatttcagca acagctgcat 1380 tetagaetee teattateaa taattegttt ettettttee atattgggtt egttgtettt 1440 gaattggcta cctagtatat tctgatcttc cccgtgtctt ttgaaagaac tctcttcccg 1500 cattogteat ggtceaaate agegaggtea agggeaatte gegegacaac agaacagetg 1560 cccacacgca tatcaaggge ctcggettac gtccagatgg tactgeggaa gtctccgggg 1620 atggctgggt aggacaggee gccgctcgag aggtacgega cgcaatgget ccctgcctga 1680 cgcccttttg agctctgtac gagagctgea aaagaagtaa acggactgge taacgtaaat 1740 tcacaggcat geggggtegt ggtagactta atcaaggeta aaaagatgge gggccgggeg 1800 gttcttcttg ctggtggece agggactgga aagaccgete ttgcccttge tgtgtctcag 1860 gaacttggga cgaaggttee tttctgcccg atcgttggta gtgaaatcta ctccgctgag 1920 gtcaagaaaa ccgaaggete tatggaaaac tttcggagag caattggtat ggagtggttg 1980 tatgacattt tgggagetea aacgctaaca tcttggctag gactccgtgt gegggaaacg 2040 aaagaagtat atgaaggega agtcacagag ctcacacccc aggaggetga gaatccactg 2100 gggggctatg gtcgcacaat aagccatctt attatcggat tgaagtctge taagggcaca 2160 aagaa

<210> 2527 <211> 941 <212> DNA

<213> Aspergillus nidulans

<400> 2527

60 ggactatete eteggggtat aagtgegggg agggggaggg gaagegeagt caetaggaet ecetettatt gtggegtete etageeggge teaaegattt tgtaeaeagt gagagattta 120 ecegtatect gatettetta attacetgeg ttecagecag ggegatgttg geaagecace 180 240 tgagaacccc cattctggcc actgactcgt cggttctgac cagcaggaac ccctagaata tctgacaqtg gacatgtcca accatccagc ctcagatatc tctagccata agtaaatctc 300 360 aacaccacgg cgctgactac caagccagta caacggtttg gagacatgca taaaaagagc attetteege tgateattga ggteegaggt ttgggagetg eageaacttg aagegaagta 420 480 cttgcgggga atgaatgaga gtttccacta gtcatatacc aggactagct gtatctccgc aagggtgtcg gtaaccacaa agctctaatt tgccgtacta gtccaaagct ccatctgcag 540 gtcttaagtc cccttacagg gtcctaggct ctttcaatga ctcccgcatt tctaaggatg 600 egcactagag etgaetttea ettttggaae ggtatageea tgaatgeaee aegeagegag 660

tgcttttgg tgtgctgtat agaagagctg acaaagtgat agacaatcca ttcagcctaa 720
agacagccca gatcttccac tgggcatacc ttatagttcc ttaaaaagcga ttagcgtaaa 780
ttacagtggt cagtcaccat catcgttgtc atttagaatg catagtgtaa ctacaggccg 840
tgaggggtgc cttcaggccg gagtataaat ctattgaaga tgtagacaag aaacagctgc 900
tactctgatc tgtacaaggt gttaatgagc ttgagtgagc c 941

<210> 2528 <211> 5992

<212> DNA

<213> Aspergillus nidulans

<400> 2528

gaatggagtg caaaggcaat ctaaacgatc taaacgacat taatttattc cacttccggc 60 aacgtccgcc ccgtactacg acgcgatggc agtgcttatg aacatgtgca ttatgggaca tgattttatt tccacccgtc gctatcgagt ttgcattcaa tgcatttcat gcattctctt 180 ctgatggctg ttatggttgt tgcatatatc atgggtggca tcctgatttg ttcggtttgt tttcctcttg cggggttgct ttgtacacgg atatggaagc gcgatgatac cccctatttg 300 aatagatata acgtgatcaa tcgattcatg aatagaaacc atttgttttt ctttttgggc 360 420 atgtacacgt acatactccg taataagtag attatacggt gacctgtgca cgcgctagga tetgeeeggg tagtgaetee gtggeeeaeg etegtagatt atacetattt gggtgtetet 480 agctegtgga actgtacage tgeagactga ggetgtaaag etgagatagg aacceggeet 540 ttcgtcggct gatcaattgt gtcatctcga ttttcttttg cgatcgtcgc tggtcctact 600 660 ttgagctgcc tgatcgagta agacggtaag ccacgaggtc tccccattca tcttttctcc tgcctcttca cttcaacttc tcccacctcc catcccgatc ttcaacatcc ttctttcat 720 tacaattctt taacactgcg ttttctgggg gggtttattt tgttgtcgag aattgtcctt 780 tagtttgctg gttcatcgcc atggccactc tctcttcact ccgtcatctc atccaaacac 840 atccactcat cgacaaccat gctcacaacc tcctctctca gtcagcggcc tgcaaatatg 900 ccaaatatcc ctttgagcag atcatatctg aggcgcaagg agttgctcta gcaaacgccc cttcaacgct atcetttcac cgcgcggcca gccagctcgc taccctatac caaagctcgt 1020 catecgactg ggacagegte egegetgete gagaceagte agtecagegt gactatgagg 1080

gtctaattcg caaatgcttg gagggaacac aagtacttct tcttgacgat cttttaacgg 1140 aaaatqacqt tqaacttttt qactqqcatq atcqcttcac cqcatcaqcc actaaqcqca 1200 ttgtccgtat cgaagctctg gccgccagtg tcctgtcaca gattgtccac ggagggcccg 1260 ttccccagga ttcttctgac ctctcagctt tccaaaccct ttgggagtcg ttctcgcgga 1320 actteagege tetagetete gatgecattg cegaceege tgtggtgggg tteaagtegg 1380 tgatatgtta cegeactggg ttagatgtee agecaacega tgacegtgat acagaacgat 1440 taatccqqtc ctttqctcqt acaatctcqc aaqcqqccqt ctccaccccc cqqqtaqaqq 1500 ataagccact gaacgactgg ctggtgcgcc aaacactcaa tttacttaag gcagccaagg 1560 ttactcaacc aaacaaaccc ttgcagctgc atactggttt gggagataac gacatcaatc 1620 tgctgaaatc caaccctgct catctgcaat ctcttattgc gcaataccct gaagtcgact 1680 ttgttttgct gcattcatct tacccatata cacgcgaggc tggatatctg gcctgcgtct 1740 accetaatgt ttatttggat eteggggagg tettteecat ggteageegg gaegegeagg 1800 aatcgatctt gagagagagt ctagaaattg tccccagcac tcggttgtta tggagtaccg 1860 atgggcattt tttcccagaa acattttggc tggccaatag acagttccga gatgcgctgg 1920 aaaaggtccg gcccctgcat tctgctgatg aaagtactct gactaatctg gaataggttt 1980 tegtggaeta tgtecagaat ggtgattata ecattgagea agecatgeag geegeageag 2040 atateetttt ecacaattea aaceggettt atgagttaaa tgaacaaceg ecatetgeeg 2100 ctttatcgtc tgggcaccag acggtctccc gtatctcgtc aactgatctg cttgagaagt 2160 tcattcgaag caacccaggc gtcaaatatg tctggacgca attcattgac tacactgcca 2220 cagttagagt ccgcatgttc ccagtaatgg agttcgccaa gatcgtccgc aagcaacgcc 2280 ggctcggtat tagtatggcc accttctgga tgttgcaaga cgatgaagtt gttggcggct 2340 cgactacqqq ccaattctac cttataccag acctatccac actcaqccca aatqttqqaa 2400 tcgactccaa gagtgccacc gtgatgacct ggtggaagag cgaacaaggc gagtccttgg 2460 aggaatgtcc gcgcacgaat ttgctcaaca taaacaacaa actcaaagac gagtttggta 2520 ttcaagctac ctgcggcttt gagattgaag tcgttttctt gaagccaacc accgacccat 2580 caacaggaga ggaagactgg gctccttctg tgaccaacca ttcctggtct caaatgactc 2640 gegagaegeg cegeatgete eccetacteg aagaaatege egaaaegete geeteeateg 2700

graticiated teaacaatte catgorgagt regreecting reaattegaa tteatectee 2760 cacctgacaa teeegteget geagtegaca eecteateaa ateeegacaa gteatageea 2820 acattqtcga gaaacacggc ctccgcgcaa cactctatcc acggccttat ccatccgccg 2880 coggracge gtcccacgeg cacgtttcca tctccccttc aacaaaagaa gaatcattcc 2940 tggccggtgt gcttcagcac taccccgccg tactggcatt caccctttcc ggcgacgcaa 3000 gctacgaccg cgttaagtcg ggtatttggg ccggaagcga atgggtcacc tggggcaccc 3060 agaaccgtga ggcgcctatt cgcaagatct caccaggcca ttgggaaatc aagtctcttg 3120 acggettgge aaacatgtat ttggeeatgg etgettteet ggetgeggga tataegggag 3180 taaaagaaaa teteeegete actateaagg attgteeatg teagtttatt gateeeatta 3240 ctcgtataaa tagctaacgt tgaacttaca gatgacgcgg catcgctccc agaaagcgaa 3300 cgcgccgcac tcggcataac tacgaaactc cccaacaccc tcgctaaaag tcttgccgcg 3360 ttagaatctg acgagattct taggagtctt ctgggcgaga acctggttga agactacatc 3420 atcgtgaaac gagctgagag caagaaactc agtgccatgg atgaaaaggc gcgcaggaag 3480 tggcttgtgg agaggtattg agtctaatct ttctcctgag cgtattcaca atatttccac 3540 ggcctttatg aataagataa tatgatgaac actataaact tgactatgct agcacttcat 3600 gagaggatac caatttgatt gaaaggagca atcttacaag ctcgagcctt gaagcatata 3660 aacagtacct gctcacgttt tggattcgtc tccaggcagc aggctagtac cgtgagccgt 3720 tcaaagagtg gagacggaca acctagtact gcccatcaat cgttagagta cctgtcttgg 3780 taatcaggta ctcattcacg gcaacttcct ttccgctctc ctttccataa cccgattcct 3840 tgattcctcc aaacggcgac tcagccgcag acgagtttcc tgtgttcatg ccgatcatgc 3900 ccqcttccaa qttctccaqc aqtcqccaca tacqqtcaat qttcttcqaq aacqcataac 3960 tagecaggee catgetggtg tegttegeea gettgaegge ttetteetea gteteaaage 4020 gatagagage agegategga geaaaggaet eetegegega caccaacatg teettggtea 4080 tgttttttaa gattgtcggc tcgaagaagt aaccetgtgt tccttggaca cggctcccgc 4140 caagaatcac gtctgcgccc agccgtcgcg cgtcttcgac ttggctaatg gccttgtcga 4200 tactgcgcgg ggtcgtgagc ggtcccagag tcgtgccttc tttagcacca tggccgatca 4260 ccaatttggc cgtgcgctcc ttgagcagct gcgcgaattt gtcgtagatt ccagcctgca 4320 cgtaaatccg gtttgcagta atacaagcct gaccagcgtg gcgccatttg agagccatca 4380 gctggtccag cgcttggtca aggtccgcgt cgtcaaacac aaggaatgga caatttccgc 4440 ccagttccaa tgtgaccttc ttcaacccgt gtgcacagtg agaggcaatc agcttgccaa 4500 cccgagttga gccagtgaac gtaaccttct tcacgagcgg gtgcttgcac agcgcttcgc 4560 ttageggegg egtgttttee agateegteg taageacatt gaacaeteeg geggggaage 4620 ctgccttctc cgctaggtgc gctaatacca aggctgtgag gggagtctcg ggactgggct 4680 tgacaatcat cgtgcaaccg gcagcgagag ctgcaccggc cttccgtaac accatagcaa 4740 tagggaaatt ccacggcaca agggcagcag cgacaccgat cggttgcttg acagtgaaga 4800 egegeeggtt aggegeggea ggeaeggega ttgaceettg tataegttet geeteaeeeg 4860 caaaccacca ggtgaaaccg gtcgcgtagt cgatctcgcc ataggattcg gcgattggct 4920 tgcctgtttc atgggtgagg atcttcgcca ggtcggatct ggcctcacgg atgagcgagt 4980 cccatttcaa cagccactgg gcacgttggc gggggttgac cttcttaaac ttcacaaagg 5040 cgtcgtgcgc gatctggacg gaaaaaacga cgtcttcagc agagtttgta gggcaacttg 5100 cccaggggag atcggtacca gggtctaacc cgcattaatc acgaaaatga gcatgaaact 5160 gtggttcttc agcttaccga cgacttcgaa tcgcgcaccg ctttttgctg taacccaagc 5220 gttcccgacg taggaatcaa agtggagcaa gtcagggttg tccagctaat acggagcaat 5280 cagtaccagt agatggctgg ttcggaatga cgtacctcga aaggaagctt atattgctga 5340 gccatattta gccactctta ctggatggaa ttattcgaag ggagatggta gagacgaagg 5400 agatggagac gagaagaagt gacgcaggca ggatagttat tgggattgac cccgcaaccc 5460 ctcatcttat cggcacctcg gtctccacgg tgaagtgagt agcgattgga gactctccaa 5520 ttgatggagt aatgcgaaga tcaaagtagg aagtagtgct aaaatgaaag tqctqqctaa 5580 tacatgtgct aaaagtaaac ggatggctcc gactctgcca gaagctctgc tcgtccttct 5640 cttgggtgtc ctgtagaagg gcccgcatca acatgcctgc tgttgagatt aactggactg 5700 gttggcgcag ggataccctt atccctcgtc ggcagacccc attcagagaa tgcatcgcgt 5760 geggeggtte catacategg egtettttee geccaecaga getecaagte gteegcattg 5820 cgcagcggga gccgtgacca ttcgttgacg gcagccgttc gcgacgggcc tggttgagac 5880 gagttggcaa tcctgaagga ccgcggcgag gaggtccgaa agatatgaac tacgaactat 5940

<210>	2529
<211>	1229
<212>	DNA

<213> Aspergillus nidulans

<400> 2529

gatccgccgc aattaaccct actaaaggga tctcggtcct cataagtctg gccgttgttg 60 gtgtcaatga cacccataac aaccgaggtg gttgcggcgt gagtcctggc gtgctgggca 120 aggttateae teeggaagaa tttetteea catteaecae actegaatgg ettgteetga 180 gtgtgcaggg aacggtagtg gcgcttgaga tgttcctgtc ggcggaagcg gcgggagcaa 240 300 agattgcaga cgaatgtctt ggaagggtcg tctgtcaaag actgcttgcg accgcggcga 360 ttgaccgaga caggagcaga tgttgtctct gagccagacg cgctgaccac cgagttctga cgagcttggc aatctgcgtg atcgcgagag gtgggctcaa ttgcattgtc aatggacatc 420 tgagectgea ctcctgtgaa agectctgag cegttctceg acttcctgat ggacttgegg 480 540 tttccgcgct tcttagatgc catgtcctcc tgactctcac tgctatcaag ctgaatggta 600 ggaagaccag gaagtgccat ttctagatcc tcggactcat ccattccgtg ctcgctgagg aactcatcct catccaatga ataagttcca aggcgctgtc gcttaccgcc gagatagaat 660 gtgctaccgc tagggtggaa gtccaacagg cggttcacaa actccatcat gggagccaag 780 atccgtgaag ctgtcaaaag taggcagtgt gctgagcggg tcctcgttgg tagaggtgaa agatggagtg ggattctcat gcacgggcag agtcacggcc tcgctaccga gaaccacctt 840 tggttcctca tcatcacacg acaaagaagg caaaggagga agctcagcag gagcgtggtg 900 tgccgactet acggtaagtt cccgaggatc gcagaaagat gtggcgtgtt caagctggag tgaagattgt gattggccga acatggaaga aactggggaa ggcgatgggg aaagagacgg 1020 gcatgagctt gccgagagga gatctgagcc ctgacttgag attgaaggat tgtgaatgaa 1080 cactaaagaa attagtactg tccacctctt gactatcgtt ctgagcacaa tccacatata 1140 acttaccagg tgtcatcgca ggcgaggccg agcgctgcca gtcaacgctg gctaggatcc 1200 ctatagtgag tcgtattatg cggccggga 1229 <210> 2530 <211> 1897 <212> DNA <213> Aspergillus nidulans

<400> 2530

atgccaccqt agcggtgatc agaggatcga cttgctgctc ggcggccatg atcacgacgt 60 attaaggagg tttgcttgtg acacggattt tactgcagga aacgtcgagc agggacgcaa 120 agtcaccgag gtggaagtag atggaagagt ccctgatgca gagggaagta taaggctcgt 180 aaaaagcggg accgactgga gaggcttgtc gctggtacgg ttgattgtgc aacgagccga 240 gaatggaacc gtagtagcat caacagtgaa gtgtgagtac cgcatattgc ccagacttca 300 gccttcacac ggctgacggg aaagtgcgcc aatacaccga tatccaagtc gcagttgcaa 360 caccacagec accaacgcat gttgtcgaaa ctctgcaggc cattcacgat caagtcggaa 420 agetggttca aagaccgctc ctgcacgcag ctaccccaat agatggacgc aatgccatga 480 540 tccgcagcca agagactaac atgggaaata tgctggccga tgccgttcga gcattctatg acgcagacat tggattcttt aacagcggcg cagttagaag tgactgcatc ttgggcgcag 600 660 ccgacccgga cggagagccc ctgctagtca gagatatcat cagtaagcca attcttgctt 720 gcaaccgaca agcactgaca agaatcgcaa gatatctgtc cgttcggaaa ttccgttctc 780 gttaagaaga tgcccggctc gatcatccgg cttgcactcg agaattctgt ctccgacatg catactgacg gccgattttt gcaagtgtca ggattgcgag ttgtggcgag ctggcaccaa 840 cctgaatggt ctcgagttgt agacgtcttt tttcagaggt ctgatggtag cctcgagecg 900 ctggacccgg atcgcacata taccgtcgcg atgccgtcat tcatagcgcg cgggtatgac 960 ggattctctt ggttcgcgca actggagacc ctcgtaggtg aagaggcagc cgtaacagat 1020 gctggcctqc tccttgccat tttcgggcat gaacagtcat ccgatggtga catgcatgct 1080 ataggtatcg agcgagcccg agcggtgacc atagtcggtc agaatccgac cgactctttg 1140 cctatcgtga aacctgttgt agaggataga atcaaattcg tatagagtcg tctagcgtgc 1200 caaatagatc tegattgetg ecagagaagt etcagagagt gttgatgeet tgacetegtt 1260 gacatatage etgegagatt atgateteag tacetttgte ettgaegtet ggtgttgeae 1320 ataccactga taattgtcca gattccgagt gcagcagtgc aactatgtga ggtcatcctg 1380 gacctggggt taagccggtg gatgccttga gacccatcta aaaatcttgt ctatcgcagt 1440 ggagcactgc tgcactggag accgtcctgt ttgttgacag cagccgaggc ctggttattt 1500 ggttatcgac gtcctccaac ttgccaaccg cctgcggatc gttgaggatt cgaggaccat 1560 tcgcaacact atcctggaaa tgagcctgcg aagaatgagc atgccagtga cgcaagatct 1620 cgccagattg agttgaagat tgacaaacaa acagagagac gatcgccgga taattatcca 1680 gaaacatgat gctcgacctc ggctaccacc aagtggaccg ccggcttatc tgggtctatg 1740 acccaactgc aacgattccg actggaggat cggttggaac ggcatcgcaa gagaaactca 1800 gctctctgga gttttcgagg gacctcaaag gcagaaacgc ggattggacg agaattacga 1860 agacaaggag aggaaagtcg ggaggttgaa gggaaga

<210> 2531 <211> 1025

<212> DNA

<213> Aspergillus nidulans

<400> 2531

60 aagggcgcgt caggattata ctgtccgcgg taaggaagga tgtttaagaa cgtccgaaca 120 agetecagat tetetecagt caegttagaa aeetgaaaga tagggeatat eegttgagag 180 acaaactgcg tggcagtgtt gattgtctcc tccatgtcct tcacaaatat agggattttc cgagctccag gcgacttgag gatcttagtc aactgggaga tagtctcttg caaaatctga 240 300 ggggggcaga tatcgatttt ggtgattatg accataaccg gcacgttcag agccagggct 360 atgcccagat gttccttgct cataccaata aggccattgt tggccgcaac cattagaagg caataattag gattgctgct cagcatgcca aagactgtcg tccgcaggta acgttcgtga 420 ccggcgaggt cagagaagga gatgacttta gcggaccgtt tgccaatctc ttcccaagaa 480 agettgegge eetgegaget geteaegate teteettgge tateaaagee cataatetet agaccgaccg agctggtcct cccgctctca atctcgtgct tgtggcggaa gagattcact 600 cgtgctttac cacqccqtc atccaaqcct cctttcacqa qqacaccqaq catqqtactc 660 720 tttccagcat caacattccc taccactgcc atccgaatct ccgccatttc ctctattgtt 780 tccgcaggct gccgaatgag aatcttaccc cacgaaccct ttatccggta atttgtagtt tttgcctctt cgggaccgcc aacattgtag gttaggagaa tgcggcaatg tgcggagaga 840 900 gttgttgcag cttctcgcag ccggttcaag gctatattcc actgatcgag gctgaaggac

atggactete ecceateett aacceegaga tegaaaattg teteceeatg geetteatea 960 atgccgcttt gcaataactc tggccgggcc cttgaggttt tctttaaaat ttgctgtctg 1020 taccg 1025 2532 <210> <211> 2309 <212> DNA <213> Aspergillus nidulans <400> 2532 gatcctttaa gacgctcatg catgaaacaa atcgttcatt catatgacgg cgccccatgt 60 gttcagtcct ctcccagcct cgcaatagct atcttccgat ctgaccccgc cgtccctcga 120 acqcacatqq cttacaqcac ttcatccaac cctccctctc qtcqcaactt qcaqctctqa caagacggtt cgcgtttatt ccctggttaa ctttcgcctc ctttcgacaa tttctggcgg 240 ccataagcga agcatccgca cttgtgcctg gaaacctaac gtctcaggcg aaagcgtcct 300 tgcgacggga agcttcgacg caacggtagg catttggaga cgatgggatg actatggaga 360 420 ggaggaaacc ttagcgcaag gaaataagaa cacaaaaaac tttggagctg aagaagaccg cgaagaagac gaagacgacg aatggcgttt tgccgtccta ctcgacggac acgacagcga 480 agtcaaatcc gtctcgtggt ctgcatcagg catgcttctt gctacgtgct cacgggacaa 540 atctatctgg atctgggagg acctcgaaga tggagacaac aatttcgaga ccgtagctgt 600 gatgcaggag catgagggag acgtcaaatg cgttgcctgg caccccgcag aggaatgtct 660 tgccagtggt agttacgatg atactatccg aatctggcgt gaggatatcg atgactgggg 720 teaggtegee tgtateaaag geeacaeggg aaeggtetgg ggeattgaet gggaggatge 780 tgagaatgtg cctttccctt caacttccaa tggcgtatcc ggacaggagg aagagtggaa aacgtggcat getetttegg ggeetegtet tgtgtettge tegeatgate aatetgteeg 900 cgtttggcga cgacagccaa aagcgcaatt gaacaccgct ggagctagct cgataccgag tattatccgg ccgtccggca cggatgaaac gtgggaggag gatgttgttc tcccgcatgc 1020 gcatgagett cegatatacg etgtegettg gagtegacga aegggettgt tageetetgt 1080 cggcgctgac ggacgtcttg tggtctacga agagcgattt gtttcgtctc atacgaaacc 1140 traggreatg aatactgatg aagtrteger gaatettggr gagggagtat gtgregera 1200 cccatcaacg gaatggagca tcgttgcggt cgtttatggt gcacatggta tttatgagat 1260 caaccatqtt qcqtqqcaa aacqtqccqa cagaggtcqt gatgggaaca aggaggaaga 1320 ggtgttaata actaccgcgg atgatgggag tatcaaagtg tggacgttga caaggtgacc 1380 tetgcacccg gtggacgtte cgtgatacag ttatgttgta taataatgtg ettgatgagg 1440 tatgggaaca cggtataggc aatagagcaa aagcacagat cttacgcaag aggcggccaa 1500 ttcataaaat atgtctggtt aaactgtatt ccacgcttat gttgcttgac ctgggcttgt 1560 atatggcggc gacaaaacaa atcttatcaa acatccaaaa aaaaaagaca agcgaaatta 1620 cqttacaaqa ttattctcqc ttttcqatqa agattcttqq qcqcqtqqta qatcctqtcq 1680 atgcgcttcg tcatcactgt cttccccgac agcataattt tcccggtcca ggcctggcga 1740 gtgtaagtca tecaactcag ceteatcaaa gteaceggee tetaegtetg egeegttaet 1800 atgattgtta tggaaacggc ccatgataga ggttctactt ggggatttaa tggcaattcc 1860 gctgtagcca ttgtgtcgcc ggcgactgcg ccagatgaga aaaccccaga ccagcacacc 1920 gataataaca acgacaagga cggcttcacc ggactttgcg taggcgtttc actcggtttc 1980 tttaatettt tgetgetett eetettggtg aactgtgetg ttgggetgae egeecaeaa 2040 agtttggggc aacggttcgc cattgatgcg gaaatccaag gtgcaccgcc gatgctggcg 2100 atacaacgtg catgaagcgg ccaccagtct tggtgcgggg aaaaaaccag ggggcctgga 2160 ctgcattgta aggaaaccta gtaagttctg ctacgtagaa ccggccgtta ttcgacgtca 2220 gtggtgggag cctacceggg tggtaaageg acccetgcca ttagtgtata gtgctaccca 2280 2309 ctgatgaata ttttatccct aagagtttt

<210> 2533 <211> 1744 <212> DNA

<213> Aspergillus nidulans

<400> 2533

ccaggacaat cccgctatat ctcccacgag ccatggtttg atgatgggtg catatacctg 60 gttttcgcat aggcgcacgt acactgtcgt gcgaggctag aactcatgcc atgatcgcag 120 gttggcacag ccaggagact gtctgaaact tccgcattga gttcgtatat tatggaatta 180 gtggtccaag catgtataat ggcccaagat tcctatattt ttgcgggcct gtcggtcact 240

atcccacctg gaccccagtg ggagtaagag gagcaggttt gtaggctctc tttaagggta gagtgcgcca cacatactct ttaatagaat gaccccaggc gcccgccaac attgagtcat 360 ccaaaagcat atactcagat gagagcaagt agtggtgagt attttagtac gcgctggcta 420 gatgatatcg caaaaagcgt ctgtcctcta ggttccgtat aggtcttgac ctcttgcata gtctcacaag cgccgttaaa ttcatatgag ccagtttatt ctccttctcc cagctagctc 540 ttatctacat caccaactgc aataacacca aaactgggct acttcaaacg gaggcaccat 600 catgeogtet geaateeace tteeacattt egtgteetat agttgaeeca teaagetaca 660 accagacaac ctcaggtccc cttccagcct gcagaagccg gacgggaaga aatgggacgg 720 780 teteaaggea atatttettg aaetggatat gggatgeeag cettteetgg ceatteaget 840 aatccagctc ttaatgctct aggagcgcca tagctaccgc ttgtttcctt ctaatggcca 900 atataattag gatgctacaa gtatctgctt gattgttcca aaagctcgac ggacaatacc gtttcgcagc cagtttatcc tgtctgatcc atcggaagca tatccgagcc gatcggatgt 960 tatgccgaca gttatctcat attctccagc gctacaaagt aagtgcatta ttttaggttg 1020 tatcattgaa gactgcactc atgataccga actgttcatg cctggggaat actgatgcta 1080 gaggctagat acgaagaggt cgcgggtaga ctacatctat tgttgtccag gtgcttatgc 1140 gggggagtaa cctgtattgg agtaattatt acctttccat actagtctta ttagggtata 1200 ccgtagttca atatgtgtct attgtgataa tgcagggctg aaacggctgt gatagggaac 1260 ttattgaact ggtctaggaa tgtcatcatc ccattttcag atgttqaqct tgtacgcaga 1320 tcataacata ctgtagagag gaccttggag gtagactgga ggcacgagcg gagttattga 1380 aggtgcaggt ccatctcaac aaggtctgta tgaggaaaag atatcctagg aatctaacac 1440 agtgcaagtg tecacagett gatggttaet getategega ttgtggtega atccagaata 1500 attaaagcat ggtggcattt ctgtagggtc ggttgaaaag tatgtaaccc tcagtgacat 1560 gtcagtagcc aatgtcgttg aggtggcctg aggaccttgc ggattcagcc acatatatta 1620 gacctetgta tectatecag eccagaaate caaccateee ttettetea gaattaaaca 1680 cacacttgtt atagcttcat ataattcata acttattcaa ctacaagcaa attttataag 1740 1744 gtat

<210> <211> <212> <213>	2534 844 DNA Aspergillus	s nidulans				
<400>	2534					
cgggggttca	tggccaggag	atggatgagt	ttaatctatc	tagcttagct	gcccatttca	60
ctgcagctac	ctgaattaat	atgctgttct	caggaatatg	gagcgaaatc	ataagtagtt	120
gaaaggtcgc	tgggtttgtg	aaggagggga	atctacgctg	aaaaccgcgc	agcaacccgt	180
cactgggtca	tatcaagtaa	aatctaccta	ggtcttctct	aggcgtgaag	taacttgata	240
caggaatgcc	gatgtagacg	aggagcgcag	acaaatgcca	ctggcagcaa	gacggaactt	300
ccagacggga	cttttgagga	gctctgactc	tagcgtgatt	acaatatgga	tatacccatt	360
ccaataaaga	gaaattaatt	atcgcctttc	cgttcctgca	gtgccgctga	atcctcgagt	420
tgggagcata	cccaacagct	agcgagagca	gcataatctg	attgtactct	actcactaag	480
agacatacat	acagctcttg	cttgtgttct	cgaaagtatc	tcagtactta	taattagact	540
caagcgacaa	gtaaactcgt	gttctcggta	tattatattg	gtatctcatc	agggtatcca	600
ggcaagctag	aagggctccg	tccatctgga	ttcgcgaaca	ttatatacaa	agtccttcga	660
ggaaccctta	gaatgcaaac	ggatgatggt	acaaagcaaa	gtagagtaga	cgttcaaggc	720
tgtctatccg	gacaatacaa	cgcggtgcaa	gctgaatcaa	atcctgccag	agacgctgag	780
aatacgacgg	gaacgcaatg	catgccatgc	aaacgacaga	gcaggatgag	ccataacgcc	840
gatg						844
<210> <211> <212> <213>	2535 4401 DNA Aspergillus	s nidulans				
<400>	2535					
tgagaagctg	gacttcggcg	gggtgtttga	ggcgccaagg	cagtgtcatc	tttactggat	60
ggacgctctt	ctccagtggt	gggagaaagc	gatacggaag	gtcttgaagc	gtcggataga	120
gaccgagttt	tgggtgaagg	gcgcaatgat	gggccaaaca	agctggcttt	ttctcctgca	180
gagtcggtct	gggtgcctga	ctgactcaaa	tcaggccgtt	ccgatttaga	ccgctgagac	240
aactgttcgc	tgaggttgct	cgcgaatgga	agcgaagggg	cgctatgaga	agctgtcgat	300

qqaqtcatqq atqqtqccat actttcgctc gtcggcctcg tactatgcag tcatggtgta 420 attggactcg gtttaggttg tatgcaggat tgcaaaggcg gttgaggtgg agggcaagtc 480 540 qctqtctcaa cctcaacqqq qatcqaaqta acagaataaa cqaggctacc ggaatgtcag 600 caqqqaaaaq ctatqttttc acagacqcat tacqcqcaac caacaacqat qqqttcqaqa 660 tggtttgacg tctggtccat agcacattaa accagccccg cactcggaat tacttctttc 720 tcattqqctt taacttgaca atcaaggatt actaattatt acatatgagt tccccaacgg 780 gaagtacaac tataatgtgc gggcgccacc atgtggtccc agagatgcga ttggactggt 840 qqaaqqaqca qqcaqqtqcq ctqattqcta tqcatacaat aatcqattaa ttcatatcat 900 ttcaattcat taagatatta ccactatgct aggctcattg cattgctgaa aggagcaaca 960 tagcactece aateattate egaggaateg eecaatgaeg gggteageae attateaega acttgccata cettcacaat cacagetetg gtacgageta caettaggae gttgtattet 1020 gacatggcag ccagtgcgcg gaggatcaac ggccgcccgc acacttcatc cccgttcgca 1080 tettteeaga geteategtt gageggatea agtteaaegg eageaaegaa aacaggeeat 1140 gccaggccta cataggttcc cgcatcaagc atatccgaga caagcctcag tatctttcgg 1200 acatactcaa ccacgagcgg cgtggtgggc gaggcgtcat tcagtgcgca gtgcagatat 1260 agtacagcag caagccgttt catttcagca atggcttgaa gggctgcatc ctcttcttcc 1320 acgtcctgga tcaattcttc aagttgtcga catagagctg ccgactttgt tgaaagcgcc 1380 gcatgatetg aattegaage eagttgtege ettgteetae ttageteggt aatgtetgae 1440 agtattgaaa ccaattctgg actgcatccc atccaaggat caattttgcg ctcattgtgc 1500 tgccagtgat cggtaccaaa gaggggctgt tcgccacaag cggtacggcc catgatatcc 1560 tgaaaggcaa aaaaccgttc ggcgaaggta gcaacttctt gctggcgtgg tgttgaagca 1620 gcttgctgcc ttctgaagcg gatgagctcc tttgcgccct ttaagtgaac aatccagcgc 1680 tggtcgcaat gatcaacaag ttcatagaga catagcagca tcataacaac cagaatctcg 1740 ggateegagg tggaaacgag egateeagga geggteaace tatageggag acettteaag 1800 actteggatt tgagacgaag teceagagea cagtactteg gategtetag egagagggeg 1860 catgetecta aggecaatat egeatttgag aetgtetegg atgetgtegt getaaatggt 1920

atgattatcg atgcgagtgg tgatggggtg ttggcacttg caattgtccg agggcatatc 1980 cgttggacat aataatcgaa caagtgccct cgaattgatc cagagaactg cgggaggact 2040 gataaagatg gcagcggtgt ggctaactgt atcgtcgata atccgagtcc ataggacgaa 2100 gaagatttca ttcgattcct ccgagtacta acaagagcat gatcatcctc tgtaggcgtg 2160 acctggtacg gctgccgaaa agcatccgtt aaactgttta tgaagttcca agcctccacc 2220 cggggaatta gacaccattc ttgctcgcga aacgaaaaag cgttcgagct ggaaggcgac 2280 ggtgtggata gattttcggc agctttggat ttgctccaaa ccccagccct tccaaaagcc 2340 tggccgcgac tggcaaattc tgactcccac ttcagaacca ccttggtcga acaggttagt 2400 ectegettet ggeatttggt caageetgge ttttgttgte acaaegetet egaettgege 2460 gacactggga gcatctgtcg cgactgccgg tcttctctga acccgtcagg tcgttggcct 2520 ttttcctagg cattcaacag aatgtgcagg aatatgcggg ttcattgcag actttgaacg 2580 caggatacct cagcctagac tgatctcggt tgaggaagtt gaagatgctc aggattgcta 2640 atccggtggc gaagagatgg gtgggtcctc caggcctgag gcaccagtgg catcttcagg 2700 ccactgctcg tatctacctc acttagtgct gttgtcttct gctaataatc ctgagatgca 2760 atgagtggga tatgacgcgc tataaagatg ctttgtatgg tagttgcgga aacagatgtt 2820 gcctacgtgg ttgggatctg taagcatgtt ggggttcgtc tgatcaagca tactacatat 2880 aatatgcaga tgagccataa ttcgttatct tcgcgccata attccatata cagttgatat 2940 acatatattc agaataacta tacttcaaaa ttcctagcag tgaacttcgt cttaaagtta 3000 tactgcctca caaaccaagc attccacaac tcccactctt gatccgcatg cgcaagttgt 3060 atctaatgaa tgtcagcatc acgataacca ctttagatgt tcaggggtaa taaaaaaatg 3120 gaagagagaa cgcacatcaa acctcctcaa aaagctcggc acgagcttat aaatttccat 3180 gagagatata ttctttccaa tgcacgtccg cgccccagcc ccaaactgca gcatcgtgcc 3240 gttcatcgtc ttcaacctct ccgcgctcac gttcaaccac cgatctggaa tgaagctatc 3300 gacatcaggt ccgaagattt cttcgcgcct gtgtaacacc catgcactgc accctactat 3360 tgtacctcca gggataaaat gcccggcgat atcaataccg gaagcaggaa caacgcgttc 3420 gagggagaga cctgcagctg gatggatacg gaaggcttcc ttgatgcagg cgtcaaggaa 3480 ggggagtttc tgagactcgg accaggtaac taaacctgag gaccggtttt ccactattcc 3540

gtgagecaeg gegttgteea gttegeeteg gagaegegee atgtaetegg gattettgag 3600 caggtaatag aaaacagegg egagaetgat agetgtegte teggageegg caaaggeeat 3660 agagacggcc attgtgagaa cgcgtttctc cgtcatgaag tccgggcggt ctttgccggc 3720 ttggataaat ttcgtgagca ggtcttgctg ttgctcggcc tctgttctgg tgccattatc 3780 agccatcaaa cgctcattca tgcgctgtcg cgcaaatata gccacagggt gcgagttatc 3840 egeaateece catetetgea aaacateata aateggatte tteeagagee atttateaag 3900 ccaqqqcatt tqaccqacqq qqcctqcqta qtcaaaqatc cqaqcqagtg atttcagaat 3960 cccgtcgatg tcttcgttct tctctataaa accgtgccgt ttgctatacg taatgctgcc 4020 gatgacgteg aacgcaaaaa actggageca gegtgeaaaa tegcatgtet tgecagaatt 4080 agcgaataaa gctgctgttt gatctaaaaa gagctcgact gtttggttga ccattggctc 4140 gtattgaacg agggaggaca ttgagaaggc gtggttgacg gatcggcgaa gattggcgtg 4200 gaagctctca tccaaggtcg agaaaaggga tggaagaggc tcgccttttg agacagtcat 4260 ctggacgggg tagaattctg actgggactt gttagcctgg aaggtatagt aaaatggctg 4320 gggaaacaga ccttggtaaa tcccttgttc agcccgtaaa tgactttgat agcactcgga 4380 4401 gacgcaaagg acaatgtgtg g

<210> 2536 <211> 1761 <212> DNA

<213> Aspergillus nidulans

<400> 2536

ctgtctactg gaaccggtgc caaaaccaga aggcccagca ttcgtactcg atcctgcact 60 cccacttgct gctgcgcttg cagcggcagc ctggctttcc aacctccttc tcaaaccctc 120 aaaccgggcc tcatttctgc cacttctagc agaaaacact actccttcct ccccaacgac 180 ccagcctgga accetecace eggaacteee acteeeegee getagaggea acacetetge 240 tctccatgca acgcctacaa tccaaccaat tgcggacgga agaagcatgt atgggaattg 300 360 tgacaatgag agctgcgcgg cgattaggta tgttgttgac ttgtcqqtca qaqaaaqcqt tagcggggag aatttgtgcg ctgcgtttcg tggctgggaa gacgqcqaaa taqqtqtqqq 420 tgtagacgta gacgtagacg ttgagatcgt gtaccggtat gtcgagggta tggaggcgtg 480

540 gtactgcgcc aacaaggcga atatagtcgc tgttgggcca gagggtagat aatttacttt 600 gccgaatgag agcggtttca gggcgagtgt tagaaggagt ggagggagga gcgtcgtgta ggggagtgtt gaaattatga atgtctgttc catcgctacc agtcagccat catctatccc 660 720 atttcatatc cattttcaaa tcctatccag caaaggaagg atgggtaaca agtatgagaa cgtacagcaa ccttccqagc accccaccc cgctcaacaa cccggcaatg ataaacgagc 780 agegeggega acagggeete egtagagttt gegaaceegg cageetgeea taccaggeag 840 900 cgccagaact gcccgtaggg aaagagatgg ggggagatgt aaatggaggc gaaatgtttg atgtcgaaga tggagagcgc gattgaggaa gcgattgtgt agatgagcag ggccttggtg agaggagtat ttgtgaaacc gctagtttgc attttggaaa gaatggatgg aatgtcctaa 1020 ccgcgcaagg tggcgccggg ttagctgggt tgttgctagt atatcagtag ttgttgtctt 1080 aagcaggatg ataatggaga cacgttgcgg agagagcgac tgtgtaagtg caggagggtt 1140 gttgttccag agtattcagg gacctcggca tgccgagatc tacaatctta ctactagaac 1200 aaaagtccac ttcataatat attcttgcat ttgcgcatgt aagtcctcga tgcctaattt 1260 attgctcaag tattgctagg ttctatattt ttcatctcct cagccaaagc ctctttatac 1320 cgcatcaagg ctgtgtccaa tgcccgaatc gtcggcccta atagacgttt caccgcttgc 1380 tegecaeeeg gtataetate eagattgaea egeageettt teeetgtage etgtaaeaee 1440 tegegegeat getgetteac ettttecace teaacttgae getetttete tgegteegte 1500 gcaacggcgt tgatacgctc catggcgcga ttgagtgatt ctactagtga cgctacttcg 1560 ctcgcacggt ctggattgcc ggatagaaat gcctgccaga attgatgcag aaattccgtg 1620 gtggtcgcgt gcgtaagtgt caggcggtcg tacagagctg acgtcagtcc atatgtgtct 1680 gagtttgacg caacctgtgt ctgggtacgc ctgtccttga tcacgttgag gatttgcgtg 1740 gaagcgaggt ggcggtaatg c 1761

<210> 2537 <211> 2012 <212> DNA

<213> Aspergillus nidulans

<400> 2537

ctctatgtga actatgggta tgatgcgctt cgactcggca ggaccgactc taggtcggat 60

taccecttta ctqttccttc aactqccttc ccttcctcca cacctqtqaa tqtcccctc 180 gccagcaccg tgtctacaac tccgcaaatg atcccccaag ccccattcaa catggtcgat ccatcaatat ctttgccata ctcttgttct gcccctcctg ctacctcaat gagcttcctc 240 300 cctccctccc cagtgagcga ggtaaaagct tcggcgccta cagaggggga cgccgcgtca aatacgcctt cttctagggc tgctcgaagg gcacaggagc agattgtgca tagcgcaagg 360 cctattgctc ccaagacaga gacactcaag gccacgccgc cgaaagtggc agagcataag 420 480 atgateegta tateategte tgaeggeact tecaaagagg tegetgeeat teecaaagee tcaatccagc gtccacctag gcaaaaaaca tactgcacca tgtgtaacga ccagcccgac 540 ggctttcacg gagaacatga gcttcgtcgt cacattgagc gtgttcatgc cgtcgtacga 600 660 aaagtetggg tgtgcgttga tateteteet gacaaaaagt tgcatacete ttgetacget 720 tgtcqqaccq qataacqqtt tggatggtta agcaatqctg ctqctcqcct tcgtcqtacc catctcaatg catgccaacg tggccgcggt gggcgcggaa aagacagtga gaaacgtggt 780 ggcaaagggg gtggcactca tccacctatg gacatcttga agcattggat gqtccagaaa 840 gaggagattg ttgttgaaaa tgcacagatg tatcctctcg atgcggacgg actagttgat 900 gatattgtgc ctgttccaac caatccgcta gacgacactt cattcgaatc gctagcctct 960 gaggacttgt cttcacaggg cacggaagca accggcatga acagttacga ttcatttact 1020 tcatttccta cgacgaattc gtatccgtcg tttgagaaca cctgctacct cgattctcaa 1080 cctctagttc ctgaagtaac ctcgtacgtc tgatgcctct attctaggaa tgttcgatga 1140 tttcccgatc tatattcgca ccttgtgttt accaagtacg tcgtcggagt tggtgcttat 1200 gccttttcgc ctttaagcat gctttctcct tactttatct ttcatcttca ctttttttct 1260 cgtctcataa ttccacaagc ttgtggaact tgttttctta ttcactttta ttttcacatt 1320 ctcttttttt tttatctatt tacgggcaac tggtttccga cttttacctc attgggggct 1380 tacaggtcga atcgcgacct cgtaatcccc ctcaaagagg gatacgacat aatgtgtgat 1440 gatgagcagc gaagcagtcc acgagactat acatccagaa tatactgatt cggcgagcac 1500 gcctaagaac aacaactcaa ctaaacccag accgcatcaa cggtgggaaa acaagatgag 1560 ctactaattt teecaatgea ceaetgeagg gaetttggta aceteeaate tteaetaeac 1620 tactatacta getgeaggea agettgteet gtaggetaca tetattaeta agegegeagg 1680 aactgaactg aaactcggtg agataacgag caagggcagt agcaagccag cagagttggt 1740
tgacttgatc aacttgagtc ctcattatcg acatgtgcaa tgcgcattca ttgcggcatt 1800
cctggttccc aggtgcctag caggaactga cgactgctag ctcgctatca tcccctcgtt 1860
tctttgagcc acgcaagcag tcgggctatg ctgctgagca gccagtctga attatttta 1920
ttatagatca aacatgcgcg tatgtggcgc agttgagctg ggcgtaggac ttgtggactg 1980
ttgtggctga gacgcgggct gtaaacgttg tc 2012

<210> 2538

<211> 1082

<212> DNA

<213> Aspergillus nidulans

<400> 2538

aaaggaagcg gtggtattta ccacataaga agattgacac gctgtccagc gtgaatctgt 60 acggagcgtt cttttctggg gcgtccggcg gcaaaggcgt ttatcaagca gggttattaa cgggagtgtg gtgtttacgg gcgagtatgg ctagctatag acccaataag gtaccttctc 180 240 ccaatttacc gttaccgccg tactcttgca cgcgacgagg gggaagaaag actaaccgta 300 catgatgcag cgcgttcctt cagccccata cggtgcctcc aaagccggcg ttcgcaacat gacccacacc cttgcgatgg aatgggcgca gtacgggatc cgagtcaaca gtgtctcgcc 360 gggccttgtg cagactgcta tgacgtattg ggtgccgcag cagccggatt gggagcagca 420 480 gctgaaatat tacggaggta ttccgcgcct ggcgcaggtg caggagttag gaggtgcgta tgtgtacctg cttagtgatg cagcaagtta tacgacgagt attgatatcc cggtaaatgg 540 ggtgattgga agtaagttct ctaatggaga gagtgcgct gcggtgctga tatttttgta 600 gtttgttaaa gatggcccga tagggttcgc ggaataccgt cagtggtcct agctgtqttq 660 gttgttgcca tgatggactt aatattgtgt ttgctcgatt agtggttgaa caattgccaa 720 agctaaatag attcaatgtc aaaattgatc tttccaagcc cccgctgcca ctgactgacc 780 tatatgggca ttgggatgga ctcccatcaa acgaggagct aaagtactca gttcgatgga 840 cacagagtga gattaccacc catccaatgg cgtcagcctc gctacgaccc catcaacagg 900 cgagattgtc gcagtccttc taactgcaag cttcttcccc ggatctgcca gctccatctc gaaceteece accattgeag caaceaggea agecaactee geetttgeaa acceetgtee 1020 aatacagcta cgtggtccat gcagaaaagt catcagggcg tagttctacc gactccagcg 1080 1082 ga 2539 <210> <211> 1689 <212> DNA <213> Aspergillus nidulans <400> 2539 60 ggcagggctt tcatagtaaa ggtactcgcg tacgttaaag ctttcacaga aaacctggat tgtatgatca cttgaaatca ttcttcagat aaatacagta gtactcgctt tgacttcgta ggtctatttg acttcgctgt ctgctggaat ataccgttga ctctatactc accgctacta 180 240 cacagacgtg cgatgcctgc gtagaccagg aaagcaggtt tgagtgggag tccaggcgaa gggaaagcag taactggtat cgtaggattc ggggcgagtt gttctagaca atgacacagc 300 aacqttqqac aqcctatqqc ctcaatqccc ccaacqccca tttcacccqq cctqcctcac 360 420 tgcctgatac tagaacattg actacatgat actcagagca tcggtattta gattctgacg atgttttaag acgttcagga tacacctacg tacatctacc agtagctggg catacagcac 480 catggagact tttaatcaag acgacatccg cctactggcg aaatgccaaa gataatcaag 540 600 cgggagagga gagtaggtcc tgccacttac ggaatgcatt gtatgggtcg tagatcttct tcagctgctg cagtcgaggc aggttgggtc caaagaggta cctggcagcg aaatcgtgcc 660 ctaaccggga gagaagtttt agcaatctat gctatgccat gtcactgtaa tataagcaaa 720 gtgaccagga ccggcctccc actcacctgc ataatttgga tacgcggcca cacctccacc 780 840 atcaatqaaq acqtcqaqqc qcgqatcctg ccagcacagc agcagaccga cgttgtagag 900 gtggtctcga ttcgcgcacg cagtcgcttc caccgggacg ctcatcagtt tggagaaagg 960 cagcageteg atggegagea egetgteece catetgtgga aaeteetgea tgaeetggte 1020 aaagtcgcgc cagagcacgg ggataaggtc cttgtctggt gggaagcgca gcttggtgcc 1080 accgccgctc tttcgactgc ggcgacggtc gaaccggacg ttggcctgac gcgccagttg 1140 ccagtagggc atcatgcctg tgtggttgat gaccgggtcc agggcgagca ggggcgcaaa 1200 gaaggtegte geeegtteet ggeaecegtt gtagaagage aeggeeatga teaeegatte 1260 gtctgcagac tttggcggg ccctgaaccc aaagaagagg ccgctgtcct cgtcctgctg 1320 ctcgtggaac cagttggcga agtcgatgac cttgaacagc ttgctggctt tgaagtagag 1380 cagcccgcca aacacctggt ccggcagcct atgtgcccgg aactccagct cggtcaccgc 1440 gccaaatgcc tggcctgcac cgcggatcgc ccagaagagg tctcgatggg cctcgtccga 1500 tgcttcgagg acgctgccgt tagcgagcac caccgttgcg cgcagcagac tgtcgacgat 1560 cagcccgtat cgcctgtga gccagccgta ccctccccc agcgtcgagc cgcctacacc 1620 cgtctggctg tgtcgcccc accacggcga cccgtaggcg cagtcgcct gttgacgtcg 1680 tcccagcgc

<210> 2540 <211> 3137 <212> DNA

<213> Aspergillus nidulans

<400> 2540

qccaqqcacc qtqaaqctcc cacacagctc ccaatccatg cgccgtgcac aatgccaact 60 tcttcttaag tgtgatctga agtcgtgcca gcacgaccgt gggatatatg gcaaggtata 120 180 gatcggcgaa accggacatt gctattcatc cgtcgcgatg agcgaatggt acgaatgacc ttagctaagc cgtgacttac cccctgtgaa tatagcgtat cccaccagga tcctgttcgg 240 300 acggcacgtt cctgcccctc cggcgacgag ctgtggtttc cacatggcct ctggtgggtc 360 acacatggtg aagaggacga caatgcaaat cgacgatgag acaaagacca aagccgtcag 420 cacccacage cagateegat ggaatetgee ggggtteatg acgeggttta gaagggeaga 480 gatggcgagt ttcggcattg tgaacgagag gatcccgaag gcgaaatcga tatagttaat cagcagaact cttgtcaaca gatccgtccc accctctgct gtgatggccg gagtatgctt gccgaatccg aaggcaacat tgacagtagt tattacagtg tagctggtga ccatgatctg 600 tttcattagc cgcctactat atcactgacg agggcgagcg gtggagccta ccattgagac 660 720 tgtgataata tagtcatcaa gcccgatatt tcgcagccat cgcgcccgta tgtacagtcg 780 cgctgacacc ataatcacgc tgacggcgaa gaaggcccag aagacgccga ggatcatggg teetttggte tgggtgagat teaccaagte cattgegteg aaactgeteg geageeegtg 840 aagatcgacg aatgcaccca gccagctcaa cccttctcgg ctaccacctt tatgggcagc 900

ctgaccgcat gatcaggaga ggtcagacaa ttagttaccc cggtgtctcg gtggattggc 960 gtcgccacgg cttctcgcac tagaaaagga ccgttccaat gtgatttaat cgaggcgcca 1020 atcatcccta atggtgtcac aacacgaaat ttaatcagaa actccgccga ctgttgtggt 1080 aacgeggtgg accataacag tggagacatc cacttcaacg atcgtcctct ccccccggac 1140 gggccgaaag gatcaggacc ccggtccatc taatcgtttt agtgtctcac tagaacaacc 1200 cacteggega gacggactgt caacatetag agtggactgc tgggctagac tgcccgcgcc 1260 gtcgagtaaa gccgtgggac tctcgtctag cccggtttat gtgttccctg tcaggggctc 1320 ctqacctctc cqcaaactgc aactctactg tcactcctgc gaatctctca aacagtacag 1380 tcatattcgt ctagcttgca ggatcactgt caagatgcct cacaccgaaa ataccacgaa 1440 tgcgtgtgcc aatggccatg gcaatgggta caacgagaac ggcataacgg tcaatgttga 1500 agaactcgcg gtgtcaccta acctcccaga ccaggtcccc ggactgctcg acaagattgc 1560 tgcgttcagt aagcagtatc ttggggcaga gcctcaggcc aggttgaaat tgctcgaaac 1620 agccaggtca ctggtgtacg ctcttgagac tcccegggag gccattatcc gccactgctg 1680 ggcagaggta cgtgtcgcgc tgatcgagat ccagttgctg ctatatattt atctttctgg 1740 aggacgtgct aagagatatg ccagtcaacc agttacgccg cgctcgaaac agctgttgct 1800 cttaacctct ttaccgcgtt gggaacacac gagtccaaaa ccgtcgcgga gttggcagaa 1860 gcaacgggcg cagagccagc actgctgagt cagttagaga ctggtccgta tgtgatacga 1920 ctgtgccatc gctgatcatc ataatccgta tgcaggtcgt ctgatgaaac atctcgctgc 1980 catgggcgtg atcaccgaga ccggatgcga tgagtaccgc ccgactagtt tctccaaggt 2040 cctgacagtg gaaaagtaca gtgatgcctt cccactcatg tatgcgacgg ccgaatccag 2100 gagegagtga attetgeagg etgateatge ggeaggaeat egegatteae eatgggtate 2160 ctcgccctcc cagccttcct cgagaagacc aagtaccgca acccgacgag cgcgacagat 2220 acagcattcc agctgggata caatacagac aagggcttct tcggtcttct ccagcaggaa 2280 cceatcacgg caaagcgttt caacaatcac atgggagtct atgcgcaagg ccgcgctcgc 2340 tggatggatc ccggcttcta tcccgtgcga gagcggctca tcgacggtgt tgcaatcaat 2400 caagaggatg tactcctggt cgatgtaggg ggcagctttg ggcacgatct acttgacttc 2460 cgccgaaagt ggccggacat tcctggccgc ctcgtgctcc aggacctccc ggaggtcata 2520

<210> 2541 <211> 2287 <212> DNA

<213> Aspergillus nidulans

<400> 2541

gctgaagttg gcgcgtctaa ttatagccga cacaacgact tctggttcac cgttgaagga 60 tgcgtctcct gagtcgtaca acagtcagac ttatgactcc tgtcttgact agatctccaa gtctagtcca cccaaggctc acccaaggct agtccagatg ggcgcatttg gagattttgg 180 ctcatacgat atccgcgggg cgaattcaga cggtaccccg tagcatcccc tctttacaag 240 gaaaactata tccaatagtc cagtacatca cttgcagtaa ccaccagcaa ccatgcctac 300 ggtgcctcgg cacctatctt ggcgcggacg acgatatcgg catacgaggc aggcatagcg 360 cattgcggag tcggcgtaaa cacatgaccg gattcagctg cgcaatagga ctattactgc 420 tgcctcggaa ccctcatgcg tggtttcggc tatcaaaacc gaacaaacag acacattaga 480 ataccatcag tetatecace agtecactea gagtaetttg gagtagtetg acagtetgae 540 agtetgeaat etgaetgeag tetgegggeg teaeggageg eettaategg gaagagatee 600 ccctgcgagt gggctggtcg ctgtggtcgg actattgaat ttgaaataat acagattact 660 ggatccacta tetatggtca gtcccctcca ctactagcct gggctggcga tcagcagggg 720

ctcgcgggac ctccattggc tggtaacgag ttcatcctac gtgggaagga tggtgatgga tegttttete titettgtta eteatitege gitetegate aagagatieg agagigtaag 840 tgcaagetea getggagete gaaceettga aetaaeeeet tttetegggt tggteegttt catgtgctga gtgagagatt gggacttctc caggtcgggc agcagggatt ctaagtgtta cagtaaatct ccggtcgctt gccgtatgca gctcggtctt caacggtacg gtggctcaat 1020 tttggtaaac aggggtacgt accttgctgt gtcgcgtggc tgggcacacg gcacacgtgt 1080 ttgagtacgt cgacccgcgg tggtatgtag agttgtacca cgaagtttgg caagccccga 1140 caacceggtt gaaactggga gggggcagtc tagaaaaggt tcaagtcgaa tgaagaaatt 1200 actctgatta gacagccagc ggaaaaaagc aattatcgat tggtggcgtt tcatgctggt 1260 ccttctattt tggtgcaagt ctgcaggaga gcctggagag cgaagagcaa atcagccacc 1320 gtcaggtctg acaaacatga agccattctt gtttcggtag gctaaactct acagtgtacg 1380 gagtatagac ttttggattg gtgcaacgaa accagttcat cccgcgtctc tctgaaacgc 1440 gegetgtgta tecatggata egetecaega cateetgggg aactaetgtg ggeaactetg 1500 agcaagtetg caccaaaccg tgcccgcgtc tcagggacca cggctcctgg acgccgattg 1560 tcgtaggagg gtcaccactt ggactacaac tcgtcgactg caattctgat ctccagaacc 1620 gtccctggcg acgtagtcag agtacggttc agtccggaga ctacaggaca ggattcaggc 1680 acgcagcaca acctacgcct ctaagggtga agatcgctat ccaccggcta gcctattgat 1740 agatcageca atgtggttte tgatetggtg ttggetgeaa ageetttgea acegggteat 1800 cggagtctga tcgcccctta aaacatgaca tccactatgt cagtcaaaaa tcatcgggtg 1860 ggcatacccc ttgcctacct aggcagtccg tatgccgtgc agcagcatcc tgtacactgg 1920 atctggatat tgtaatgggc gaatctggta aagtattgga cgtggttaga atgtgatggg 1980 tgtgcaatta ccgagaacgt cagaagtttt gccaaaccgc cagagagtgg gctgagtgtt 2040 cagtgcacgg gcggatcggg ttcgatttta aattgcatat ttcgtctcga cccgaagatt 2100 aatetteece eteccagtee ceagtgattg teacgtatta ttattategt taaaageget 2160 tgcgttgccg ctggtgctgt cttctggcat ttcacctatt ttccctcgca tatgcacctt 2220 actggtacct ggccagcctc ccacctcgtc actcttttat gttcgctcac tcacccaata 2280 2287 gcattga

<210> 2542 <211> 2560 <212> DNA <213> Aspergillus nidulans

<400> 2542

60 gcaactgatc gacgatcccc aggtcttcag gaacgttgtg acagactacc atgccgatcc tactggagca tccgattcca ctgccgccat ccaggccgcc ataaacgacg gcaatcggtg 120 180 cqqtgcaaqg tqcaatggtt cgacccgaaa aaacgccatt gtatacttcc ctccagggac atacctggtt tccagcacca tcgaagtact atttgcaaca caaatcatag gcgatgcaag 240 300 ttttaaccgc atcccagtat ttgttcccgc atgtgactaa catacttggc tcaggcaaac aattggccga ccattaaggc agcaagcagt ttcgttggtc ttggtgttct ctctactaac 360 420 cagtatgtcg gtggtaccgg gcctgatggc ggggatgggc agtactatgt caacaccgcg cgattctaca gccagattcg caacctccgc atcgatatta ccgccaccgc tcgagacgcc 480 tacgtctgtg ctattcacta ccaaatagca caagcaacca gtctgcagga cgttgaactg 540 600 attgccacaa cagggaccac acagcaagga atttgtaggt tttcctttgg atatatcaga 660 aatattactg acgtcagcga agtttctgag aatggcagtg gtggtataat gtccgatgtt acgtttcggg gtggtaactt cggtttctgt gagttactaa cttcggagca aattcaatct 720 780 aaatatgctt tggctaacaa agacagacgg cgggaaccag cagtttagtg cccatcgaat 840 qacctttatc gqttgtgcaa ccgctgtgca gattatatgg gactggacct gggtctggaa 900 atcacttgat attcagggcg ccgaagttgg gcttcgtctg gtcagcaacg acggcagtgg taatgttggt tcagtcgcct tgatcgattc caaactcacc agtgtgaaca ctgctatcat catagecect gegtetteaa etecagggae eggtaegaet gggttggtte tagataatae 1020 cagaatcgac gqccccattg tggataccgc tggtaaggtt tatttaggag caggctacta 1080 tgataactgg gtgcttggcc ctacatacag gggtaccacc cgaacctggt cttcagcgcc 1140 cttctcatcg tatccgcggg agcagtcact acttggaaat agggttgatg gcctcaacaa 1200 tgcgccgtat tttgagcgca aaaaaaatca atatgcggat aggcctgtcg gagattttgt 1260 ccagctcaag tcactaggtg ccagaggtga gaacattttc gttgcgccat tagtcggcta 1320 gctaacccag ctcaggggac ggagttactg atgatactgc cgccgtccaa cgggcgttta 1380 acgagcacgg gagcggaaac aagattatct tcgtggattc tggcacgtac atcctgactg 1440 acacggtggt ggtccctaaa gatgccaaaa tccatgggga agcatggtca caattcgctg 1500 cttctggcag cgcattctct gatgcaaagt acgtagtagc tacccactcg cgataggctt 1560 tgctaatgct gcgctcttag taaccctcgt gtcatgcttc agatcggaaa cagggcagat 1620 gttggatccg ttaagctaca atacttgata gtggcatcaa aagcaggcac agctggggcg 1680 gtcctgatgc agtggaatgt caaggcagct agccctggtg aggctgccct ctggggtatg 1740 ttgagtcaga cetttggcat tetaaaggeg tataettaca gatgtetett ateatagaeg 1800 tecatgeceg gattggtgge getattggga eggeettgae geagacagaa tgtecaceae 1860 tgactactgg cactaageeg accteetgte aggeageaag ceteatgetg catetaacae 1920 cqqaqqcttc aggctatttt gaaaatatgt ggctttgggt agctgatcat ttgatagagt 1980 aggttcattt tccattgccg tatctttcag gtggtctggt atttattttt tgctcgattt 2040 ggatcaagta ctaaaactca gctcagtgac ctcgatctga atgatgctta caatgatatg 2100 gtttgttctc cgctaggaac ccattaatta gtattgtttt gactgacgag attgcagcca 2160 caattqaqtq tctacqttqc tcqtqqaatq ttqatcqaaa qtacctctgc tacttggcta 2220 tatggcacat cctcggaaca ctgtgtcttc tatcagtaca atttccacca tgcacagaat 2280 atetteacta cagtgateca gacagageca ecetactace aacetaatee taggecacet 2340 gcacctttca acaatcaagt cgggaaatac agttcagatc cagcctataa ctgtaatgat 2400 gcaaatttta atggctgcga cgaggcctgg gcagtcatca tcacagagag tcaaaatatc 2460 catateggea gegegggeac ctacteetgg tttagtgeat atacteaaga etgeategae 2520 cgccattctt gccagcaagc gttgtggcgt cttagaaata 2560

<210> 2543 <211> 901 <212> DNA

<213> Aspergillus nidulans

<400> 2543

gcccttacat tgtggccccc gagccaggct acgacttttc ggtcttgatc gacttgaaga 60
gccttcccga tgatcataca gcgcgagagg acctcatcac acgactagct ttgctgaage 120
gcaacgcaat ggccgctccg ttcgagaagg cgttcgatga gttcgcgcag ctggcggagg 180

aagcttcaaa gtacacttcg gaggctgcgc cagcgggtgt tgcggaggga gtcgaagtca 240 tggcgattca ttatcgggaa gaagaggcaa tttatatcaa ggctagtcat gatcgagtga 300 360 ctgtgatctt tagcacggtc ttagaggagg agacagaccg tattttcggc aaggtcttcc tacaagagtt cgtcgatgcc cgacgacgtg tagcgacctt gcaaaatgcg cctcaagtcc 420 ttttccgcaa cgaccctccg ctcgaactgg ctggcgttcc tggtctacag gacgctggtg 480 540 acggcaagat cagttacatc acatttggta tgagctctct caacgtctga aattgtcccg 600 atgactgact ggagacagtt ctcttccctc gtcatttaac accgcagcga cgtcaagaaa atateteaca cateeagace tteegegact attteeacta ceacateaaa geatetaagg 660 tgaaatacct gctcttacat aaatagcatc ttgctgatgg tctgataaag gcatacatcc 720 acactegaat gegeaagega actgeegaet ttetecaggg taegttttgg tteaatttta 780 840 gttgcctgtg tttcaactaa ccaaagatag tcctcaaccg agcaagacct gagaacgagg agcgagaaag gaagacggcg agcggacgca ctttccgagt tcagggatag gaatatactg 900 901 g

<210> 2544 <211> 1896 <212> DNA

CZ1Z/ DIVA

<213> Aspergillus nidulans

<400> 2544

gttggcttat ttacgacggc ccgccatgtc agaccaagat gaatcgcgta gatctccagg 60 catgaagtaa ttttggtcgg ctgaggcacc aggaagaggt ggaactggcg ggacgagggg 120 ggtgtctggt ggggatcggt tcgttacgcc aggaatataa gcgatttgga tgacatttga 180 ggcgcgagtc aagacagtcg atgcaatgga gtgggtagat ttcctcgatt gtgcagcgct 240 ggaagccggg gcccgagcgg cgtacgagct ggctttttcc gattcttctg ctcgctgctg 300 gttgcgcttc ttacgaatga caaaccacca gatgaggaag acgatgattc ctaccgccgc 360 aagteeteeg ataaeteeae eegetatage geeegegttg gtteeteeae eaccegaega 420 actgtcctct gaatctgacg agctgctagt ggatgttttg acacattgta tagttgcaca 480 ttcggtgcag gattgggcgg tcatcacaca tttcgtaccc gacgggcagt cgcatgaagg 540 cgatttttgc ggacattgtt tacactcggc gcgagcgaac aaagctgcgt tatgttagtt

tegettgtag taageggttg atggacaate agtaegeace gtgeggggag agtgggtega gattgtgagg cgacatgttt gaatgttata aacagagatg gatgaagaac aaaagcaatt 720 gtcgtgacaa ggataaggct tcgatgggta tgagataaac aagttaaagg ataaaagagc 780 ggctgccgat caacggcgta gagagcgtga tcttagtggt ataaacgagt gtgataatac 840 tccagacgtc aagtcgtgag ttataatcgg ttcatgaagc agtcaatgtt cagtggcagg 900 aaatgagcgt atatctcgag ggctggcaga ctagagcagg agactataag cagcgatagt catagtgcgg cgtctattgg atgcgggata ttcaatatat cgagattcga ggccggaccc 1020 tcccacttaa agcgttttgt tgcgtgatac ggccttgagg atcgccgtca agaggttgac 1080 gtcgtggaca cgcgttacgg tagttaagta cgagcgcaag ttatggatca ggggaaatag 1140 agcggcctat gaaaaataac ccccctggat gcgaagaatg gaggacgaag aaattgagca 1200 agtcggaggg ttggaaggga gaaatgaagg aaagaataat ggcaataata tgaggcagag 1260 aaggaggtga aagagaaaag gtccagtgtc tttcaactgg ggggttggcg gttgggtgga 1320 gttgagagga gatagtaatc aaaggcacct ggcacagccc aaaggttgcg cattatgccc 1380 acceaetteg actategeea eggacgetee acaaaegtat cacaaatgta etetgagtat 1440 gtacttacat ttccaacgaa tatgtcgtga tttccttgag tttatcttct acactaagta 1500 ttgaagctga gaactggaag ctgagaaccg tccttgacag aattcaaatg gctacaaaat 1560 tcattgtcaa ctggggagag aaaccttgaa ccgtacgaag ccaacttgaa atagtataga 1620 gccaacactg acaatgattt tcccctagct tctctatagt gagttcaatg tgctacaaca 1680 tttctagcat gagcgagaga cgatcacaca acgcaatagc catttcgccc cgtccaggca 1740 aatccaggcc cctagcatga tgtttcgcca gcccgttgtc tcatccgtct gttgtcctta 1800 ctgattccgg ctgggaaagc cgtgtgcgag aagacatcga ggccgtgtcc gaaggctggt 1860 tcaagtggtt ctggaccatc ccacgttcct ccggca 1896

<210> 2545 <211> 1605 <212> DNA <213> Aspergillus nidulans

<400> 2545

aaaaccggga atgaaattgg gacataggcc catggcgtga acccctagac cttaaaaaaa

ccctttggga agaaaccaat gggtttaaat aaaaagtggc agggagattt aattagagga gacgttgcca acccatagaa cgtcagccct ttctaggaag ggaatacctt ttataggcgg 180 gaagcaaagt aaagcacccc ttattgccaa aaccacaaat gggcccggcc aaacggccac 240 ggggttaaac gccacagtga aggtctcttc aggattcatc cccactggcc ttggcctgta 300 agggcgttag tggattgcgt actaaccctt tcgggattta cggggtcgaa aatccctqqa aacacattga tgatccgatc gatccaccat gacatcgtga gagcaaggtt tacgctggaa 420 gtcgggtgac atcacccact gtagggtact ccggagtata accaqcaqcc cqaatattqq 480 aatccatcaa agcctaatcc tttaatttcc tggagcaaaa ccgttaatca aacaatcatt attatgtgca gcaagccttg atagggctgt aggcagccaa atttcgggtc caaatttagg 600 agcaaaaaag tgggctaagc ttccaataag ctttgcaggt ggggctcgtt cgctgaattt 660 tgggggaata ttggacacca aactgccaaa ctgccaagtt cagtgtcagc aatttcaaga 720 ataacgaagc tgtttcgtga ggggtagtcc agtactaaaa ctaaacaaca gtagatttgc 780 agccgcgatt gtggatcaag ctcaggggta aaattaccat tggtcctgtc aaaacgtcga 840 gtctgctaat atccggaaaa aacccgagat tgggggagcc aagccatcta ggcagaacat 900 tcttttgatc ttctttgccg tcagcagctg gacttggtga tgtagtgatg aagatctgag 960 gcttagttgt ggatacaaag cgcggggctc caattgctta tagaaaactg ctaataataq 1020 aattaatatg tacaataggc tgattggtct tgttcatcaa ccgtctcctt acgcctttga 1080 catcaaaaat ctgcggagtc ctcaaccacg ctcctcacta gcatgctctt tttgaccctg 1140 tgactgcctg actcggtctt acaactgaag ggttatcctt caccattagc cggtctatgg 1200 atcgggtccg tctacatacg ttagtgtatg agcggccagt tcacggcatc tttttttt 1260 ttttggacca acgtaactct ttgttagggg caaacgggcg ttcatgtagc cagggcttgt 1320 tgaggacact gggcacatgc aattcccatt ccctcccaag agtccgactc tcaggcggat 1380 ggctgtccag tgtcatgaag ggtaagggcg taataggaat gtatcttgaa gctaccgtca 1440 gcagcgtttg gtgttacagc cccttatcat accgtccccg gtaatggtga gattgaaaat 1500 agaggetgte tgtteecage eectageeca etggeatgea agaaagatag taccettgga 1560 tgtcactggt cttgttattc cactcacgca aactggcttg agtct 1605

<210> 2546 <211> 2311 <212> DNA <213> Aspergillus nidulans <400> 2546 gactataaat tgaagggagg ggcttggcta atttattgag gtcccaataa ccagtaatca 60 ccaagattat tcgaatcgta ggttgagttt cgagggcata atcaccgatc ttttgctcct tcgacaggtt cccccggctt cgtttcgttg ctgtgagggc cagatacgcc agtggttgcg 180 gccacggtaa gactgaagaa ctccagctat cgtattaata aagtatttgt ccaagccgag 240 gaacgtgacg ataaggtgag gaatgtaggc aatcaggtga aacagtcatg tcataggctt 300 ggtattgtcc gaataatgct gtgcagtcac attcgtgaat ccagcacctt caagcatacg 360 ctggaatacc cctgggtgcg agaaaatgtt tgtcgggatc gtagcgaatc cgctgatctt 420 gcgcatagac tgtcccatca catcttggtt ttttcgtcca gctcatggtc atactcaaac 480 aatgatagac gacctcctgg ttttagggta cgggaagtcc ctgctaggac agcctcaggc 540 tccgttgcta cgaaattttc catagtgtag atgccggcct gggaatttct agatggtgat 600 aatccattct ctgcacagag attcgacctt ggaaagacct gatcgagagg tatttcgcct 660 tgctttgagt aggtgatgct cgacaatgcc aataccctca actctaaggc catgcttgct 720 cgctaattga aaagcaacgt ggccaatgcc acatccagca tcaataacat aagagccagg 780 tctaaggtct aacgatgctg ctaacttatc ttccatattt cgcaaagcct tgcttagtgg 840 aaccaccagg tgtcattttt catagtaacc aaaatgtcgt gtcccattta gaagcagccg 900 gtacccaatc ttgattcaag gctgttatag taagtcagaa tgtggggttg ttgttgatca 960 atggttctcg gtcgaattcc agagccatga cgtgattgag ttaagaatac gtgagtataa 1020 tcacaatgca gcgaacgagc agggcaggta aaatgattcc gaaggagttg tgaggacaaa 1080 tagettagaa taggtattee aatatettta tettgtagte titgetgaat titeeteaat 1140 atgatattat ttgcaggaat ctcctctagc ttgttctctt gcttgctaca tatttaagac 1200

cttcgcggac tagtactcta aaaccccgtt ggtagtcgag cctgattttt agtaattcaa 1260

catcttggcg aagtcaatat agattgaaga gaaagctata gcttcatatg agaaagagtt 1320

gatagagacc aggettataa etatgaagca ttagactaga cataattacc agcattaaac 1380

gcagtgatat aaaagatgtc tgattcttcc agtctagctc tattgggcgg tttaaatgca 1440

aagaaataat aagcaacctg gtctaataca gcagttggaa gagatataac tttgggccat 1500 gaaaaaggcg gaaatctctg cacaagcatc ggctagccag agcttgcagt tccaatatct 1560 gaaataggaa acttccctta tacgactagc tgtcacatac ggtcgacata ttcctactaa 1620 gatccctata atgtctgaat tggtctgttc ggcgtcaccc gacactgata actgatcgaa 1680 aaagataaat tttctcaata aagctcatgc tcactgaact actcgtatgt ctttqagacc 1740 agaatataat tggtcaatct tgcctcgccg cataaggaag agaattagta gtaagccgta 1800 atccgcatgg aacaaagagt gcaataatat gaagaaaggt ggtggtagcc attgactgcg 1860 caatggcgcc caggcgtcgg ccatacaccg ctagctcgtc cagcggaaat accaaaagct 1920 cccacttcgg tcctggctct accagtcccg ctaccatgga acaggcctcg actcgctctc 1980 tactatggct aaatgagctg cagctggtga atcctgtgcc attcgcgcca atgagctgcg 2040 aaagctaaaa cctggtgagt taaaaaagcc acgctaattg ctgacaggaa gcccaacccc 2100 gggctaaagc ctcagctaag gatccgtact gacaagtgag aacttataaa tatcccacat 2160 tragactriga tragcattric atottaccat tittcragara ragtrotigra gaaatqtccc 2220 taataaactt cagattecag acgaataceg cgatcagete gaacgaacag agecegtgga 2280 aacaaaacca acgagcagat tatctcctcc c 2311

<210> 2547 <211> 1236 <212> DNA

<213> Aspergillus nidulans

<400> 2547

aagagtctag cctgtcttaa gatccttgtc ggcatttgtc ccatatgcac ttttttggtt 60 cctagctcga gcatagccat agcgcttgct cgattcgaag cgtttgtgcg catccggcag 120 cggcggccct gggaggggc gtacccaacg caaaacggtt cattttctgg gtaaagtgag 180 atgatctcag agaggtgagg ggccgacggg aactgcaaat atgaaaatgt atacggcatg 240 gttgctgtga cacagaacaa agatgagcga atgtggctgg atcaaccata ttcaggagaa 300 tccagggccg tatatatacc tttgggcagt tgggtcagat tcgaactgaa ttcatgtctt 360 cgcatagggc taagtatgag aatggctata cccgctccat gattccgtgg ctgagcgct 420 caagggttga actgggttca caacgcgatg gcacgacagc aaggttagcc catgaatggt 480

aaggettggg geggtgtetg egggtgetga aactageeta acaacgaaca atetgtagtg ctatcagagg gcactgcgcc attggcaggg gctgtttccc atgacgtaga tggacagggg ttatgatcgt cggcggttat tatgctggcc taactggtca aagcggtagg ctaaggctgt 660 accttgataa ggcgcagtac cttgttggct tctaagcatg taagttcaac tgtagacgta 720 780 atagcgcaac aggataacga tgaggtaggc agcccatagt acaaaaatag aaaccgccat gccggacctc atatctggat aattettaca aaaaagaage ettatggtet atcagttett 840 ttctcaggcg ggggatgcaa gacagttacg catagaaagt ttttcgtgag ctggacatct 900 atgtetatat acaataacac caettggaag etettegtaa teagttteat tgaaccegge tctttgtatt tagcgtactc agactgatag taaacaaatt ggatttatgt atcaagagaa 1020 atattgtcgt atggccaata cagatagccg ttttgataaa catggagatc caccataagc 1080 tatattgggt agacctgagg gcccacaaat ttcggtgggc aactcagggg aaatggaaat 1140 aggtacccac actggaaaat aatattcatt tatgctgcga accaattttt aatcgtttag 1200 1236 gggaaaggtg gttaatcacc aagcatgtta attatt

<210> 2548 <211> 1872 <212> DNA

<213> Aspergillus nidulans

<400> 2548

ttcaagcccc caaagtgcgt aagcggcagc caagagctgc tgcagctgat gatcgatttt 60 ttagatttcc tggcctctta accgtttgtg gtggggttcc aaagaaacga ctcggcggca 120 gatcgttgat ggaattgaaa atttctccga tcatcaagat gaggtgagaa cgacgagtgt 180 agaatcgttg gcgtccctac aaaataagtt tttctacgca taaatggctc tgcttattgg 240 attcaaggcc tggaggtcca gagtcacgtt cttggcacca tgtgaaaaagg cagaaatata 300 taacttataa tggtccattc gcgcggaggt gttaaggcag aggtttaaac cgaggataaa 360 acagtggggg catctataaa aggtatcttc caatgacctt tctggctata gcttctaaac 420 aacagtttga ttgaagactt atgatggttt ggcagatcaa gtttcaaata tcttgttatg 480 ctctggcacg gttccagagc catgggtcga ctaatacaaa aagaagaacc tcggcaattt 540 tacgttgatc tctaaccacg gcatttcgct gacagctcgt catcttttta agaccagaac 600

tacagetget ettgaaacca aageatcaaa gaetetagae aaccaecagt teagteaaaa tgggccagaa aaagatcgag tgctatattg acattggtgc gcccgccccc cgtcccqqqt 720 ccaaaacaat caagtaacat cgggggcagt ctcaacatac agcttctatg ccttcaccta 780 tetecagtet aaccgageeg etettgaage getagaegtt gaagtegagt aggeegeace 840 attacttaca ccctatccac gaccagaagt cctgacaagc caggttcatc cccgtctttc teggeggaat caacgteggt ageggttegt etgageecac tgtegeeett attacttgag 960 ttcatttgga gctgacagag ttctaatcaa aaggaaataa acccccatgg actctccctg 1020 ccaaagccgc atacagtcga tacgacgtca aacgagctca gcgctacttc gggcacgatt 1080 ttgaggtccc gagtttcttc ccgatcttgt cgctgctcgt cagtgtcctc tctgttcacq 1140 actacagtga aacgttctct tgtgtgaagt gagtactgac ggagagatag ccacaacqcq 1200 ccctcacata tataaaacaa atgtacccaa aggacaaata cgaagcgacc tttaactcct 1260 gttttgagtc gttctggtac cgacatattg acatctcgaa tcccgaaaac ctcgccatcg 1320 cactgggaaa cgtctttgat aagacccaga tccaagagat cctagctggt gcgaacaagc 1380 cagagacaaa acaggcgctt accgacgtaa cgaccaaagc tgtcaaggag cttggagcgt 1440 tcgggtgtcc gtggttcatg gtgcatgatg ggaaaggcaa tgtggagccg ttctttggaa 1500 gcgaccggtt tcattttatg tgggattatc ttggactgcc gcatggggat ctagaactga 1560 aggttcaaga cagagagaag gggaagcttt aggtaaatta gggcttctga tcgcgaggga 1620 gggaggctgt ctcgagttac ggagtctgca gtgcaccaat ataggcgcaa ttacggccgg 1680 cctgggttta ttcaaagatc gttgagatga taccgcgaca ggagagcggt qacqtataqt 1740 gccagcggta gcatgccaac cgctaaagag ggtttacttg atcataagct aaacctgcca 1800 ttggctatat agtctcctca atattttgcg ggcgattttg ttcgggcact ttcttatcaa 1860 tattgcattt gt 1872

<210> 2549 <211> 1037 <212> DNA

<213> Aspergillus nidulans

<400> 2549

tgatatcaca tacgatttag gtgacactat agaatactag gatctgccac gcttatttcg 60

ggattcccag	agtaacttta	gtatcccact	ggatgccgtt	actattatgg	cgctcttcag	120
tcagaacaat	gtctcttgca	caacagaaaa	cgcgcttgtg	tcattcaaag	gcttgtcctc	180
aaatgataac	aagcgccgcg	cactcaacgc	ggatctattg	gtggctgatc	ctgaaaagct	240
agagccatct	tcttccacgg	atgagcctac	cgccactatc	cccgttcgca	gggaagttgc	300
tacgaagaac	ggcattttgt	tcgaggactc	aggaacaaac	gaaagccctg	cagcggcaga	360
gactagttct	gcttcgacga	gcgaagcgac	gccagctccc	acttcggccg	tcaccggcga	420
agcgctcgat	ttctctcgga	tcttcggtct	ctacaattct	gagaaagacc	gcacgctaga	480
tgcggccatg	ttctctgcgg	atgttatcaa	gaaacacttg	gaacattctt	actccaactc	540
ctctgacgag	agttttgtaa	ttaaccttgt	tccttctggg	ataaagggca	acatcactct	600
ggactatgga	gggttcacca	tcactgattt	cgacggtaat	acggttgggg	ggtcctaaaa	660
acaaagagtt	gcacatgcct	tcgtctatgc	gtattcgtct	tgttctctaa	cctggatgtt	720
tcttgttctt	tgggccattg	ggttttttct	tctcgcactc	cttcatctct	gctttattga	780
ttggtgcttt	tattacacga	gagtcgggcc	cgctctcatg	cttcttcggc	gtcttctggt	840
atgcatatac	acctcgtttc	tcagctcttc	ttagccttgt	tcagcctagt	tcttagctag	900
atgatccggg	gcgattatag	ctgatagcgt	taatcatgtt	aatatacgcc	tgtttattgg	960
cattttgaga	aatgcaaagc	caaatctagt	agccaacaaa	tacagtttca	tattcgtaag	1020
gctttcgtga	caaatat					1037

<210>	2550
<211>	5466

<212> DNA

<213> Aspergillus nidulans

<400> 2550

cgtccaccc ggcggaacca ggactttcgg ctgtttcgtc aggcgcatca accccagcc 60
gaaggctatc tactacatcc gctgtgtccc ctaatattat gcatcagctc aacgagagcc 120
gtccttcgca tcccacggtg gataatcggg atgagagcct tccacacaat acgactcatc 180
agcgacgccg aagtgactcg gaatttgcgc gccatcgtga gcagctaggc tctggggcgg 240
ccaggcgtaa tggggttgta gaacctgata atcataacgc agcaccagga agaagctggc 300
tgatttacgt tgtcggaact aacctttccg agaatcaccc tgcatttgcc gcgccaagtt 360

tattcactga tgtaagtact ccaaagtctg aagacgggcc acaatcgcta accctgcgtt tagaacccaa catacgagga tatggtatta ctgtcatcac ttcttggtcc tgtgaagcca 480 ccagtcgcta cccaggaaga cctgatttct gcgggaggcc tgtaccgtgt ggtaaagtgc ggtgactcta tgtctgcagc cgctgttgat ggcactcgta ctatccaaat ttccgaaggc 600 gagegetgtt tgatetgeet eagegagtae gaagtggetg aggagetteg acagttgaea 660 aaatgcgagc atctttatca ccgtgactgt attgaccagg tacgtcaaat tgcacgttga 720 tcttaccttg taagcataga gctaactaat taagtggtta actacgggcc gcaattcttg 780 teegetgtgt eggggeeagg gtgtegeega caaateegge getgaacege caegaeeate 840 900 agatgcgcca cgcgcagcag ccgcttaata ttttgtatca cggctgttat tatttatacg atteccaact etetattact gttagaagta tttageatgg egettteece ageagettea ccatctcttc gcatctttcg ctcttcgctt cagatatcca ttgctgcatc gcgacatttt 1020 ggttttggtt gtggggtcag tatgcagttc aagtcagatc attgtttcat ggccgggttt 1080 caagtcatgg tggtatcact tgatgtgcat gaacatgatt ggactcagcg agattttcgc 1140 atgggatata cactaactit cigitatacig icatgaggit cggagaatgi gittiticgca 1200 tgagctgtat tattccccta gtagcataga gcgctctgtt catgtcaata ggcagccgga 1260 agatcatgaa attcattact tatagaatta aggttgacta tctgcctaca tcacatacta 1320 ccttcattgt atgtatcaga tactttatta tacccctcca aaaaagatgc ccgaaagtaa 1380 ctaggcactg actgattact cagcttgcct gccccgcgtt caaagtgatc ggagcttgat 1440 cgcgatcaca tcgcccctcg accatactga aatttcagga acaagcactt ttcgaccgtt 1500 ccaccatcac tcgaatatca gagggcaatt gttgggatca gaggcaacct tgctcagtaa 1560 cttgaagagt ccctgattag cctatctatc ccgctcagaa attcgcatta aaatacaacc 1620 cgactacgaa ggtagactga aagttccaag cggggaacaa aggacccaca aatggattca 1680 attegectaa cagteeteat eteeggetet ggaacaaate tteaagetgt gategatgae 1740 accaccette eegcaaaaat egteegggta atetecaace geaaaagaeg ettttggeet 1800 ggaacgtgcc cgacgtgcca acatctccca cacagtatca caacctcgtg aagtacaaga 1860 agcaacatcc cgcgacaccg gagggtgtgc agcgcgcaag agaggagtac gatgcagagc 1920 ttgcacgact ggtcttagag gataagccgg acttggtcgc ctgtttgggg ttcatgcatg 1980 tgctttcgga gggtttcttg gggcctcttg aggccaaggg tgttagaatt gtgaacttgc 2040 atcoggcgtt gccgggggag ttcaatggag cggtaagttg ttaccttgtg agccatactg 2100 agetetgtte ggeetttggt getgaetggt ttteetaeag aatgeeateg aaagagetea 2160 tcaggcatgg ctcgacggta agattgagag gacgggagtc atgatccata atgtcatctc 2220 ggaagtggat atgggaaaac cgattcttgt caaagagatc ccatttgtga agggagctga 2280 tgaggatctg cacgcattcg agcagaaggt gcacgagatt gagtggaagg ttgtcattga 2340 ggggttacag aagaccatcg aggaaattcg gtcgacgaag tcataggcta tgggttgagg 2400 gttgggatgt ttttggctga aaaaaaaaa atttgggtga cgagcattat gataccattt 2460 tgtagtatag cttgctaggg tacgttttat agaggagtat aacatgctga tattaaagca 2520 cggcacagat ggtcaatctt agtcaaaggt atgcttgcgg ctacccacgg tgcataatga 2580 acaagtccac tacgcagctg actggtgctg tgcaacaaga agtgccgcaa gcccatccac 2640 cagttcaact ccccaagtca atgatcatat cgaggcggac tcgaacttcc tccgcctccc 2700 aggeteteae agtattaate ttgagetgag gggtttteat eetgattgae ggtetggaet 2760 aactetecea ttgteageca gteaageaae tgttegeetg etgeaaetge aaageaaege 2820 caccettete tatgteaget tgacacagge agettgagat atttteaaag tgaggtgaga 2880 gcctggccaa agtaccaaga acggagttga tatgctgtca ccgactaatg caagcacgaa 2940 cettagatee tettggaget acetacegat etcegaegee gtecagaeag egaegttget 3000 gtgattgtgt ggcctactga aatgacagat acgataatcc cagccggtaa tcggcttcct 3060 gccatgtgcc cctccaagtc agtaggcgga atgcgtcttg aatatccacc aggatacaga 3120 tcctgtggtc gtgttatgga tccccaggat gatgccgccg attatgaaga ttcgacgctt 3180 gagtcactac ggttctaatg gacaggtgat aatttggatt cgaattcctt ttatcaatca 3240 cattetggat ttgacagega geegtteage eectgaatgg gaaaagaegg agaceteteg 3300 tttcatgaac cgcccttgag aagcttaaga agccacgatc cgaggcccaa gctcgaaatc 3360 agcaagccca ttaaacggcg ctaaactagg cctcggcgtt aagagttgaa aaccgcgtgg 3420 aacaccagta cagagtatag ccaaccatca tattcaatca ttgacaagaa ttggttcctc 3480 tgggagcggg cagggatttc caaactagac aggtagttct tcttctgtct cactgtgcgc 3540 agcaatgtct gtcctactgc ccaagtcgtc atgaagcatt agcgctgggc gcatccaact 3600

tgacggcagc gctgcatgag tgcactcagt gacccaataa tatgcgcccc ctgcgttcct 3660 ttqqtattac caggtattcc ttttaattca ccatgccatt ggacactgac atgcttagac 3720 aaggccagtc atcttagact ggaagacctg tcacggtctc ccaggagttg cattctgatc 3780 atgaacgtga atcctaattt cccatccaaa agacacccct ccactttcgt tgagtgacaa 3840 tcgaggagag tccaggaatc cacaaatata gcgcgaacag agaacggacc aaggtaatag 3900 tttccacctg ctatgcgcct tggtctgtgc tgctcgcggc ttgtttgctt gaagggaaga 3960 ttatctattt tttttttcc tgagttcctg gagatccagt tgtcaataca gaggagtagg 4020 ccaactaacc aaggtatcgg cgttgctatg gtatatacga actgtctgac ggaaaattat 4080 tectgagage tgeagatece tteategate cagaeggtge geaggtgtea aatttegege 4140 gccatctgcc aactgcttac gaacttccac tacatactga agtccttttc gtgatgggtt 4200 tettateegt aaateteggt ggtaagggta eagetgeaga geaeteatea ttggaateag 4260 acctagagge teaggteett teeggateea etggetgeae aaattetegg caacgtgaae 4320 catatcgact gaccggcaac aacagaagtg ggagcccgga gagctccgca ccagactctt 4380 acgatagttt tcgtgttagc aagccaaccc atgctctccg gcttatccaa catctggtga 4440 tttgcacaag gattatgaat tgcgagtcgc tgtgtcagga ctccagcagg tcgactggcg 4500 tgcaggagct tccagtttta ggttgacata caaatgatac aatcctcctt tactccgggg 4560 aacqqaqcac cctcgagtcc tactcatggt cccaactcct ttcggagtcc cttggctagt 4620 tttgcctaat cagatataac agctgataat ccccactttg cagcgttgca ttgattgcgg 4680 tgcggcgtca aattgtcgaa aactcctttt ttgaaagtcc aacttccaag caataaacca 4740 agaccggccc ttctggttaa gccaacacag tggctcatgg tccagtcacc gacctttatg 4800 atgctcttat attacaatgc gttcaagaat aagggcggag atgaacaggg agcccggccg 4860 cttggcttcc ctccgtttca tcaaacacca aacctccgct gctgattcat gaagaggatc 4920 cgaggaaatg tgtgcgagtc cactctgcca gcataaaaga atacggccga ggagggtaag 4980 caccaacagt ttgaccagtt ccacccagaa gggctaccaa gtgaacgggc cttaactcct 5040 tggggactag ctgcccctcc atggcagcat atctcggccc tgtcggcgtt ttctatcagg 5100 caccacccc ggactgagcg acacaagaca tccgggctac agttatgctt gcctctgcct 5160 ttgaacttcc ttaggggggt gatttgtctc ctgcactgac ccagatgacc gagcacgcta 5220 tgcatactca gttacttagt ttgaaagaga gttccaccca taccccagga atcatggcga 5280 aggtacgact tgaatatgca gtttgaactt cagggtgtag agaaggtcac ggtctacaat 5340 gacacggatc cataataaag ttgatcgaag accatcctcc cccctccaa aaaaaataaa 5400 gcaaaaaaaa gtcctaaaat tcaagggcca tccatgtcat aattctgatc gtataagcaa 5460 taatag

<210> 2551 <211> 901 <212> DNA <213> Aspergillus nidulans

<400> 2551

60 qqaaataagc agccaagtcc tcttcagttc acgcatgttt gctacaagga gaatggcaac cagccgctag catagcgccc ctgtgagcaa gactagactt caggaaagtt gctatccaac 120 gcagttcaag attgcagcag tacacccagt ctccttcgtg gccttctgcc tcccaagctt 180 ctgcctctca aggccccgag cggtcttagc tgcgtgcgat ggccaccaaa tcctggctcg 240 300 agcttctgct ttagccaggc tgtctgaagc tccaggaatt ggtattcgtt ttcagattag 360 tttgactcct gcggtcacgc gttatcgttc ctgtcggtca ggtcagaagt ttgcgttttg agattgccaa atataaccgt tccctgatag ggttgcagcc agatgtactc ggaaatgaac 420 taatatacga gagcttgttt gcatggtcaa gaatttggcc tccggtattg cgcctgaaga 480 atcagcttac gaatagcggc gatggccata tttggttgct aacatccagg tgacaaaacc 540 aagcatttca acatgacctg ttcgggcctg cgtcaaggac cgttccgtga tctcgtacgg 600 gccctttctg ccgtacgtct aaagagtctt cgatattgac taggtcatcc cttcagcaaa 660 agagattggc aagaattgat ttcttatata cgtttcataa aaagagaata atctcttatt 720 780 tcaaattgac ttagagagcc ggtttccgta cggagatgat tatgtcccgg agctcatcag ctcaaggacc gggataaatg gtctgattaa ctgtcttgaa agaatatcga ggactgatcg 840 ccgctgaagc gcctcggcga cgccatggtg atgaaagcag tctggtgctg ggcggcggga 900 901 а

<210> 2552 <211> 7236 <212> DNA

<213> Aspergillus nidulans

<400> 2552

ttgtcgacgg gctggcgctc gccggtacgg cggtgctact gcttggcctg acctggggtg 60 gtggagagta tccgtggcaa tcgtcgcatg tcattgcaac cattgtcgtc ggttttgccg 120 tctgcgttct tttcatgtta tggcagtgga agggcgcagc gtacccgctc gtcccagtgc 180 acatetteaa ategggtate gtgaaeggeg eetgtetgae eatgtteate aaegggtgga 240 300 acttcctcgt gcaggtgtac tacatcccga gcttttacca gctggtcttt ggatatagcg 360 ctgtcagggc aggcgctatg cttctgccga ttactttgat gcagagtacg tctttcattc cgcgcgcctc ttctctacga aatttatgaa tgcaaatact gatggggaga cagctgcaag 420 480 cagcaccete tegggeeteg tegtecactg gateggaegg tacagggagt geatectett cggatggatg atctgggctg tgggacttgg tctgttttcc acattagatg agcactcggg 540 cgtaggaaag cagatcgggt atgggatctt gacgggtgtg ggcgttggga atactttgca 600 gccgtatgct ccaatcagtc tgtataattc agcatcgatg ctaacggatc ccgtgtgcca 660 720 gggcccttat agccattcaa gccggtgtcg agagacgcga tatggctgtc gttacctctt tcagaaagtg cgtcctccct ccttccgctc ctctagtgct tgcagttagt ccagtcaaga 780 gctaattact gcgaatcgtt gcacctacag cttcgtccga aatctggggg gaacactcgg tctcgcaata gcccagacaa tcataaacaa cctcatccta agctccctat cgccagtcca tctctctcct tccgagcaga agtccttcct cgcaagccca actgcctata tatctactct tcccgagacc gaagccacac atattcggag tctcctgata ccagcctaca aacgcggctt 1020 ccggatcatt ttcattattg gggctgcgct tgcggcgttg gcatttggta tcgcgttcgc 1080 gcttatgagg caggttggat tggagaaggg agatgatgag aagcttaagg aggaggggag 1140 aagaagggtg gaattggaaa aggggatgaa ggggcatgcg gaaaaggagg gtggagatgt 1200 tcacgttgat agcaatgacg aggggaggcg cgagtaaata tccatcacgt gcgtggtttg 1260 ageteaagae agaaaageet ttaettgtea atetgaagga eteeagatgg ttgttgetga 1320 tagaatgtgt tttaattagc atagactcga taaaaaagga caagctagta cagagcagct 1380 tgagccacaa actagtatca caatagtgat cgcgttacga tgaaaaaatt gaactaagaa 1440 attgctactc atttatgtac aatttagaac cataagcata gacatccata gtttacaatt 1500 tagcettgge accetecage ageteegeac cageacetga gatageagge ttgeeegtet 1560 caacaacggt agtctggaag aggacagtgt tgccctcctt ccacatctcc gtcctgagag 1620 tctggccggg cagaacaaca ccagcaaagc gaaccttcaa gttcttgatg gggccaaatt 1680 tctggaaaac gtgcttgccc gagacaccga gcgagcagag gccgtgcaga atggggatct 1740 tgaagccgcc gaccttgctg aactcggggt cgatgtggag cgggttgcgg tcgccgttca 1800 ggcggtacag cgcggcctgg tcttcagatg tcttctcctc gacgacgacg tcagccttgc 1860 gcttgggagg tttgtaggcg gcgacagcgg ccttggggcg aggagcagtg ggcttgggag 1920 agccgccaaa gccaccgcta ccgcggatga aaacggtgga ttcgttgtag aagaggtctt 1980 cgccggtggc gacgtccttg gtggtgtagc cagcgacgac gagcgcagcg gcgcctttgt 2040 cgatgacatc aatgagcttg gggtaggtct tggtcttggc ctcagtggga atggggaact 2100 tgcgaatctc catgtactgc tctccgtgga ggagcatcat gggagaaaag ttcttgacaa 2160 tgtcattcat gtcccagggg gtggcggtgt tgaaccaggg aatgacagca aatgtgggga 2220 gggcctggaa gtgctcgttg ttctcgtaga cgagagggag atcagtgcgc ttggcgccca 2280 agctgaggtt gtaaaggatg acatcgcggt cagtgtagtc gaaggaggtt ccgtcagtag 2340 aagcettett ggeegetteg ategegetea ggatetegtt geeactgeea eeacteteae 2400 cgccgctgcg gttgctgaag ttggacatga ccttctcgtt agcggcctgg atgtcctcag 2460 ggtggtctgc acggccatcg tcaaagttga cgatcttcgc gagctccttt gcaacagcct 2520 taccgaacca cccgctacca cactcgaaca gacccttggt agagtacggc tctggggtca 2640 tatcggagca gagcagaacc accagaggag caacgtagtc gggcttgaat gcctggacca 2700 tctcctcggg catgatcgtc cgagtcatat tggtaccagc gttcggggcg atggtgttca 2760 ccttgatgtt gtacttggcg ccctcaatcg ccagagcacg ggagaatccg agaataccaa 2820 gtttctacga catagattag ctaatgtaag atagatgact tcagggaaca taccgctgcc 2880 gcatagttgg cctgtccgaa gttgccgtag ataccgctgg tgctggcagt gttaacaatg 2940 cgaccatact tetgettaag catgtgagge caggeggeet gggtgaeett gtaggtteeg 3000 cgaaggtgga tgttgaccac agggttccac aggtcatcgt tcatgttggt gaatgccttg 3060 tcacgcagaa taccggcgtt gttgaccagg atgtcaatac gtccgtaggt gtcaatggcg 3120 gtcttgacaa cagcggcacc atcttcgcat gaagccttgt ttcctacagc ttctccgccg 3180 gctttcttga tttcctggac aacaggctca gggtcaacca ggtcgttaac cacaaccttc 3240 gcaccgagtc tgccgaacag aaggcagtag gcacggccaa gactaataaa gttagcttga 3300 gcatacccta ggcttcaaat aacatacccg ttaccacctc cagtgactag agcaaccttg 3360 cccttgaact ctggctcggg gccggacggg gcaggaggca acttcagacc gtcctccaac 3420 agtcccataa agtcggcagg tccagtgggg tagtcgggct tggagaagtc attgacctcg 3480 ttccattttc tggcgatggc gcaaggcgtc agtgaagcat cggtcttcag cagagcaccc 3540 ttggaacgct cccagcggag cttggccaca tgaccgcctc caatctcgaa gattgaacca 3600 gactcggtgg tgttggatga gtggaccaga acggcgacga cgggaacaac ccattcgggc 3660 ttgaggagtt caagaacctc agggggcatg acggtggctg tcatacgact cgcggctgtt 3720 ggggttagca gtgcccgtga gtgtcaacac gctaacatac caataggggc aatgacgttg 3780 gcaataatgt tgtacttggc gccctccttt gcaagggtct cggtgaaacc gacctggccg 3840 agtttggcag ctgatttgtt agcttattcg catttgcgtc ggtgtgagac ataccagcat 3900 agttagectg teegaagtta eegaacagae eageageaga ggeggtgttg atgataegge 3960 catacttttg tttccggaaa tgcggccacg cggctctcgc gcactgtgaa atcagcctct 4020 catccgtcga acgccgaaga accggttcct accttgtatg caccgtatgt gtggactttg 4080 ttgatgagat cccagtcttg atccttcatg ttcttgaagc tgacatcccg caggataccg 4140 gcgttgttga tgaggacatc cactcggccg aagttcttaa tggctgtgtc gataatcgca 4200 tegeogttet egacgetgte gtagtttget acageettge egeeageage tetgattteg 4260 tcgacaacca catcggcagc ctaccacaga acgcgggtca gcactgggga catactgaaa 4320 agtaataatt gcatgtgatg ggctcacctt gcttgacttg ccttcaccct ggtgggagcc 4380 gcccaggtcg ttgaccacga catttgcacc tcttgaggcg aagaatagag catatgcctt 4440 acccaaacca ccgccagctc ccgtcacgac gacggtctgg ttgtcaaagc gcagctcgga 4500 catgttgaaa aagaaagaat gaggggaaaa gcgtggatgg aggatgaaag cggaggtgga 4560 ggttgaaagt agacgaagaa gaggaaacaa acagagatat agatgcttta agaaggaatg 4620 gggaggatga agagtggtat ggggagtcgt gggcaggaga aacaatctgg ggagaagtgg 4680 tgacggtcgc cgtgctcggc aagctgagtt gcttgaaccg aggtatcttg ctgacccaag 4740 ctcggtggtt ttgtacccac gcgctagtcg ctacagagaa aaatggcaaa tgtcacggct 4800 tcacatgccg agctctcacg cttcacttac gataatcgag tgttactatt atttactctc 4860 ttactacctt tgatcatacg cattctccct ctggggtcgt ctgcccgagt cacgggtttt 4920 ctttgtcttc cccaaacggt tagcttggtt catgtgatcc gagcccgagt cgtcttatgt 4980 catggtcaca tgattttatg tggggtatgc gcctaaggac cccccgaggt cccaaaactc 5040 acgtgagatc actacggttg gttggttgaa ctcagtatct gcgtacgtat gaacgctatt 5100 atgcccatac acccttggaa aggaaatatt agaccaagtc ccaacccagc aattcctcaa 5160 tttgaaaatt atgagtttcg acaggagacg atcttgaatc ttgagccgtt cctagttgat 5220 tgaaggcact atagaatgga tccttgcaac caatactatt ttcagggtgt tcctgtgaac 5280 ccttgtaatc gtctatatct tgaccttgtc gacttgctag aaaatgacgg aggtgcaggg 5340 atctcagcaa agacagggac gcgaagctcg gtccagggcg tggcttttgt cccatgctcc 5400 tgaacgggag tgttcgtctc cagcgtgacc ggatatggtt tatcgatctc agaggctcag 5460 gattacccat ctgctcggag ccggtactag cggtggctca gtaaagtctc tggatgacgc 5520 ctttgctcta gacaatggtc tagggcacgg cggatctgag cagcacgctg aggcagacag 5580 aagtetttee gtggeeaget getggaegte tegttgaege tgegetgaag aggeeggget 5640 ataagaagat gcttcatcaa ctgccgcggg cattctcatg gccaagggcc taataacggt 5700 gegetetegt ceaggggete tteagaaace geeactteag ceaecegetg ttgttgetge 5760 cgccatcgct caaaccactc cgcatattcg tctggcgaag cctcgctgga ctcacgaccg 5820 tacttatcga tatcaacgac taggactagc tttcggaccc ccgttcacgt ctatcatgtg 5880 ttgctgaatg ctcccgtaac gagtcattgg tcgtgatgaa tgtccagatt caggttgctg 5940 agcttcgaaa tcggacattc tatggttgag cgttgtctgg ccgaggcctt gctcgagatc 6060 gagatcgtcg tcttcctcgt accagtattg ctttcttcgg atgaagaaga gaatcggaac 6120 ttcgcagagc tgtcgaggga gtgcccctta cgtcacgcgc tcctccattg tctgggcgta 6180 ctttacctgg cacatcatac cgagggcgaa agtcaagaag accaccgcac ccaacatcaa 6240 gatgatcgct ccatcggagt ctagcagatg gaagtgtccg gaatgtgtgt tatttggggc 6300 tggcatgttt cagctactgt tggctacgga ctctggaatg taagacggga gatacatgag 6360 cgcagacatg gaaggggaga gcgacgctag aaggaaaatc gaggaactcg ttacgagggc 6420 cgatgaccta aggatcccaa gcgtctcttg aattactatc tttcccattg tactttttt 6480 ttcttctctt atccgcgact gaccaactat cgacgagaat gctgcacgtg cgaacgtagc 6540 actatagcgg cggcagctat acatatgcag ctagtcctag cggacgccta cgccgtgtac 6600 caggcaccga aaccggttag tagctttcca gaatgcttaa gacaggtcca aatagcccag 6660 cccggcttta cccgggccca cgaagcggca taattcagag tcacacacaa tgagattgga 6720 tactacaget tatgaatacg cegegggett tgacaageta agactageag atgettetgt 6780 ttcagcccgt cagataacgc ctgaacgtcg ggattcgaca accgttttct cgacggataa 6840 aaaggcattc teegtttage caateattee aaccaatgtt atattetaeg taeggegtta 6900 acaccacaat ggtccaggcc cttaaacacg aggaggtttc tgtggatcca aaggagaagc 6960 tttgcggcca gatcttgacc gtagtcgaat agatgattac gccggtcttt taccgaggct 7020 ggtctctcgc cgtgtcagcg tcagatgtgc cacaggccta tgcatggaga ctccctggta 7080 ctcgcgactg gttcggagtc agtctccagg atctagttga gaatctcatc atctcccaga 7140 gtgccgtcgc catggtgggg gccgccgtcg gaatgcgagt cagtcagcag tcaatcgtaa 7200 7236 caacccctct cggctggcta ccttaacaag ctcgca

<210> 2553

<211> 565

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2553

atcgaatcaa tacgactcac tatagggaga cccaagctta ggatcaccac atcaccaccg 60 ctgaggagct gagagtagcc gacgttggtt ttggggtcgg tnnttttta ttttttctt 120 accatgacac gctagttct gttcggatta taatgcatag ttgatgacca tgattcgatt 180 gtcgtatttg tgtcgggtat aatttttaa gattataagt ttcttatgat atatagttgg 240 ttaaaacatc ttcttctata tagacttggt ttactgatt aattagtaga attaatttc 300 ttgtcttta ataactgagt ttattctcat gttaatatt ttatcatgtt tgtaattata 360 tgtcatcata taaatcaatt agttttcatt tttacatacg aatagattct tcttttattt 420

tttttttctt	aatttaattc	atgtttgtac	cgactttttg	atgatttatt	ttattgataa	480
tatctatgtg	ttatatcaat	tccctttctt	attcaaattt	ttttctttaa	tcgatatgac	540
tatatattga	ttactgctac	tacgc				565
<210> <211> <212> <213>	2554 753 DNA Aspergillus	nidulans				
<400>	2554					
atacgtgcgc	tagaggtacc	tccaacagca	ttcaatagat	acgacatatt	accaattctg	60
cttttctatg	cctgatttct	ctgatctagc	cccctggatg	cagaatactt	caaattgaat	120
cttcattaca	ttagcaggat	atggctgaat	aagtctaatc	tctccattgc	acaaatacat	180
catccgtccg	gaagcgctgc	gtgcacgtag	attccttgag	cggcgtccgg	aagcctgtct	240
tatatgcgag	cataccagcc	tgggcaatca	taatcccgtt	gtcaatacaa	aacctctcat	300
ccgtggcatg	cacactgcct	ccgcgatccc	gcgccatgat	ccccatcatc	tcctgcagcc	360
tctcattaca	tccgactccg	ccaacaatca	aaacttcctt	cgacccaaca	tgtgccatgg	420
cgcgctctgt	aatttccacc	aacatcgaga	ataccgtctc	ctgcagcgaa	aagcacagat	480
ctgcccgggt	tggtttccgg	ctttctaaag	ccccgtctga	aacgggcgta	acatctgtta	540
cgtcttcctc	ctcatccggt	tgttctccgt	ttagtccgta	cgttgcggcg	agagcatcaa	600
tggctgcaag	aatgcctgac	atagagcagt	ccatgccttt	tactgtgtat	ggcaaatcga	660
ccagttgctt	gccctttttg	gcgagttgct	caatattgta	ccccggagcc	gggtcattag	720
agataggagc	gttcgcgcga	atcggtccag	aca			753
<210> <211> <212> <213>	2555 1596 DNA Aspergillus	s nidulans				
<400>	2555					
actacagaag	atagagtacg	agtgctcgac	ggtagtgccg	ttgcgtagca	aatcgctcgt	60
tgactttcat	cacgtttgac	aaacacttga	agatttccat	caatttttc	caggtgcgat	120
agtcctcggt	aactgcctgt	ttctagtcca	tcgcccaaat	taaagcgccg	tgagatattc	180

teggttgtat acactgttgc etgggagaag attteetega eettgeegta aggaaggata gagactctgc taccataata gatcgcgcat cttaatatgg ctcttatcag tgatgtgttc ggaacagtgt atgccgtcat acttaccgaa gtaaaaactg tgccctctgc cgcaaatcat 360 gtgtaagctc agctgattta tccgcattgc ctgtaatgac tgttgtttct ctaagctgat 420 ttgatacata acgctcctgg agatcgaggg ctgaaaagaa ttgtcgtaag cagcatacat 480 cttccggggc gaagttaaga accggaacat gggtatcgat ttggagacga tcatcgtcga 540 cgatgagaaa tggatagctc actgtcgcgt agatgatatt gttgaccccc tttcgaacag 600 gtagaaatct aatcatcttc agaggctcga ggtcaagtgc ggtgggacga aggctactga gctctttgag aaccaccaaa atctcgctgt tgctgctgtc cgacgccatc atacactgga ttttatcaat gtatgaacat atatccggca cgtctacgcg tagcctgtca acgaagaggt 780 cttccagacc aggatagagg tggcgtatgg catactgtcc attagtaaat gggaagacac 840 tccacacaca atttttcgtc aatgggatcc aggcatcttc gtagggaatg tagataaagt 900 ctccgcttct aaaattagcc ctaagcatgc gatgtcagtg ctgtacttta ttcaaaactc tgagttaatt caccgaatgg tttcccaatc ttgctcactc caagaacctt ctacgatttc 1020 cttgtagatc cgacagaccg aatcttgaga aataccattt tgtcctcgaa gccatgacag 1080 cttcgaaaag aacgctgcat agtcctcatt tcggcagctc agaactcttt gaaacatctg 1140 cttcaccttt ggactctgga ggtattgctt ataagacccc aagacgtgat taccgcaagg 1200 aaaattgtca tcccagacgc agtcggctag cctaaccagc ttaccatctg agtctggctg 1260 aggaagatag acaatggctg gaggtgtcgg actatccctt ttgacaggat tagcatacac 1320 cagacataac agctctaaga ctcaccaaaa tccatcgtaa taattgtcag ctagcaactc 1380 gtacagettg aagaagecat etettgeatg getaagagge ateattgaca geetettage 1440 acttectact aagaacteeg ceatagitgi aceaacgeea aategggeea gaaatteeea 1500 gtccttaaga tcatcgtttt ccctgctgga aagaatcttc aggaagggga acttgtcctt 1560 1596 caagtatgta ccagacaata ggtttcttgt ttcatc

<210> 2556 <211> 1718

<212> DNA

<213> Aspergillus nidulans

caccgatcaa gttcgcgtcc tcaacgaaag actgcggatc agtcgcgata tttctcttgt 60 tttgatctcg cgaaacgccc agtcccgtcg gtaccgccgg caactcgtcc acctccgttc 120 cgcaaccgcg gccgcttccc aacgcgcagg acatgcttct cctccccgca gataagctac 180 ccatgctcgt tcctgcgcca gtacttgggg aacccgataa taatgtccct gtcgactgcc 240 ggtgcggagt agaccatcgc tcgtactacg aatgcctcga gtactcgacc ttttccatcc 300 tcctccgcgc tcaccagggc ctcaacacaa gcctctcgaa tccgacgcgg cttcctcgca 360 420 cgccgtctct aatacatgtc tttcgcccag cgtcgaccga caatccagtc atccagatcc ttggcctcgt cttcagccaa gtgcgcccgg caaatgtccg tactctgttt gcttgctatg 480 540 tggtgatgta tcgctttcta cgagtaagct cctcctacac aactggcaac catatatttt ctcccgccta acatcctggc tagtggcgcc tctgccctga cgaagaaacc caacgcgatg 600 tcccaacctg gctatatcca accgaaattc aaaagaccat cccgcatccc gtttgcatcg 660 acttcctccc atggccgggc ctccgcgatc gtttgataca caaggcgcac gagatacaag 720 accccgaca ctcagtgatg atgtacatgc gctcaatcca cttccggtgg ccgggggacc 780 aggagtttat ctacaccaat gagaacgggg aactgatgcc gacgccgagt ttcgaggccg 840 gcttgtacgc gtacgagaac tggcaagtgt cgcgcgagtg ggcagcaacg tttccgaaat tgaaaaagta cgtcaacgtt ggtgatgacg agggtgttct ggtatgaaac gcatatatga ccatccacat cgtcgctggc gttgccgagc tttcggtcat cgtggttctt atttaatgtt 1020 gcccattgag caatctgtgc aatctacttg caggtgtaca tcatgggtca aaacaactag 1080 aatccgcaag tagcgctgct gcagagcatg tacattcctc atcaagctta ccatgttctt 1140 gtatttagct gcggcaatag cctacaaaca acatcattct tacaccttca ggaattcgta 1200 cccgggcgtt tctgagccca gagtcatata gtcccgctaa ccttataaag ttgcatacaa 1260 actatgtaac cccattccgg gcaccaacag tgccagcaat tgtttcttga gtatggcgtg 1320 gcaccaatag cggggttcta agtctgcaag gactagactc tgcggctttg ttcctcgtgg 1380 tcaagtgage gageetgaca tgeatagttg teeegeaacg gtageaatag eggetgtaet 1440 ccgtttcttt acaaatggac atgggttctt cgagcccgtt tcctgacggc catccatgtc 1500 ttgcccagcc atcttagtct ggttcttgag tggccactca catcgagtgt tgtctcactc 1560

atatcacage agecatecat ategttacea ateatectag cettetttee eteattggee 1620 acticacatty actyctytic tecettycyc ttytettegy atecyceagt etgatatteg 1680 1718 agttacagca gatagcccct gcgcagaaat gatcgtat 2557 <210> <211> 720 <212> DNA Aspergillus nidulans <213> <400> 2557 60 acagcacccc ttgactctat ccaggcgagc tatttcacaa aggtgaacga aacattattg gataagaaga cgggagagat gctggagctg ctgaagtcga tggatgacat tattccggca 120 attcttcagc atgttgataa ccccatggtc atggatcttc tgttgaagct gatcagcttg 180 gagagagctg agggcggcca gggcatcgtt gatgtaagca tctgtggtcc agttctagct 240 tgatatgtct aacaatcatc cagtggctca aatcgcagga tctgataccg agattgctct 300 ccttcctgtc gtctgagtgg ccggcttccg ttcagacctc cgcgggagat tttcttaaag 360 ccatcataac catatcggcg aatgcaacgc agaacgacca atcttgtatc ggcccaaaca 420 gtctgactcg tcaattggtt tctctgccat gcgtggaaac tcttgtcaac gcgatgttac 480 aaggcggcaa cactttgaca gtcggtgttg gaattgtaat tgaagttatc cggaagaaca actctgatta tgacccggag cacctgaatg gacctgattc tattcctacc atgtacgatc 660 ctatctatct cggcacacta cttcgtgttt tcgccaaaca tatacccgac tttgtggcgt tgattagcag ctcaaagcat acggttgttg atggagggaa gatgaagagc gtggaacgtg 720 <210> 2558 <211> 1159 <212> DNA Aspergillus nidulans <213> <400> 2558 gcattgcgca tatctggcgg catatctata cagacaatta gtgctcttac gtcattctaa 60 caacgcccca gtctgcagga tctacactgg ctcgcagaag cccggcttcg gaaacgtctc 120 actgcaaggg cctaccgttg ccctatctgt cctcgaccca tcaggaacga tccatggcta 180 tgcagaagtc gaaagacacg cagacaagga ccggatatac ctccgcagcg ggacgatatg

caatccaggg ggcatggcgc acctcggctg gctgaggatg gacgatatga gagccgcctg 300 360 ggacgccgga caccgatgct ctcatcctat tcaggaggtg gacgggaaac cgaccggaat cgtaagggtg agcctggggg caatgagcac aatagctgat attgagggtt ttgtcgcttg 420 gttaaagagg aactacgtgg atcgatacat tggcctcccc tactcggaga agtcaagtgg 480 gtcgatgtcc aagagttcgc tggatatagg catggaagag cagaggccag ctagaccgaa 540 acgtccatgg gtgaggacgg tggcaggacg ctttcgaatg ttactctgtt gaggttgatt 600 gatatattaa cacgtcgagg gggtggaata ggatatccaa ttgagtatat agatggtcta 660 gagtgatacc cttcgggggt tgtgtatagg tatattcggc ctttcctcaa gagctccaga 720 tatagcacga taccaaacaa acaatcatct ttttcctgct attgttcgtt cccagtaagc 780 840 atccctaaat ttgagccgat catcaggctc tattgtggtt tccaggatga gataccgtct 900 taggctgtag gccatcagtc ccagaaccaa ccggcgaaaa gaagcaaaaa ataaggcgca gatgctggcc agatcgagaa ttttggtgca accetecete ggttagetge gtgaggattg ccagggtctg gtgaggagtt cgttcttctc tgtactcttt actagatact ccatactcca 1020 agetgttett ceaecteace atacetgega atgetageag agttteacte attataageg 1080 caacatctta ctcccaggta cactttcgta ataccatggt ttgaatcttg atcaagattg 1140 1159 tgaaagatca ggtaaagag

<210> 2559

<211> 2275

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2559

attgtcatta cgcccgaggc gaagaaatac tgcgatgcgg ttgttgtcgt taaaaaggag 120 gaggtccagt gaccggcac ggggttggct gggctggga gcagttttc aggaactgga 180 acgtcgaaca gaacgggaat tcggggctga ttccatctag ttagcacgtc tcaatagaga 240 atggaactgg ggtgcgagg cgtgcggttg agagccttca cttacgtctg tgatggaagg 300 gtcctggtcg ggtgcgaagt tatagcccga acagaagggg gggggtgggg cttgangggc 360 agtccacagc gcgtcatgaa ttttgggaaa catattatat gtgcactaac atgcaggtct 420

tcagataaat cacaatgttg gtggaggtga gagtaggcgt gggtatttat gcctgggttg 480 540 cagcgcatct gggcgagacc ggttgctcct tcttcatggt gctcagttcc gccataaaca 600 atcccgtcta ggaagtaaca agatcaatcc ggtaggagtc ttttagggta cctattaagc ttacttatga gtgggtggaa gtttcccatc tataccctcg acaccgtgaa cctgcctcca 660 720 cgagttctgg aaaacatcct cacggttcaa tccttcgacg ccgctgcaag tttcctatgc tatgatggca ccctggcggt aggtcttttg caagagacaa agctaaggta tgagtacctg 780 840 gcatatgtac cggttgacgg ggcatactcg ttcggttctt cgcacgtgga ccgccagctc 900 ataagacgtc tcgtcggtcg ctccacgcct cttagattag ctctggctgg aaggtaagtt ggatatagaa gaatacatgt tgagtgtgct tcgaaatatt ccagctagag ggtgtttcgg 960 tcgccgctta attgtgcttc gctggtccta agaatatgta ttcaccagct ggtgacggtg 1020 gagtcaagtg actcttccac atgttgctgt tcagctaaac gcaaagaccc aattcaaaca 1080 teettgatae taagagtetg eetteagteg agetteggta eecaaatgea caageaagta 1140 agtccattcg gaggtgggga agggcttcat tcgtggcgat ttcatgacca cacctgccag 1200 atgatctgag ctatgctgat gaacattcac caatcctgct tcaggttttt tattggatat 1260 ctattataga gaggcttgtg gcagtggtcg ggaagctgtc gaccaaaaag ccttggtaaa 1320 ttcagtcgtt tagggtggaa ccagggaatc tgttggctcc aagctcgtcc cagtggaggc 1380 ttaggatagg tgtcaaagac taacatgtta ggccagactt tctataatat accacttcgc 1440 tttgccatcg agtcacagtg agatgaagtt ctagcgtctg taacctgtca tggagtttct 1500 gctcagatgg tccatctatg tcatactata taatcagata ttgcactggt taagctctaa 1560 agtttgatat gctaacataa tactccaatc tgtgccacat tcacagagta aaacagccag 1620 acctaaaaga gaaaaagccg aaggagtaaa caggatgatg tcatacatac agaaaagtct 1680 taatgttcta gctaggcatg atcatgtatt ttacagcgtc aaattctagt tcaccaagca 1740 aacaagcaaa accttctagg aacatacagt aatcgcagat ctagtatatt atgcgtccaa 1800 tatgagegee ataageegag ttgeetetat eggtatgttg egaeeagtaa eeeatgegtt 1860 cccgactgtg ccgattcgga agatgaagaa ctaacctctg aactctcgcc aacatatgag 1920 cageteatta eccaaaceaa ageaagaaaa eetetageea aagegeaaca eaggeegata 1980 agcagggtgc gggtccttgc ccgcaaatcc ggtaactggc gcagcatcag gctcagacgg 2040 ggtctgcaga atagccaaaa tcgcgttacg aaaggcctgc ataacaatcc catacccaaa 2100 cttcaaactc ccgtccggag ccagccagag cccatgtcca aagctgccga cccggggagt 2160 gttccgttca ttggccatac gctcgagctc gaagagatcg cccatccgca tctggtagaa 2220 catgcgagcg gcgaaatagt ctccttcggg tttgacgaaa atagcaactt tgtag 2275

<210> 2560 <211> 1959 <212> DNA <213> Aspergillus nidulans

<400> 2560

cttcccccca ccaccccct ctagtaaaca ccaccacaat agttcttaaa aaatacctat 60 aaaaatccca ccgtttgtgt ttttagttac caactttagg gaactttact tggcccagaa 120 cccagttggt ttgtaaacgc ccaatctctt ctaaacaaga gcccccataa ttctgggcac 180 aaacaacttc cggttaaaca gtctaaacgc acaaacaaaa cattcatcca atgcccagca 240 acaacctcca ggcaggataa gcagttagtg ttttcaagga cgctggggcc gtcaccagtc 300 cggcgaggta agtagttgtg ccaaaaggtt gtttcgatgt cggaatcctc gaacgacatc 360 cctatacctc gcagacattc tccccgcttg gtctaagctc ggatgacaaa agcgcgtact 420 480 gagagagtgt atctattcgt gatccaccga atctgagtaa actcagggca tttgtggcga 540 gtggggagca cgccgttacg tatgggcctg ggacctggca tgcgccaatg gtagttgtgg 600 gtgaatgtaa ggtggatttt gtggtcacgc agtttgtcaa tggagttgcg gcagaggatt 660 gtcaggaggt ttgctttggg gaggggattg ttgttgatct gagtgagagg cagcagaggg 720 cgcaagcgaa gctgtaaaac ttacacaaag ttgcgagtca atcggagatt atggcggccc 780 aagaaagagg gggtccaccc ttatgttagc aggatatgta tattatatat caaagtgcaa attatgacgc agaagaaaag gcggccgttg tcagtcgaga ggcttcgccg cgtatactat 900 cacgaacget tegegeeage tecagegtet egetaggeaa tecegeeage tgegeaactt tcagagcatg tgactcccga tttatgccct tccgcaactt gtggacaaaa gaaaaccgcc 1020 cctcagtcgt ctccttaacg tcggtgcaat accttcccag cgcaggaaac tcttgcgtca 1080 tatcagccag tccgtggaaa tgcgtcgcaa acagtgtccg gcattgattc cgataatgca 1140 aatgatgcag gcatgcgaaa ctaaccgcgg tgccatcctc cggcgtcgtc ccacgtccaa 1200 cctcatccat gatcacaaat gaccttgccg tcgcttgttt gagggatcgca gctgtctcca 1260 gcatctcgac cataaacgtt gactgatcgc gaaaggatc gtctgctgg ccgatacgac 1320 tgaaaatctg atcgacaatg ccgatctcag cgtagtcagc tggcacaaag gagcccactt 1380 gcgccaggat ggtgataagc gcgttttggc gcagaaatgt gctttcccg gccatgttgg 1440 ggcctgtgat aagccagatg cgctcggatt cgcccaagaa gcagtcattg ctgacgaagc 1500 ggcggccttg ttcttcaagg ccgagtttca cggttggatg gcggccgccg atgatcttg 1560 agtttggcc ttcagtgagg atgggacgca cgagttgtt ttcggcggatg cggcgccg agggtgcaa 1620 atgaggaagc gacatcgagt tcgtccatga ctgaggcgtt gcggcgaatc tttaccaggt 1680 tcaaggataac ttcgcggggt aactgctcga agatggcttg ctcctctgc cgaatttgga 1740 cctttatttg atccattcgg ccgccgagtt cggctcaagc cgcctatgtc ttctaactgc tggagaggatcc tttgacatgg catatggtc ccaaaccagg cgtccatttg agcgtgatg 1920 cggagggatcc taagcttggt ccccatagta gtgatatta

<210> 2561 <211> 2518 <212> DNA <213> Aspergillus nidulans

<400> 2561

aaaaaccatc gactcgaagc aactaaagaa atatagcatg aaccccctgc ttaatgtcag 60 tttgatgcaa aacactatag tgtgatcgag aatgcgactg acagatagaa ccagagcaaa agactgagta aacagcatca gggccttagt tgggagactt acgatgtctt gtcttcctga 180 240 ttcggccatg ttagtaataa gtttttccat gtaataaagg taaacagtga atatctctga 300 aagtetteae atggttgete acgaaccaga aagaacaaga aaacgtgagg etegtggaga agcaagcccg ggggtaagga tgctgtcacg tgatgcgatg tgggcgaatt ccctgaactt 360 cccgagcttc aaatctcaga ttctagtcct gcaattgcgc gacggctctt gaccaacccg 420 ccattggacc tctttgtttc ttgcctgcga cttcccaggt ctgcactctc atttctctct 480 tctctctctt ccagtggtta tcaagatgcc tgccacggcg acccgtgccg tgctgcggca 540 atcgcagttc ctgacccgga ccgcggtcag acactcttct tccacatctc aagccacttc taaggctact gagactgcct cttctaccgc ctcaaaggcg cagcagggtc tctctcgtgt 660 ctcttcctct gccggtcctg cgatctcgaa cgctgcccag ggcctcggca acaccctgaa 720 gaaagttggt ggaagaaccg gaaaagtcgt ctccttcatt gaatgtgagt gaaactccgg 780 gatattaact tccacgtctg cggtttcaat tctacacctt tgtgactggt tttcatggcg 840 taacgacgaa ttggccctcc ttggattcct gaaggggtca tgcctgggcc atgttcatca 900 aacacataaa agcggatttg ctgactcgtt gttctataat cacagccatg atacccccta ctatttacta ctccagggtt ggccttgaac ttggcaagct ggtgttccgt ggacagaaca 1020 tgactcctcc gtaagcgcac ccgccatggc atgtcagtcg tcaacatcaa ccatcccact 1080 aatcctatct taggagetet getacettee agteataett ceageetetg ateaatgete 1140 ttcgcaaccc tgcttccctt cagaacgcca acttctcgcc ccaaaatatc ctagcccgtg 1200 teegcaaege gaacaagaag gaaategeee tggeeggtgt taeegetgeg gaggteateg 1260 gattetttae agteggagag ateateggte gttteaacat egttggetae eggggtgagg 1320 ctggccacgg acaccactag atcgatcgca tgcaatatat ctgacctgtc ttttatttcc 1380 gctatatctt tcctttgtga gctgtactat gtatgataga cgatggaatt aaactattgt 1440 ctgggttaaa attacctata tgattatttc atgtctgctg ttgcatatct taagcctggt 1500 ttataaatca tggtgcaatg ttcctcgaat agtaagaagc agcgagcacg agaacactca 1560 gcatgtacca tatctatgaa taatactcgg gctcaataca acagcatcct tgcataatta 1620 cgtactagac actgatctta tcgagacctt catggcacgt tccagtttgc cgtatactgg 1680 ccggtgtgga attgcggcga cttgatcgtt ccgcgatctg attggtccgt gcagttagaa 1740 ttctggtccc aacttttttt tctgtaagtt tccaaatgcc aacaacttaa tcaagcctta 1800 gctcgaccaa aatcgccgtc tacaaagaca gataaaccac atgcgtcaat atggacgcct 1860 ttaaactgtt gactcgatca actaaattga agtctgctac cacccagtct tcgactctcc 1920 cgtctacggg aaaagcagca aacccgcaac tattccgcgg tgctgcagca gagaagctcg 1980 agaaggggag tggcaagaag agaaaaaggg cccatgctgc agatgatgaa gcagtagtca 2040 atgaggatgc gctgaacctg gatttcttca gccagggcag aagctctatt ccgaagagct 2100 cggatgccgc aacgacaaag ggatctggcg cgccagcagg tcaggaggga gcctctgaat 2160 cggactcgga tgccgatgac gagccaatgg atgaagttca gcgccgaacg attttgaatg 2220 ctcataagat caaggtcact gatatgcgtg acttagaaga gctcgcaccc gcccaggttc 2280 aaagtgaaga gccaaagaag aagaagaagc gcaagcagca ggaggaggca gagaagcagc 2340 agcctcagac tcttagtaaa aaggagcaga agaaggcgcg gcgcttgttt ccgcagcccc 2400 ttgccagcat gaatcactgt tccacttgag tcaggtgggg agcttcttgc tttgggaa 2518

<210> 2562 <211> 997

<211> 997 <212> DNA

<213> Aspergillus nidulans

<400> 2562

taagacgcat aataaacgtc caatccaacc tgagcgcttt cactcaaaaa ttctcacagc 60 ggtatcgaga gccccctagt aagtcttgct aaggggaaga cttttggcga atcatatatc 120 ctcctaacca atatcgctgg cgtctctcag ggccttatgg ctttaacact ggcatagcaa 180 gcttgacatt cgctggcttt gctgttagta agggcgcacc gctcgtggta gctggtcctt gaggatagtg ctcatcaatt gctcgtgtcc atcacctcta ggagggggcc ggagtttgtt 300 agettggccc atgatectte teceggettt tetetgttga etegaaegtt gegeaggttt 360 tgtcgttcat tctaagacgt ttcaccgttc acccggtccc gctccgtcct tatcctcgag 420 atgaatgcat gagattatat gtcacgattg atttctgact tgctaaccca ccgtcagtca 480 tatatgtata agcttcgaat cccagcttcc aagtggtctc cctgtatcat atatttgtgc 540 cacaagctaa tttgcgccta tctgactacg tcgaagtgac accttaactg caacgtggac 600 gatgcaatca gaatccggat gtttctagta atgtttttac attaccaagt acctttgcca 660 ctgtcacaac ggaccagggt tgccagcagc atatgcaatt cgaggccagc ccgtccctgt 720 tcaacgggtg aagtctgtta ttatgcagtt cgagcgttgt ctcgtattcg gcaaatttcc 780 aacatctcca acgcgtgacg aggaatcctt aggacacagt acctaaatat agaatgtcga 840 ttaagtagca acagcagtgt atttatatgg atttcccata aggagggttt cgtccccaat 900 960 agcacagttg gacagagccg ctggttgaaa ggagattctg ggaataccaa gcttcaagaa 997 agcaggtgtg gaataagaag aacaaaatct tgagggg

<210>	2563
<211>	1662
<212>	DNA
<213>	Aspergillus nidulans
<400>	2563

60 atgggctttt ccaagtttcc ctcagtgtcc tgccagcgcc cacccggcac aatatatttc gcctgagcct tttttgccag cagaatagcg gagagagatt cgagcagccg catttcgaca atcagtcaag acgattgagg cccagtgatt caattgccct ggcgtgagcc tccggcaggc 180 cgtttcgccc gcacttatac tgtggggaag caaccagggt cctggatctc atggtcgggg 240 tgaactatcc cgaaaaggcg gggataaatg aagctctccg caatttctcc gaaattgttc 300 360 ttgggatggc ctgggctcct atgatgttac tttgtgtcgt tcttgtctgt cgatcgttgc ctgatctcgt gattccttgg aatttctccg tggctaagcc cggtggtacc caggccaggg 420 cattgtgcat tttcatttgc agagtcggta tataatccat acctgcggtc atcgtgaagc 480 tgctagacga actattgatg atgggagtga agagcgtgac ggcctagcgg ttgaacagat 540 gttgaagaag tagaagagga gccgtgttga cctgctatcg cagcctcagg cacaaaaggc 600 acgtgatett eccegeacee cacagtetae agtgtagaet gacetgegag ettgteeeet 660 720 ctgccttctt ggcctatggt cctcgtcctc tatcctagcc tgacaaatgt tgataattct ttgatctact ccaggaattt tcaagtcctt attcatgcct ttatcgctta tttattaact tgccctgtct gtctccgctg gacaccactt acggcctcaa tttcagatcg aaattcttgg tgaaagcgac taaatggcag aagaacacat ggctgtcaat aaatattctc tatcaggtaa 900 ggatacgtcg gatgctaagt gatactatct gaacgttgga gtttagaagg tattatctgg tgagagaagt ccctcggaac cattcttcat gattgatggc atggaatcac tgctctctca 1020 tcttattaga ggcaagtgag tactggtcta gacgtctaag ctttcattga cacgtgcttc 1080 tcttgcaaat gcagatctat gacgcgcacg tctcgatcag gctgtctctt ctcctctcgc 1140 accgtcagga atgttattcc catcgtccag aaagccaatg cgattgacac cgctatcatc 1200 gcccacatgc ctttcgtgaa cttcggcgcc atatcagccg agtagaaaag gatactccac 1260 caagegttga eggegttget geceatgtte atggaageaa teaceaetga teggageege 1320 tcgtccttgt agcgcatcgc atcgttacac cacgcaaaga acgtggcctg acaggcgtac 1380 accgcgccgg cccagtagta cgcgcccatt actgtagccg tggagtcaaa gcaggtaaga 1440 atcattgccg aggtgacgac tccagtgatg gcaataaagt acccgaccag gtaccttttg 1500 ccgcccatga aatcggtcaa cgtagcccaa aatagggtcg atactattcc caccgccggg 1560 atgcctgttg gatagttgtt cagttgtaag aaagtgtaag agtttgtcgg gtgggactgt 1620 aggtatagag cgagcagtgc gttcgtcgag aaatactcgg tc 1662

<210> 2564 <211> 1138 <212> DNA

<213> Aspergillus nidulans

<400> 2564

60 accetggagg tetegtegaa geggegaage gattteetea ggeteagggt gaagaaaegg caaggtcccg taccaccggt catcttcatg tccggccgat cttgtccaga cgaggacggt 120 ccacctgtcg gtctggagcc gtggaactgc acgacatact tgtactcggc ggctttctcg gcgctgactt cctggatgtt gctgcccag gggctgccaa cgttgccgga gtaggtgaac 240 300 ttattgccag tgatagactg cttagtacgg ccgccaaaac cgtcgaagca gaactcgcca ttagagggga agttggtcca ggccgagtgg tcagcggagg tgctggtggg cgcttcagtg 360 gaggtaggag cgacagagct ggacgtggtc tcgggctccg gtgctgggtt ctcggtcgaa 420 480 gcctgggtgc tggtgctggg ctcagcagga gcctcagtgg aggtaggaac ctccgtggac gacggggttt cgctagggat ctcaacaaac gtggctggct gggtcggggt gatggaggac 540 agggtgctgg tggtgcagca ttcccacgcg gtctccgtca cggtaacggg ctcggagtca 600 660 tacaacccgc ccacctcctg ggcagcctcg ttacggacgc cgtgtcggtg tttgtggcta 720 ccgtgcgaac gggccagagc cgacccggca gtggcgagag taaaaacgag cgacttccac tgcattgtcg gtacgcgatg gagcaaattc acatcaacgt ccgataataa agagcgtaaa 780 840 ggaaaacaaa aacgaggga tcgcgcgata aaaggggaga cggggaagag gctgagggag 900 agcgggtggg ggcccccggg gcagtgtgca ggaaaaataa gaagatacag agagcagcgc tggcttggtc cctagtgccc agatcgaatc gttagtcgcc caggtacgag ctaaaaggtc 1020 gtgttaatta aatgggccgg tggaaaccaa ttgaagtctt tcttgagtcg gtttgacaag 1080 <210> 2565 <211> 1743 <212> DNA

<213> Aspergillus nidulans

<400> 2565

aagtgcttct cctacttcta tttgcatcta tttacagctg gtctaataca acttggttaa 60 tccacaactt gggctagtgc cttagtaatt tcttacctcc aagagtctcc tgggtttaca 120 acaaaggcag cacgtagagg tgccatagac ccgtttcaga tacactagct actgcaactc 180 gacatcttgt ctaaaagaaa ccttgactaa cgcctatttg tatgggattt cgatattcta cttatcgagt ctactctcca cccacgaatg attaatcacc attaatcacg attgatttaa gcctatcata ctttactcat tttgtcttcc tttcactagt tcgagaataa gccttgccac 360 420 tgaaatacgc ccatcgatga catcagactc aaaataagcc tttttgtctc gaaacatggg cccagttcca ccagcccctg atagctggag cattgctgac cgttaagtcc gtcctgcagc 480 acgtgtagcc ctggaagttg tggatacatt ttccgttcca tgtactgcag aatggaggaa 540 aaatatcaga aaggaacaaa aaagtcgaaa atagacttgc ttccgggccc acaacgaccc 600 660 atttcggact taattatgga ccctagatac tataccgttg gttgagccag atattgaacc gtcttcgatg acattctagc gggccgatcg gttctgatct gatcactcag catgccgaag 720 ttttttgatg agccgtggcg agatgccgcg aaattgcagc tataagaagt ctttgacagg 780 caggttgagg accttttgag aatcagtttt ccaattgtat tccttgatac ccctataagc 840 caatcacatc acatcacatc acatcacaat gtccaccgac tacaagttcg aaggatggct 900 tggccttgat gccggttccg ttgatggcaa gatgcagtgg aaggagtttg agccaaagcc ctgggaggag accgacgtcg acatcaagat ctcccactgc ggtatttgcg gttcagacct 1020 gcacactctg cgcagcggat gggtatgttc tctccactcc tgccctcttt ttgcctttca 1080 gagatetega gaetaacaat egtgateata tagggeecea caaactaeee etgetgegtg 1140 ggccatgaaa tcgtcggtac agctgtccgc gtcggctctc aagtgaagca catcaaagtt 1200 ggcgaccgcg tcggtgttgg cgcgcagacg tagtcctgcg tcggccgcaa aggcgagtgc 1260 aacgaatgcg caacctccaa cgagccctac tgcaccaaac acttcgccgg gacatacaac 1320 ggtgttttca tgaacggagg caagtectac ggtggctacg cectatacaa cegeteteec 1380 gegeactteg ceateaagat eeetgaeget atteeeteeg eeeaeggge geeeatgatg 1440 tgtggtggtg teaeeggeta eteeegget aageactacg getgeggaee tggaaagaeg 1500 gttggtatta ttggaategg tggaettgge eaetttggtg teettttege taaageeete 1560 ggtgeggaee gegtegttge gatetegege aaateggata agegegeega tgegetgaag 1620 etgggegeag aegagtaegt egegaeegee gaggatacag agtggatgge gaacaacaag 1680 egetegeteg acetgattgt ttgeaetgte teateateeg agatgeecat eaegactaeg 1740 ega

<210> 2566 <211> 1112 <212> DNA

<213> Aspergillus nidulans

<400> 2566

acggatgatt cacaatgcga tccataatag gggctagccc tctttttgac agagaattcc 60 ttcacccgat acccacattg acataggaac tcgtcctcat cgtcgatttt gacgttcttg 120 aggttagatc gcagggacat gtcagaatcg cagactgatc acgagttcag gccatgaagc 180 ggcgaatgca tccaggagat gattatcgcg gcgaacggac ggtcttgttt cctggggaga 240 cgaatcgacc ccattgctgc gtgatgtatc aagtgatggt ggggtaactt gcagcttccg 300 cagccactcg tttaatgctt atcttctctg cagtagggca actgttgaag ccttggagcc 360 ttcttattta ccgtctcgtc ttggagaatc caacgggaatc caacagccga ttggagacga 420 tgaaactact ggcccacggc atcaattgtc ataagttggt ggcaaatcat tcaggtacag 480 tgggagcggt ccatgggtat agatggggca gcaaaactgc gctaaacctg acccagcaga 540 gctagcccaa ataatacgct aaccgtattt gtgggcggta catacattct gccgtcgata 600 tcaatatctt ttcaactttt ttctcggact tgctttggat agccttcaag ttgaattgtt 660 gcacataccc aaaatgcgcc ccctcacaga agaagagacg cagacgctct tcaagaagct 720 tgcggagtac tgcgggtcag gcctgaagga gcttatcagt atgtcttgtc cgcaaaaatc 780 gttctccagg taaatctaac aacagcttag aaccgcttga ttcttctccc aacgccgatc 840 gctatgtctt ccgactgtca ggcaaccgtg tctattactc cctcttgtcg atagccaacg 900

c	agccaccgc	atttcctcgc	gatcagctcc	tctccctcgg	aatatgcatg	ggtatgtacc	960
ç	gatagactcc	cgtcgaaact	tccgccgttc	catggcccag	cagacttata	ctaacgtcct	1020
C	ctcgctgcag	gcaaattcac	caagactggc	aaattccgcc	tccacataac	cgcgctcccc	1080
ā	atcattgctg	agcacgcccg	aaataagatc	tg			1112
*	<210> <211> <212> <213>	2567 543 DNA Aspergillu: 2567	s nidulans				
							.
i	agaaagaagg	attattgtta	taaggaagtc	ttgtaggtgg	ctcaccgcct	tcaggacagc	60
•	gcaggccttg	gcgagtcact	aaggtctaag	gtccttgtat	aggcaaagga	cccataacaa	120
,	aaactaggta	aattattata	ttaactaata	tatagagcta	agctctaaat	atatataaaa	180
	atataattat	tagtaaatac	aatatattaa	tactaagcta	tcctagaagt	agttttactg	240
	attttttagt	attagtaaaa	aatataggat	tattaagaag	gatatctata	atatagataa	. 300
	gactagtttt	tagataggta	taatattaat	tataaaggtt	atttacagag	tagatactag	360
	aaatagttat	actaaataat	ttagcctaga	aacaaaaaat	aggctactat	aattattaag	420
	taaatatatc	ttgataggcc	ctactattat	attatatcct	ggctatagac	: aattattaat	480
	cttagtagta	taataatact	aagcaactat	taactcagta	ttaataagaa	ı taaatagata	1 540
	tta						543
	<210> <211> <212> <213>	2568 2560 DNA Aspergill	ıs nidulans				
	<400>	2568					
	caacactttc	: tgaaccctto	c cagccgtgga	ttcggcacca	caacagacgt	gatctcgttt	t 60
	acgatatatt	tetgtaegae	c ctctgtcccg	tcacgggagg	g aatgactat!	t cgtgatatco	c 120
	acagatacgo	taattgtgtc	c agacgctgtg	acgtttgttt	tcgatagcg	a cacctcgcc	g 180
	taagtgaagt	tcacatage	gagtccgtgt	ccgaagggga	a accagggtt	c agggctgcc	c 240

aggacatatt ggtgtccgaa gacgagggtg ccattctcag cctcatatcc ggagtctccg 300

360 attgaacggc cagagttcag atagtcgtag tagatcggca agtcaccgac gtaccgggga aacgagacag agagtttgcc ggaggggtta tagtcgccga acagaacgtc agccagtgcg 420 tttccgccct gttcagaggg gtaaaactgc tggaccagcg cactggccga gttcgaaagc 480 caggtctctg tgattggttt cccggaacta aagacaacga cagtcggttt gcctgtgtcg 540 atgatggctt tgatgagtgg tccttgggcg ccgacgaggg agaggtcatt aacgtcgacg 600 tgttcgcctg ttgtggcgtt gaggccctgc catagctcct gctgatcgcg ggaccaggtt 660 cccacgacga caattgcgac gtcagacttc tcggccgcgg cgatagcctc ctcgaagccc 720 gattggtcgt tgctccagcg ttcgcagcct tgtgcgtagt ggacggttgc ggagtcccca 780 acgaacgcct tgatcccgtc taggggtgta actcctcggt attgactacg gtagacgacg 840 tagtcaccat actgctatgg ttagctaaca gaaatggcac gagaatgagg tagacatacg 900 ttcatatagc catgtgccat agggccgata actgcaatgt ttcccgtttt cttcagggga 960 aggatgttgt cgtggttttc cagcaggaca atggattctt tatcgagttg tcttgccaga 1020 tecaeggett etttgetatg aatgaggtta teceaeteet etttgggage aceggggtaa 1080 gggttctcga agagtcctag ggcgaatttc gagcggagga cccttgaaac agccgtatca 1140 acggtctcaa tatcaagttg accagattcc acaagttgag ggatggttcg gaagttgctg 1200 gcaagcaatt agtaccgtta tttatcgaac gttgagggca gatcatacaa cgaaccacca 1260 cccatctcca catcgttacc agcgggaagg gcttggagag ttaccgattc cgaatcaatg 1320 ggggagetet egeaagtgtg gaaggegttg catagteggt eagtegetee ggegtegetg 1380 atcacgaagt actcataacc ccattcttct cgaagaatct cagtaagcag atggtaatcc 1440 gcgacagcag ggattccgtc gtagcttcag ccaaacaaag ttagacgaca ggttcagctt 1500 tgaatgggat aaagaactta cgagtgataa gcgctcatga cactataagc accagcgtct 1560 atgatggctc gcttgaatgg cggtaaccag ctgatatggg ttaactcaaa tctcttaaca 1620 acgatggcca atgacatacg tggtgcgaag gtatcgctct cccccgtgaa caggagcagt 1680 gttgataccc tgctccggct gactgaatcc ggcgtaatgc ttcacctgcg ctgatacatt 1740 gaggetttge agacetgtaa egtattggta tecaattteg eeggeaaggt aggggtette 1800 cgaatatgtc tcttcaacct gggctgcatt agaaccgctg tacctttatg agtaagggtt 1860 tggccttacc cgaccaaatc ggatgctcgt gggcggaggt cttcatgcgg tgttcaatta 1920 <210> 2569 <211> 433 <212> DNA <213> Aspergillus nidulans <400> 2569

<210> 2570 <211> 1939 <212> DNA <213> Aspergillus nidulans <400> 2570 accettctec taaggactag ttacctcaga agttettcec cttactatec ecegeatccege 60 ctctgagatg acgttgaggc ggaggagacg aaatttccag tggaaactgt ctgcatcgcg 120 catgggcgtc ccatatgagt actttatctg ttctaactcg gattcgtata tctcgctctg 180 ctgggctttt gatttttctt gtacgtcgaa gattccgtcc gcgaatttga cgcacagttt 240 gttggcgagt acaccttcgt ttagggtcca aagtcggcgc atccaggcgg atagtcggat 300 ccgcatgaac gactgtgtat agtcactgga cgagaacgac tggatgtcgc cgtctagcac cagcacgcgg aatgcccgct cataaacagc tttcatcgat ttaatggcta cagagcgtac 420 480 tegeggtget ettgggeeae eggaatgeae attgtgteea teeagaatag tagegaggge ccgtggaact ttttcttcca gagttctcta aaagccagcc ggttgacaag gtcaaccgat 540 cgaatcccag agactaactc atctagtaag ctctgaatgc gaagcagctg gcactgcggc 600 agagtatttg cggagggatt cccaagtcca tcggaccaga catgtgagaa agcgatatac 660 ctcttccctt cggtatattt ctcaacttcg actttgacgt agggtgcctt ctttattggt 720 gttatggaca acagcggcac gcccccggaa ccgatgatgg agaccacttc atcaatcagc 780 ggcccataat gttggcattc gcagtcagaa gaagtgtgag cagtacggta cgtctcctcg 840 ttaagttgtc gcgccataca caggctcctc gtgcacaaac tatggtcttt ttctgtcgca 900 gacggcggac tctcaagttg cgatgtatag tacgccgacg cagaggtgaa tgtttcttcg accagggcga cttcactagg acaccatccg gattcctgta agcgcttgag aggaagccat 1020 gcacagggaa attctagccc cccggtgtcg gaaccaaaga ctaaaggcat tacgcctgtt 1080 gagaagetee aggacagaeg etgaeteaac gteettattg agagatetat etetggegge 1140 agtggccaag tggtgagccc cgggcgtggg tcatcctcgc actttgcaat tcgacaaaac 1200 cgggatacgg ttcgaagaca ctgttcaata cggcgaccga tctgttgcgc agtggacttg 1260 tecteggtet ggagaatgga egagataaaa gatgtgagtt egaggataeg ttettetaga 1320 ccggtaacag atatgactcc atttgggtga ttttgttgtt ccttcacata gtaatgcttg 1380 ceteetttge tgatgggace aaataettee caaaggacee caaagaagag ceaattetge 1440 aagaagggcg ctgcatcttt atgccctgtg aagtcgccat taaacagccg ggtgatgtcc 1500 caaccttcat gctccgggta ggtcaggaaa tcgtgatgct cgtacggctc tttgctgaga 1560 caaggcactt ccagaaaggg gtagggcgaa tccggaggca actctacgta gtccatggca 1620 agacttaaac gtctgaagta tttttaggtt gatgaggaga agaaagatga gctgaactgg 1680
tagttgttgg gcggtaccag ccccgccact attcactttt taaccaggcg gaggttttgt 1740
cccgggcaca acgggctggg ataacccaac caatggaaaa ttctcccgac ttgtatgggt 1800
ggggatttag gtgcatacca atttggggcg aacggtttat tccacgtagg cgagggatta 1860
aaagctttt aattgatatt ttcacgattt ggagttttag ggcttttggg ttccggcttt 1920
tttttggttt ttgggtggc

<210> 2571 <211> 1707

<212> DNA

<213> Aspergillus nidulans

<400> 2571

60 ggtcgagact ctagttcggt atctacctct atctccaatc ctatgcctta agtgctgaaa 120 ggatagtgte ggeageeteg etggttgtte tettagette eegtettttt eegeeeegge gccgcaaaaa aatccatttc cacttcacat ccaccctcac acacttgagc tcctcgttgc 180 240 caagettete tttecaatte ttggactace tggeeggaat gtegteagae cagaatteag taccttgagt atctaataga taatggcaga tgaacatcgc ccactcaagc gcgttcggca 300 agcttgtgaa ccatgccggt tggtgctcac attgttatgt cgcgtcgatc atgcggctta 360 tgatgaagat gacggatgac ggtagtgacg ataaaatagg cgaaaaaagt cgcgatgtcc 420 480 aggcgagaaa ccagtatgct ccttttgcga gcggctgggt cagcaatgtg tttatgcacc gggcgatggg cctgaattgc ctgccgctga tattgtatgt cttctaactg cctctgtcga 540 aatgcgtctg gccgatactg atgattgctg ctcggtaggc taaacgacta tcaagcgttg 600 aggacaagct ggaggagcta gctcggaatc tcaggtacat tttctccaac ctgcaattgc 660 aatagatcac ttcgagttag ttatcaacct gttctgactc gtcaatagac cgcactccac 720 gccggctgaa gtctctatct cgcaatcagc gctcgtacag cataagctac caaatctcca 780 840 gcagaatgat ctctctaccg ttgcgcatct gttcctaaca tgctgcaact atcagcctct cccgctcttc catccagata gcttcgttga gaccctggag agtcgcgatc cggagctgat 900 tetegegate caegetatta gtetteggtt egggegtagt eetgatggta gegaettgeg 960 teettatate aeggactgtg egegeegage gaggaceett gteatggage gtattggteg 1020 <210> 2572 <211> 1604 <212> DNA

<213> Aspergillus nidulans

<400> 2572

caattcgcat cttcgaccgt ggggattggt actcagccca cggcaaagaa gccgaattca 60 tegetegeae agtetacaaa acaacetetg teettegtaa teteggeege agegaaaegg 120 geggettgee gteegteaca atgageatta etgtetteeg taattttta egtgaggete 180 tattccggct aaataagagg attgagatct ggggctccgc cggcacgggc aaagggcact 240 ggaagaaggt taagcaggcg agtcccggaa atctgcagga tgtggaggag gaattagggg 300 caatgggtat ggagggaagt aacggagcgc ccattatcat ggcagtgaag cttagtgcaa 360 aggccgggga ggcgcgaaat gtaggtgttt gttttgcaga tgcaagtgtg cgcgagcttg 420 gtgtgagtga gttcctggac aatgatgttt actcaaactt tgaggcgctt gttatccagc 480 teggtgtgaa agagtgtete gttgtgeagg atgteaateg gaaggatgtg gaggtggeea 540 agatccgagc aatatgtgat aactgcggga tagcgatatc ggagcgcccg gcatctgatt 600 ttggggttaa ggatattgaa caggacetta caaggttgct gagggatgag cggtcggetg 660 qqacactqcc qqaqacqqaq ctqaaqcttq cqatqqqcqq tgcggcggcg ctaattcggt 780 atttqqqcqt qatqtcqqat qcqacaaatt tcgggcagta tcaactctac cagcatgatt 840 tggcgcagta catgaagctc gatgcggcgg cattgagagc tttgaatctt atgcctgggc 900 cgagggatgg atcaaaatcg atgagtttat ttgggctgtt gaatcattgt aaaacgcctg ttqqqaqccq qttqctqqca cagtgqctqa aacagccgtt aatggatctg gcggagattg 960 aaaagcggca aaggcttgtt gaggcgtttg tcgtgagcac ggagcttcgg cagatgatgc 1020 aggaggagca totacqatot attocqqato tqtatoqqot tqcqaaacqa ttocaqcqaa 1080 aacaggcgaa tetggaagat gtagtgegtg tgtateaggt tgetattegg etgeetgggt 1140 ttgtgaactc tctggagaat gttatggatg aggagtacca gacgccgctt gagacagagt 1200 acacggccaa gctacgcaac cattcggcga gcctggcgaa actggaggag atggtcgaga 1260 cgacggttga tctggatgcc ctcgagaatc acgagttcat catcaagccc gaattcgatg 1320 atagtctgcg catcattcgc aaaaagctgg atcagttgcg ccatgatatg taccttgagc 1380 ataaggctgt cgcgagagac ctagatcagg aaatggacaa gaagctgttc ctggagaacc 1440 accgcgtgta cggatggtgt ttccgtctga cgcggaatga ggcgggttgc attcgcaaca 1500 agaaggccta ccaggagtgc tcaacgcaga agaacggtgt gtactttacc acatcgacga 1560 1604 tgcaatctct ccgccgcaga tcatgatcag ctctcctcca acta

<210> 2573 <211> 3838 <212> DNA

<213> Aspergillus nidulans

<400> 2573

ataaaagcaa cgatttctgc attttcagcc cgcccgaact actgtagaca acaagctttt 60 gaccatcctc aacattgaag aaacttttac cccgattctt cttaggaacc ctgcccggaa 120 ggttagagcc tcataaacca acctctctca gaaccgcagc tcgtatcaat gcgacgcaaa 180 tgattaaacc actcgggcag gtcttatcca gaagccaaag catggtcgcc caattaaaacc 240 caaagttccg ctccgaagta catttctcct catctttcgt gccacgcgcc ttaaaagcgt 300 tgtactttaa acagctcacc cgttaaatac gtttacgctg actaccctca gccaaaagta 360 agtagcaaaa agggaacgca cttaccagat tctctcctt tttgatcttc agactatccg 420

cgataccgcc aaggttcaca catccaacat aaccgccaat cttgcggcaa atgctgcacg cgcagagctg gtaggggacg ggtgtcgacg agtcgaggaa gaattcgacg ccgccacatt 540 ggcagcttcc ttcgagcttt ctactattgt tagttataca gtaacttata ttcagcgatg 600 tgatgagcgt atggtactag tattggcgcg attgctagtg atgtcttcga ggtactcaag 660 ctggggtaac gcagtgggac cttggacaaa aaaacttaca aaggcatatt atgattgggg 720 780 tagttgatgt ccaagtagtt aattggatcg acgagatctt attatgtccg aataacctca acaatgctca ttgaaggaag ttcgatctca aacgaagagc ggagtgaaat gctcactact 840 tatacccaat ggtatggagc acagaatcgg actccctctc catcccaccg gctcctgctg 900 cgtaagagaa tcatacccgt tctgactccc agatgagggg tcaatcgatg cagaccacca 960 taatcctcga tcctgattgg atttggttac atacatctga cgtttcggac gttgtctagg 1020 aaataagtgg atgtttgctt ggtttgtcag tgtttggaat gtttgtcctg tttgttctc 1080 gacagtccgt tcgatgtctt cgccgcggcc tctgtcgcaa tttccgaaga gcaacccgaa 1140 cgaatttccc tettcagete tagattatte agaatgaget ttggaagtee eggtggegge 1200 gcgacaaatg tcaaacctac accgtaagtt ctttgcttct gcagtccagc ccgtgtcagc 1260 ccaatgcaat ccagtatatt tatccgcttg gaatggttga tcagctaacg tttctacttg 1320 ctatagtccc gaacgaggga gctttccgct agatcatgac ggtatatgcc tccctaccaq 1380 cctccaaaac tttcagtcaa tactttccct tgcgaaccat ccgtcctaag tgcatggtta 1440 agtegaegaa tatggatgeg ataaccataa ceatacecaa tatetaacea ettaceatee 1500 attgacccca gtcgtatgag accgaactct aacacggctg tctgtcacag gcgaatgcaa 1560 acacctaatt caatcatacc tcagatgcct caaactccag cgcggcgtca acgatgagca 1620 gtgccgtcgg ttagccaagg ggtatttggc ctgtcggatg gacaagtgcg ttcctaaccc 1680 tgttctgttc tactccgatg aggttgtttg cttactgaat tggcgtttcc tgtctgtgta 1740 ggaacctcat ggcaccagat gatttcagaa atcttgggct tgtttttgag aacgacggcg 1800 atgggtcaca cgcacaagca caggcacaga cacaagtaca gacacaaagt gggtcgagtt 1860 cgggttaata gcagatttgg ggttgcattg aggctttggt ggaaagcttg gtgcacggtt 1920 gatgtttact ggtactcccg ctttagctcg cgccttgcat gacatggcgg gctgtatgag 1980 gtcgatgagg tcgatgaggt cgatgaggtc ggtttaaact gtacattaca tgtatcatag 2040

ggttgttttt ctctgtatct catgagttat gatatttctc ctacctcctg cagtgtacta 2100 aagttaccta tacggactga aactagatga aagttattaa ggcaagataa ggctctggat 2160 tgtacggtgc taccggaagt agtcaaacag ccgtacttcc attggaatca attggatgct 2220 atgtgaagaa atacaaaact ggtcaataag tcaaaaagcc aaaaggtatc gtcctgcaca 2280 ctgatatcgc cctaagcaaa atagtagttt gcacatccct gaaccggcta gttatgtctg 2340 gaagcggcgt gtagaacgag tacgttgccg acagttctgt tttcggtgcg caccattgcc 2400 tcagcaactg ctcctagtac ccaacgtgcc tcaggactaa cttcatcaga tgacgctgga 2460 tcgatgtcta gtgtctgatc cacgtagttg ttgcgtcgtc cgactacggt gacgttcccc 2520 ggtttttgag gccgactggg ccattttgtc tttaacggcg tcgattgcaa tctggacagc 2580 ggcagccttg tccttcgggt tgacactctt gaaaaccaca cgtgaggata atgcatctgg 2640 tagggaatcg cggagggttg caaagaagac aaggtctgac tctgggttga agctatcgaa 2700 ttgagtatcc gagcgagatt cgtgctgttt aggctgggca ataactttgc ttgtctgatt 2760 ggtcgggaca gggagttcta tatggatgat tgtagctgtt acctggtcat tttgcgctag 2820 ctgaaggaca aactgaagcg catatcggtc gtcgtaccct ccgaaaaaag gcaggacaat 2880 qtqatqaqag cgggtagctg cagggctaac ccacattgca cttccaacgc ttctagcgct 2940 tagggttctt tgcaaatcgg ggcgggcttt ggcattgcga gtgtacatgc tgcgctcgac 3000 gagaacgcca acgttgcagg aactttcgtt tagtatgcta gacacgaaag cagtataggg 3060 cccgttggca aaccgatttc tctcatccac gtctaacccg ccttggtgct cacttaaagc 3120 accggtctcg ctccagggga tgagaaggag atcagtggtg ccctcgcgcg ccattccaag 3180 cacagtatct gcgtatgagt gctcgggcac caccgacaca ccagccataa ttgagatgtc 3240 gtgccattgg ccgaatgcgc ggaaggtatt aataaccgga tcccacaagg aatgttcgtc 3300 gacctcggac actttcatca cactagagtc tcgatctgtt agctccatta aacgtattcc 3360 atgeacttgg agtgatgaat caggetgaat gteageteea gaeteeteag etgeagette 3420 cggcgctttt gtactctggg ctttctcagg atggaccttt ggagttggag gtcggtttgg 3480 actgaggagt gctgcaagtg tgcaaatact agaaagtccg tcgagacgca gataggccaa 3540 aagcctccga acttggcgag actgaagttg ctctttggtg gcggcggcaa tgctgttatt 3600 atcgcttggt tggattgggg ttccatccca gtcgatttct ccgcggcgcc accgatcgac 3660 tttgtcctgg taccatttgg ggtatatata tgtggtcaat ggagtagtcg ccaatgtcgt 3720 cacgagtgcc ataaccacaa atatggtgaa ggttcgatga ctcaagattt ctgcttgtag 3780 aaaaatattc tagccccttg gtcagtaaaa ggtgcataat caccagcgtt gttctcca 3838

- <210> 2574 <211> 2618
- <212> DNA
- <213> Aspergillus nidulans
- <400> 2574

agagcggcag acaagcgcca gaaggctcaa gagcaacacc aactccaagg cggcgttgtc 60 cagagagate gateaceact egeteegget ecceaeceeg atetetggte teateteeae 120 gcagagaaca aaacagcggc cttctactgt ttatcagttt actccttcta gtgtttacaa 180 attccactca tttaaagaaa tcctcgttgc ctagttgttc cgaccagcaa ccctttgctt 240 tecgecgtat etetegteet etecaactee eegetgeege cetttetete gtegettgee 300 360 tctqaaacct gcggccctgg ctgaagcact tcgataaaat aatatacgag cgcttggata aatatagcga gaatgagcaa taccgacttc cttggccgag caatcgacac ggtcaagaag 420 480 gccatcgaga gcgacaatga aggcgagtac gagaaggctt atcagcaata ttactctgca ttagagttat tcatgcttgc gctgaaatgg gagaagaatc ccaagtccaa ggagatgatt 540 cgcgctaaga cgggcgagta catggatcgc gcagagaagc tgaagaatca tctagcctcg 600 caaqataqtc qqaaaaaqcc gagcgcggtg ggcgccaatg ggaaagtgtc gcaggggagt 660 ggtaaaggcg ggtatgttct acttatcaat acttccaggg gggtatgctc ggtagcgctg 720 atgctcttat ttctttgctg gcagaaaaga ggatgatgac aatgaggacg ctgattcgaa 780 gaaactgcga tccgcccttg ctggcgctat cttgtcagag aagccgaacg tcaaatggga 840 900 qqacqttqca qqtctcgagg gtgcgaagga ggcgctgaag gaggctgtca tccttcctat 960 aaaatttcca catttqttta cagggcgacg gcaaccgtgg aagggcatct tgctttatgg gccaccgggt actggaaagt cgtaccttgc taaggctgtc gcgacggagg caaacagcac 1020 attcttcagt gtcagcagca gtgatttagt ttcgaaatgg atgggtgaga gtgagaggta 1080 tgccgccgaa tcgtcgacga cagttctgcc gctaactgaa acctcatagg ctcgtgaaac 1140 agetetteaa tatggeeegg gagaacaage etgeeateat etteattgae gaagttgatg 1200 cactttgcgg cgctcgtgga gagaacgatt ccgaggcctc tcgccgcatc aaaactgaac 1260 tgcttgtcca aatggacgga gtaggcaacg actccaaggg cgtccttatc ttaggcgcta 1320 caaatattcc ttggcagcta gatgcggcca tccgccgaag attccaacga cgagtgcaca 1380 tcagtcttcc agatattaac gcacgcatga agatgttcat gctagctgtt ggctcaactc 1440 cctgccatat gacacaggcc gactaccggt cactggcaga gcagagcgaa ggctactccg 1500 gcagcgatat cagcatcgcc gtccaagatg cacttatgca acccattcgt aaaattcaaa 1560 cagcaacaca ctacaaaaag gtaaccgctc ttggctccaa ccctatcagc tcagaactaa 1620 ttcaggtccc aggtactgca tgaaggtcaa gaaaagctaa caccatgctc ccctggtgac 1680 aatggcgcca tggagatgag gtgggagaac atcgaggccg accaattact agagccttct 1740 ctcgtgctca aggatttcat caaggccatc cgcaattcac gaccgacagt tagccaagaa 1800 gacttgaaga ggaacgcgga atggacacaa gagttcggaa gtgagggtgc ttagccctgt 1860 gcaccettet gagggeeeat ecegtaceee atgteegett gaateeaata gaetatgtet 1920 ctaaacgaag ccgctgtcaa ggtcccgtct tgttgaaatt cgcagatgct acacgtcttc 1980 ctcataacgc gcgacttaaa tgaccgccat ataaatacct tccaccattg accatttatt 2040 ctttttaaag ctgttttccc gttccttcat ggatgctgct ccccccccc cacctttcac 2100 tttacatacc gattgagcgt tattactgtt ggatgagact acttaggcag gcgaggcgtt 2160 atatgtatga ccttctatct attcctacta ccactgcttg tcgttccggt tcgctttgtg 2220 gcgcatttga acattgtcta aaaatactgg cattgacaag actttgtata cgtctctctg 2280 cctctcttag gtcatgatct cgcgattggc cagatgcact ccacagtgcg ggttaacacc 2340 ctaatgttct agatgtaaaa cagcaggggc acagccgcgg gcccgacttc cagcaggtgt 2400 tggagtcagg taggcagttt caaatttctc agtctatgta tacagcgaac gtccaaacaa 2460 ageteetggt aageacccat gageteteet gaacagaagg cagteaccaa teatgteatg 2520 cagtectaaa ageegeecae tetacagaca aaaaggeeaa ageegacaaa eegeaaaaat 2580 2618 cgctggggaa tcacttgcaa aaaaaacaaa agaagtgt

<210> 2575 <211> 1253

<212> DNA

<213> Aspergillus nidulans

<400>

2575

caatcatacc	gtaaagccgg	gcctttctgt	aagccctgaa	tcaacccgga	agcgcttctg	60
gcgttttcag	atcccttgct	cgttgtgaaa	gtcctgcagc	atatcgcacg	cggtacacga	120
gggacagacc	ttagacgctg	ggcggaaaat	tgacgcagag	ataatcggga	agccatgttg	180
acctcaggtg	caatgataaa	agaaagttcg	agttcggcag	gtgttgaggt	attcgggtga	240
aaggatacag	tctatagaga	ttgggagaag	tgaggtatac	ctgcaacagt	gaagagaagc	300
tagtccagtc	cgggccgaga	agtaccggaa	attccctcag	caaggaagct	cccgtctgaa	360
ctcggcaagt	gacggattat	cattactacg	gaacttcggc	gtgccaaaga	aaccaattta	420
gcataatcta	ttcgtgggat	accactccgc	aaaggtcata	tcaagccatt	atcctggcgg	480
tgtcgttaat	ccagaccggc	ccgttcacat	ttcatttcag	tattgccagg	gaatttggct	540
cattatgtcc	gtcaacgctg	tcacgtaagt	tgccggtaaa	tgaatgggtt	cgacctgcgc	600
tgacttcgat	tttcatagat	ctctctaccg	gcgttcgctg	aagctcgccc	tggactgggc	660
tgtccacaga	catatctgga	ggggacaggc	agtttatatc	cgatcccttt	tcgaggccaa	720
taagaacatt	cgcgaccccc	ggcaacagaa	ggtacgtgac	atgaccttcg	cagccgctga	780
ccgctccgtc	gaggagcact	cgctcaccag	cactgttagg	tcctactccg	agagaccgaa	840
aaattactcg	aaacatggaa	gcatcctgat	ccctaccgtg	caccaacggc	ccctggtggt	900
atgtttacaa	caatctaagt	atccgagcaa	aggactaacc	cgcgaaacag	gaagcaaata	960
cgagagaaac	cttcctgctc	gtcaactacc	ttgtgagtgt	aacctaactt	acgtggacaa	1020
tccagacatc	gtctaacgtc	atgtcagacg	cctctggtgg	tgctggtgat	cattaatgct	1080
ctaggacaaa	aatcaagaga	gattatttta	tgtaatagga	gcatgtattc	cagtcgtcta	1140
attaaatcaa	atgcaatgtc	tctgcgaaac	tagactctca	agacgagatt	taaacacata	1200
gattgccaaa	agacagcact	acaattgata	ccgataaagt	tggaatcaga	aca	1253
<210> <211> <212> <213>	2576 2870 DNA Aspergillu 2576	s nidulans				
ヘセリリン	4010					

gaagaaggac aaatcctcgt ccaaaagtag cagcagcagc aagaaggaca agagtagcag

accagatacc acgacagetg ctacgeetge accegteeca gagteteegt acaetttaac 180 taccgcaacg ctctacctgc ctctttcgcc catctcaatc tctcctacgc acgctctcgc 240 ctcgctactt gctgaacacc tatccccgct gctccttacc tactacccgc ctttccaggg cataattctc gcttactcca atgcttcgat atcaagtgaa ccaccctcgc cctcgtctcc 300 360 gacctccaca acctcaccaa acccgcaacc actaacccta gccaccacgg ccggcgaata cggcgttatg tatgtctatc tcacagcgac cttccttgtc ttccgcccgc agcgcggacg 420 agaccetega gggetgggte aaegtgeaat eagagggett tetgggegee gttgteetea 480 acctcttctc agtcggaatc gagcgcaagc ctcccttcaa cctggaaatg gattcctccc 540 600 ggtgaagagg atgagaacga gaacggaaca acgacaaacc ctaactcaga cgaagacgac 660 gatagtacgc cctctacacc cttcgatcct gaaaaagaac acttcaaccc cgtcccgcta 720 getteagact ecaatecett tteetatgae caaggeeaag tegeagatte caeaactgge gcaattggcc aactcgaagg cgaggaggga acaaccgacc aagactccct cgaaggccac 780 ttccaatccg tctctggtca ccgcgtgcgc gggacaatca agttccgcgt tgtcgatatc 840 900 gacgtcatcc ctggcacaga gcgggaccgc ggcttcctaa gcatagaagg gacgatgctc tctgaggacg aggagagcag agttgttgag gacgagagaa atgggggttat ggcggctgtg 960 ccttcgagcg tgcggaaggt tacggttccg atgtcgtcgg gcggcattat cgttccgcaa 1020 agggaggacg ttgagcttga ggagtcgccg agcaagaagg cgaggaaaag caaaaaatag 1080 acgatgccta tgtgacccta tatgctggca tcgtatgtaa ttatgtttgt tatgttcggc 1140 gttatacgga ttaaaactgc attatgcgtc tatacagctt tgttcttggt acataaaact 1200 ttcgtcttta tcaatctgtt ccgcacacac gctccgtttc atcatgttcg cattcatcag 1260 acattactag ctagctaaga tgcaggccga attgatgatt agatcctcac acccttcggc 1320 acatcaatcg acagtacatc caccccgtcc tggatctcct tcttacttgg catgttgttc 1380 ctcctcatta attctgcaca cttaaccata ataggatcca tacccatcgt ggcaacagca 1440 acaactgtct ctcccttaca gtagtaagct gcaaacttgg cattctcggg ctcgcccttg 1500 agcaccaggt cgtcccatcc cattatcgtg tttccgcaat aacgcagctg tgagccgagc 1560 gcggaccaga agattgggat aaagaccttt ggtttgacct tttgcaggga ggaggtggtg 1620 ttgtggagca tgtgcaagat tgaggatgcg acgctacggc cggcattttg agcgacattc 1680 cagtgttcga tgcgtgtgta tgtgcccttt ttgggatctg tgccgggccc gtggtacggg 1740 aacgtggcga tatcgccaat ggcgaagacg tcattgttca gaccagggac ggagaagtgc 1800 tcgtcaacct tgatggagcc gtccttctca agggtgatgg ctgggttgcc ttggaggaaa 1860 tcggttgcag gacggacgcc gacacccagg atgacgacgt cggcgggtaa aacggtgccg 1920 teetgeagat geaeggegee aacettgegg gettetteat tggagggggt ggeettegeg 1980 acgccggcgg agagcttgaa cttcacgccg gccttttcga ggttgcgttg gaagatgtgg 2040 ccgacttcgg tgcccattac gcgctccatg ggtgcggatt cttgaccaac gatggtgacc 2100 tcattgtcct tggacagagc gttgccaacc tccctgccga tgaaggagct tccgataatg 2160 acaaccttct tgttctttcc gtcgccaatg gcattgagaa ttcgctggac gtctgttact 2220 gtgcggagtt tgaagacgtt ctcgaggagc tggaagcctt ccagggggag cgtgcgaggg 2280 acgcctccag tggctaggac gagtttggtg taagggaatg tcttgccaga gcgcgtaacg 2340 acaatctttt ggctgaagtc gactgcacta acttcgtctg agactgtctc gatgccaacg 2400 teettgtace actggggaga gegecactgg atetteteag ggtetgggat gagageettg 2460 gagagetteg tgeggtegat tatgagaeta ggetegegag taatgatggt aatagegeea 2520 ttgtaaccga gttctcgaat agcaaggatc acgccgaggg taccagagcc tctgaatggc 2580 gaaacaggtc agctagcgct ccattcatgg gtacggagaa tcttaccctc ctataataac 2640 caageegeeg gggeeagagg agetgeactt atgeteegag attegetgae eagaettgat 2700 agcggattct tcaccgcgga tgtagacaga gccgttctcc tcaaacaatt caaatgtatt 2760 gagagcagcg ggagcagggg catcttcaat atctccactc ttgacattga agcaagctat 2820 2870 agtgtggaag tcagcatgtt atatacatat acatttaatc tatatatgtt

<210> 2577 <211> 2742 <212> DNA

<213> Aspergillus nidulans

<400> 2577

tcaggttccg gtagacgagt cgcacccaga agctgcggtt gccagttgga ccatgaacaa 60
aggcgtacag tcactaaaat agccccgga tcccggttag cgcgactgct agcgatattg 120
tccccgccga tactttcctt ctggggcttg ggttcatcaa ggccgttagc agatccatct 180

tcatcgtcgc ggccaagcgg tgcccgtcaa aaagtccacg gctcattggc tggccgatcc cacaccaacc ttcaccagga aagcgcgaat gggaaggatc cgaagactgg gagtggccaa 300 ctgccgcgat ggagctctcc agggtaggag agtccttctc tcagtaggct ccgtcctctt 360 cccgtgtcgg ccgatgcgct gttaatgctg cctattatta tagcgtgtcg ccagtttagg 420 480 atctgacgcc gttaacaacg tcagccccgt ccggcctcct ccacctgtct ccacgccgaa 540 ccatgtttct cgctgcttct ctcaccagta agtgaggact ctgtacggct ctcgcgttgc cgctctgttt cgtttctaat tattcttcat tcttcgcttt tcagttcctc ggcagttccg 600 cagatctacg attctcgcag ggtaccagat tctccagccg ctgctgcagc agtttggcag 660 cacagccggc cctcacacgt cgcccgtctc tccgtgtttg caggcaagca ggcaagcaca 720 gactgaccgg catagcatag gtagcatagg tagcatagcg tcgcgctgcg atctatcatg 780 catcagttta tgaggcgtgt cgcagtttaa ggaatgcaga atggaagccc atcattaaat tgccccatct ggttgttaca gatcccgtcc caggaattct gcgcggccgt tagattgagc 900 agtaattttt aatatgagga acgtcctgct agcagttcaa cgcaccgggc tcgaacgttc gggaggggtt gggagccgtt cttttcctag tgtcccgtac tccccactgg aaccgtttga 1020 taatcgccgc cagtcttcac tttttagtca attctaaccg gtttaccgtt ttgttgttgt 1080 atttttcggg cagctgaggc actaacactg tcggtaactc tactgagctg actacgacca 1140 aggtacacac cccgtcctcc atagatgcct ttgcatgggc cactgggtaa ctgtggctca 1200 aagtgtatca tgcaatttaa aataaaatga agggaaaatg gtaaaacagt tagtgtcaac 1260 ggcttctcga acatggtcct gggctcgcct ctgggtcaac ctagtgcctc tacgtctgat 1320 acagagetee teactggeee gtettagetg etcaateage tgteatgage egatgatete 1380 ctccttcctc ctgcttgatt ccacgaatct ttcttttcct tcatcgccct tcctttgttg 1500 cttctgcttt agttccgagt tcattcctca gttagacggc catctcaaga tcttgtctcg 1560 tctcgtgcct tcacctcaca ggtcatcttt ccctccacgg cataccataa cttcatctac 1620 cattcccagt tatttattta ctgtatacac aaggcatcat acgcggttca cggcaccctg 1680 gtgtgctagg tgttttttc gcttcgacgt cttcctagat catcgctgtg gttggtccgt 1740 qacaqqatac gctccgaagc gactcagcct ccgcagggca gcttcaccag gcctaacccg 1800

acctgttctg agcgcagctc cgtcactggc tcaaggcgca ccagctggtt ctatcgcctt 1860 acccgctcat cccgagatta agacaaggaa ctatctggca acacttctga acgtgccggt 1920 acttettgta etgteteaag getggeegte tgtgatetae ggeetgtttg teetaetega 1980 ttcggctggt ctgtgagtgg actacttgga cgcctgttgc cactgtcaag tgtcaaccgt 2040 caagacgtgc actgcaccgc actacgcacc ccatccaaaa ggtcgggcat caagggcagc 2100 cgcgacagcg aagactttga accgttcttt tcatctcggc gtatgctgct ccattctcac 2160 ctactatctc accacgagca agccttgcac gctgtgaatc gcgcatatga ttgcgttaca 2220 aaaccagcct atcctaccac ctcctgccaa agtggatatc tcactgcttt tgaagcccca 2280 agatgaagaa gaagcggcct ccgtgaacat gatgagcacc acctcaaccc ttccacctgt 2340 ttcggctatg caaccgctgc cgccgatgtc ctcgattgca ccaccgccac cggttggagt 2400 tggacttgcg actcaatcat cagtgccttc agcgccctcg gggcccccgc ttactgccaa 2460 ggtgccagct ggtgctggta cgaagcgcct gcaacctgct cacacggcag agtcaccggc 2520 gaagaagcag tcaaagtggt ctccggaaga ggacgccctg atcatcgagc tgcgaggcat 2580 cggcatgaag tgggaggaca tcagcaaacg actaccggga cggagtgcaa tcagctgccg 2640 cetteattae caaaactate tggaacgaeg aagegaatgg gacgaggaea agaaaaacaa 2700 2742 actcgcaagg ctttacgaga ggtataccac gctttgaaga ga

<210> 2578 <211> 1396

<212> DNA

<213> Aspergillus nidulans

<400> 2578

atctgttcga ttctcacagg atggctttgt attagcgact acttcatgcc aactaatgct 60 agcgagtctt gagaattgtt tgattgcttg tcatggctca ttatgagagt cgcttcggca 120 gcttcgaggc ggacgatgtt ggtctggtct cctgatatgt ttgtctggat ttactaaaca 180 tgccgagtgc aacgttttt tagaggggat ccttatttcg atggcgattt agtgaggtga 240 aagtttgttt agtgatgcag tctgctataa ctttagaagt cttgccaaga tccggaaatg 300 agaatagccc taactcagta gcatatgagt aacaaataat atatatct caattacctt 360 acaaacagac atattggcat ctagaccctg ccaccgatcc agtatccaat tatcagcgca 420

ctataccaat acttgtatgc aaacagccag cttcaggaca gaaccgtgat attcctcgac 540 aattccgtac agttcacgag cacactgtgg gcggaaaact gccgccaggc aggaaagcaa 600 gactgctata attataggtc gggctcagca ttataatctg tccgacggtc gtcccgaact cttctgccag atccttgtac acgccccagg tgaacatata cggctggata gcacactgac 660 tgggctcgca cagagggact ttgatgaact tgcccggcga tagacggtca ttcggtccag 720 tggtctcatc acctaatgcc gcggccgtga gagactcggt tgtgatattc agccttctcg 780 cgatgatttc gtatgtgtcg ccgttgacgg tgtagtagtt ccgagggcca ccgctgacgc 840 aggttcttgt cctcgtggtg ttgggaagga ggcagctgtc gttgtctgta tggcaggttt 900 caggtgggat gatgatttgt tcgccaacgt ttgggatgat ggtaacgtcg gccatgaggt 960 tctgtcgccc gatgtcgcag acgccgcggt ttgtggctgt ggcgatggag aagagcgtgg 1020 tgtttggagt tgttattggg caaaggtagg atgtactgtt gagtgtgctg gggtcacagc 1080 tcgaggagac gtttgtagcc agggctgcgg cgaagagcgc cggtaacagg gtgattaggc 1140 ccccgtgga tttgttcaga ctcacgtaca aagcagctgt aagtcaactg gtttattgat 1200 atgtgagaga atgtcaagct aaatagtcaa gggtccggat agtcgacgca agcgcttgtt 1260 ttcttcaggg gctcatcgga gtcagtaccg cctcataacc tgcagctgac gcagccttcc 1320 acagcaggca tetttgtete gteateateg agaatetege tateaetttt gaaccaacte 1380 1396 ttggcagtgc agttcc

<210> 2579 <211> 4313

<212> DNA

<213> Aspergillus nidulans

<400> 2579

ctccgcttct gcgggttttc ctcgtctcgt cctcgttcct cggttcgatc attacctgcg 60
ataacgtgtt tattcgcttg cggcgtcgcc tcgttctccg gtgatgggac tcagagcggt 120
tacatcacga atgcgtctcg agttacctac cctcgggact tgcggaatgc gactgtgctg 180
agcctgacct gtccggcgca taaacggttc gagagaatcg agaatcggtg tgatattaca 240
cgtgccgtga gagccagaga cttgaaaggg cctcccattt ttcaggtttg ctaggttctg 300
gaattcggta tctgaaagtc tggaagtctg gcccagtatc cctttgtcca acggcgtcga 360

tctcgatagt aatgatatcc gtgcgccaaa gcatcttgac agttatgcat gaaagagccc gaaggagact tecegtagae ateceeggea eetetaggea geaaaggeag eaaatatagg 480 caaagtatag agctgcaggg ctggccctga tccctagtcc ctacagatct agcaagctct 540 ttcatgtcgg acgattatac ttctggaaca taaatggttt tcgactagac atcagccaca 600 taactccaat ctcagttgaa tcttctctaa ttcctgggaa caatgacccg cggaatggtg 660 gecectegga cegtggageg cagacageae gageaatace agaeggttgg caagaegetg 720 tgtcttgaag cacagcagca ctagtcggga tgtcgaagtc gatatgcaca tgttctgatg 780 caggaatctg ctgctcagtc cttgaggcct cgaagctagc taggtatcct ggcagagaac 840 acgcaatgat gcagacccct tacccagctc gagacatgtt tgaagggttt gtcagtacga 900 tattgaattc taaaatctgc cattccattc acggaataga tcccaagatg tcttaatcaa 960 catgccatac taatttgacc gcgtcagctc cggcagctgc ttttgactct cttagattga 1020 tgacggcacg aggccgacct tgttaccttg agctccaata tttcgccact aggagtcacc 1140 cteggececa egtteaceat ecceaactee caaaatecaa etecagatte catteteete 1200 aaactccaac tccccacggt actaatcgag atggatctgc cgattctctc ttttttggag 1260 agctaccgct tcacttttgg ggccgacacc ctctagtaca gaatcgcgtt cgacctggga 1320 tgaccacttc tgccgttacg cctcggcaac ttcccgctct tgccgtcatt aagcagcgag 1380 ctctgtgagc tgcggacgcc tcgttcctgg tcactcctgg tttgcacccc tggatgccat 1440 gccacgctcc cgtttgaaac ctcggatcat gatcgtgatc aggaattgga catcgtactc 1500 cgcgcccgcg ctttcttccc aactacctga ggggtatacc tgagtgacct catgagctgg 1560 cgttcagctc ggtttcagct cggtgatgcc gccagtttgc ggtcagaggc gcatccagca 1620 caaaaatcaa cgacgaccgt ttgaaaacta atcgctttca tgttcggggt atttctcggc 1680 tgccagaagt ctccagaaag tctccaagga gcaagaaagc gcagcgccca ctatgtctca 1740 atcagtaccg gcatgagett gtaacccage ggetecaaca geeettgtae tetgtaetet 1800 gtagcgctga aggtagtagc tgaattctta gtgcgattgt tacctgtaga ctgctggctg 1860 ctgactgctg tagcctcctg ggcgtccctg caggacaaac tatcccgtca aatccgttta 1920 gaggaatagt atgcagctac gtggctcttg cgtccccatc ccggtggaac agacaactgc 1980 atgggggtgg cagctgagca ttctaacaac cacagtcgcc ggcgccccgt tttcattatg 2040 ggtatatcga taattagacg caccataagc tcgcggcgtg gatactggct gctcaggacc 2100 tactgatggc agctattatg tgcatggtgt cgcgcatgag caagtgactc ctgaagtata 2160 togtacctat gtttogoott otcatotact atagagtact tagtacacac tatogttota 2220 gaaacaagta ccgcacttta tccaaaccgg ctcctatcta atactccgga gggaaaaatc 2280 aaaaagaaat tccgacaatc ataataatac ggacttgcgt tggtgattgt gaagaacctt 2340 gcagccacat gcggcgaccg actggctctc gcaaggctga gatccttcgg ctcatttgat 2400 gccgaaaacg caagggttga aatcatccat ttctcctcca ttcagatagt ctcatgctct 2460 aatgagaatc cacccaaagg agaaggcgta cgtgagtgat cggccagaac ggcttcccca 2520 gagaatgaga gtaaagtacc gtaagctaga ccccagtcta gggatcacct aatcgtctcc 2580 catcatgtgc cgtaaatctg aatctggccc cgaacaacga acctcgatgg agaatacaga 2640 gtacagccat catctgatag gatccgattc gcatttctgt aagattgggg ttacatgcaa 2700 gctgacaaca acaatggatg tgaagtctaa agccacgcgt ttcatatcga agcctaagag 2760 gaagagatca aactactcgg gactctattg tactcttctc tctccatggc ccgctcgctc 2820 tatttctcga tgggggcgag gcgacactgc ctcatctcgt gatggagagc tgctcatctc 2880 atcgccagta ggttgaaaga agactgacag aagactgaca cgtacattgt cacttgggat 2940 gtccatcggg cgatgcgatc attgattact ggtgacagct ggccgtcgac cgccttgtga 3000 tctcgggggt gagttgttgt gatacactcc cggcctgtcg gagccccttg agtccctagt 3060 ctttcaggcc ctgctgcccg gcgacgcagg taagcttgac ggattgacgg gattctacgc 3120 tgaaaaatgg gcgattggaa tgaagcttag aactgtgata ttgatatcga cgccacgatt 3180 cacaccgtcc gcatgatgtg tggaaaggtg tacggagtac acactgagta cacgcagtag 3240 ttacggatac aaccgagcgt gtttcgccca tactatacgc atcgtgataa tgaagctcgc 3300 cttgacgttt ttccggttaa gtatccggtt agttattcta cgatgatcat catgaccgtc 3360 gcctcgatcg aaccgcagac ctcttccttg gtatgtgata acgcttgtca ttgcagtggc 3420 ccgggatccg ttcccattcc gccggttagt ggcagcgggc tggacggaag aacggtccat 3480 atccattaga gatggatcaa acatcggcat tgacacgtcg agatcaatgt agtgcccttg 3540 accetecett gtattgggta aagttataca aagtactage acatgaagtg gcagagtaga 3600 ttgatcaact gagcgaaaat atgagttcca gtaagtgcga aaacaaacct gagcgacagc 3660 caccaaaaaa aaaaaggcag gttcgactcg atcccacgca agagcttgaa cggagacaga 3720 ttcacagtct tccgaacggg ctgcctaatc gagccatatc cgtggcgaaa ggagatgaat 3780 cgcatcgctt gatctctgtc taccccgtat accccgtata ccccgtagtc agcagggcat 3840 agtctgtagg tgtttggccg cctgaaccag ccatagacag cattgtctgg ggcagtgaaa 3900 cgaagctctc caaccgcgcg atcgatcga gactcgattg ggggacggat aatagcctc 3960 agattgcaca agagataact agctcgcaag gaatctacag cggctctgag ctgctactta 4020 ggctgaacag tgttatgaat accaggcct gcacgccaat cattggggac ccatttttc 4080 tggcagtcaa gtgacctggc caccgactat cactttcgaa tattgatgcg atgcagaact 4140 gggggctgct cctggtgtta gtcagccggt cacagggctt gctgattttg tctagactct 4200 tgagtcttcc atagttgct agctcggta gtaaatggcc atgaggtcg agctggtgat 4260 ttttatgagc gtttaggttc agctcggta gtaaatggcc ataaggatcg gat 4313

<210> 2580

<211> 2389

<212> DNA

<213> Aspergillus nidulans

<400> 2580

atctttgatg agcgatgagg gcggttgaag tagattgcct cctggcctat tgagctaatt 60 120 agcaagatcg ccaaggatgt atcctttggg gcgcaaagca acatacgccg tgtagttgac cgtgtatggg gtggcactgg gaaacattga gaggaggcca tctctgcaga caatgttagc 180 atgtcgttac gaaagccaac agagcactca cgcagcattc tggatctcag tagcgttgac 240 agtagcggta acttcgtcgg cgagcgcacc gatggtgctc aggagcccga gggcgatata 300 acgaaagaaa tgcataccag ggctctatca cttgctgaag tgtgtagtaa atagtcacga 360 aagaacctta aaggagtatt gagcacgtcc agcaatggtc aagacgccga ccatgtgcgg 420 aagcgatgag gtatgacctt atatcaaatt gtggagatat atcgatcggg caagccagtg 480 ctctctgggg tatgctgctg aaagcacgag cgaatcaacc cacagcgttc tatggcaacc 540 600 ctggccgagt gggaactcag acatctggag ccgtcgtggg ccgaagccgc cgtcaaacct cggggatcca tcttgaggct ggtatgagta atggttgcga ttggttcgta tagggcatgc 660

tgctgtctga ctcggcccgt atgaatcagg atcttgcggg gaaggatcca agcgaccacc gcggtgcctg gctgcacatc aacccagatc ataatttgag cagatttaca agccatatgt 780 840 tgactttatt tagagttgcg gctgctggat ttgaccgagg gtggcgtccg gattctcctt gtagacgaga tcagagcagg ctggagtgag acatcgcgcc atggtaccga ccgcgaactg 900 aagctattgt aggtaacgca gagcaacagc acttagggct gagctctata ccaaaatggc ccattactcg atttcatagc atgggtaagc taggagtcgc actaaacccc tgagagctca 1020 atgggtgtat cgatgtcaag cattgccata gtttcatacg agataacgtt ccctttcgga 1080 tcagctagac ccttgcagca tgccaaagct ggtgaggagt taatgtttct gttgcgagtc 1140 atggcctctg agtcgcggtt tactgcagaa ggcacgacgg ggattgcatc agcatccagc 1200 acgctacgat gagaatcgcc actccagcag gcccaacgca cccttggttg gccgtcaacc 1260 ccgcaaagtc catctccgca accgcaggga ttgcccggta aagtgaccga tcagtatatc 1320 tgacttcaag aatgtgatag ccgccaaggc cagcagggaa gaggatgcca tctataaaga 1380 gctcctagac gtctctgaga gggggtacca ctaacccagt tgccagacca gtcttcctcc 1440 gcccacaaac atattacaac agtactgtct ctgtcctcag caaggtcccc tcctcagtcc 1500 tgaccgcaaa catgaagttc ttccaatatt tcaccgtcgc actactgccg gcgactatat 1560 tegetatece ggeegeaaag eccaageeca aggeegtege caeggeggea geeattaceg 1620 cggaagactt tcatgctctc gttaagcggc agtcgaacct gaccgacctc attggagact 1680 tgaccaattc cttcggcgcc attaaggact tgctgtcgac cgagagcttg aacaacatca 1740 acctgatttt gaccaaggct gccgagttac tttcggaccc aaccaccaag cagatcaaga 1800 gcctcgtcaa cacagcctcg gacctccttg gcagcgatgc tatcaagaac ctgctcgacc 1860 agatccccac cctgctcgat agcgtcggcg gtctcctgaa caaagagact ctcgacaaga 1920 tcacaaatct gctgaataac gccgcccttc tcctgaccaa ggagttcgca gagaatacca 1980 gaaacctcat aaatgatatt ggtatttttg agcccttcca cctccaagag atatgaccag 2040 cgctaacagt aactagctcc tctggtgtcc gcagtggccc aggttatatc agctcttctg 2100 ggtgcccttc tcgggtaaag acaacgattg ggtgagaagg attcaggcag ccgcacggtg 2160 caggicaati gaatigegie tiegataaee aigaageigi teeigeiage igagaaeeea 2220 ggcgggagga tagggggacg cactaagtct gcttgttgcc acgaccgtac tggcgctggt 2280 aatgaacgat aacgaactaa tcttacttaa taaacgcatc atgaaaacaa aaccgaattt 2340 2389 atttgtcggc tgtcaatttc aatcaatagt aatcgttagt tgagctgaa 2581 <210> 1147 <211> DNA <212> Aspergillus nidulans <213> 2581 <400> gaaagtacaa gctgagcaaa gccatgagga ggagccagaa gaaactaagc ctgacggccc 60 ctccactgag gccgtatcag ccagcccaca tcaagatgag gaccatcgag gagcagaaga 120 tgatggaggc gaggtagttg aagataacga agatacggtg atctattagt tatttacaat 180 atcaagttgg tcatctactc ctggtcccaa tggtggtcaa ttatgtacaa cacaatcatg 240 ataattgagg agacggttaa cgagggccga ggcaactcgg aggattgaca tcagacccca 300 aaatactccc aggtccacga ccttctatcc ttagacattt caaaaaacat tttcaaagac 360 acttaggcaa atcatcctct cgatcaaatt atcctctatc aagccctcaa attacagagg 420 aagctcgact tcacgtgacg ggagaggggt tctgaagacc ttctccatta aaaaaaccat 480 caacatcgat acagtccatt tgagctgcct tgtccttccc ttttctgtat tcgttttaat 540 aggetttggt ccatgaaata aateetgeeg ttegaaaace atggeagtgg acaaaaceag 600 ggtttcggga gactcccgag tcgagcatcg ctcagcgttt gtgaaggaaa acatacggta 660 tgagtatttc ctcatctttg tgatacatta ttgagctcgt gcacttcttg cgtgttcccc 720 ttgctcgccc gacgccgaga cgtgcttatg caatggtcta acaaacaatt cgttgactat 780 atatctaggc tacctctata gccagccgcc atcaggccaa tacaaaggca ccgtagtctt ggtattcaca ttgacttttc tctatactct ttcaagttca atactgatgc agatcctgtt ctgtctcagc tccatggttt cccggacctg tcaatgggtt ggagatacca gattccgcta 960 tttgtcaata aaggctaccg agtcattgcg ccagattgtc ttggatatgg acgaacggta 1020 cactaggcca tcaattttac agtctgagca agcagctgac gggattactg tcttcttaaa 1080 ccaggacgcc ccagcggatc tagcggcata ctcacacaag aactgtgccg acgacatcaa 1140 1147 agaacta

<210> 2582 <211> 3120 <212> DNA <213> Aspergillus nidulans <400> 2582

accgggatgc aaagcctgtg tatagaacca gagcaagcaa gatgattgaa gagggggcga 60 gggcttgttc aatcgatttc gtcagagagg cgaaaaaacg gaagaacata gacatgccca 120 tcatcatggc gaaggagatc aggtagagga aaaagaacgc tcccgcttca cgtcggaggt 180 240 ttcccatgaa gtacaggaca aggctgttga gcagggagtt gacaatcttg tatggcatat 300 ccataatcat cgaagaaata gcctcagcgc tagggtggta aagggcgtat ctgctgtgtt tctcgacaat tgttcgtttc tcgtacaacg tgatgatttc gagaacgctg gaaaaggcac 360 420 tcaagaggac catcatgaac agcaatgcgc cacgggagaa gaaggaggag gtatttccag 480 gaagattgta aaacacactg gaaatgatca aggcctcgaa gaagtttaga atcagcatgg ccagtgtcac actggggtcg tttttcagcc gttggaaatc cctccacaag cagattcgaa 540 tctggcccca gtatgacaag gtatatggag atttcggtcg ctggttcttg gacttctctg 600 catcccgcga agacgaaaag agatcaaggt ctgtggcgtt aaaggggtgc tcggtgttat 660 720 accggtcaat gtcacgtaga agtgcctggc gttcaggact ctctttccac ctctgcgcaa agtcatcggc tgtcctgggc actaagttct cgaatccagg ccggatgacg cgctcgactg 780 ggctcgacat gaaggtcaaa aagtcaggcg tagtttgagc ttcagggcaa acgaagccga gacggatgaa gtagtcttta gcttcctttg caggaccgaa gtaaatctgc cttccctcgt agagaacggt gaccttgtcg aagagctagg aaagggtcag tacagttggc aagaaaaga cttccaacat acctcatagg cggcttgagg agcctgatag attgcaacac aggaggtgat 1020 cccgaaaacg tctccttgtg tccgtagggt cttgcaaaac tcgacagcat tggcactatc 1080 caacccccga gtgctattgt cccaacactg cagaggagcg tagctcaatg ccgcctctgc 1140 aatagtaact cgcttcctct cccctccgct aaccccccga acgaagtcgt taccaacctt 1200 ggtgttgatc gtgtggctga tgccaaaggt cgacatgatg acatcgcgta agtgaacggc 1260 gtactcctct cggctcatgc ctccagggac gtggcgaggc gtccgagcga gcgctgcaaa 1320 gtatagggtg tccccgacaa caagctgagg aaaatgtgcg tccacctcgg cggtataaat 1380 cgcttcgcca cggaactttt tggacatctg tttcggagta atgccctggt aattgacgta 1440 cgaagaggga tccacttcaa agccgtgagt ttcctgtgcg atggtcttca acagagtcga 1500 acagcctgac cccggagcct aagcacgcag agttgttcgc cgggaagcag cagcccgtcc 1560 acgtectgga ggateteagt eegttgettt ttgeeceeta geeattgeea ggeaagegte 1620 ggcaacttga gaagcgcatt ccctacactc atctggtaat cgactggact tccgtagcca 1680 gcaacattga gattettgaa egegaeacea gcaactegtg gtggaggege gtetgtegaa 1740 ctgtaccgga cattgtagaa ggccttggcc caggctctcg cattgaactg ggcattctgg 1800 gggtcgaggg acgggtcttt tccaaagttg aacgggagct gatgatgcga atgcttcgac 1860 cgctcactca gtacccgcgc caagttggtc acctcgcggt cgttttcgat ctgattttca 1920 tccagggtcg agttgcagct ggtagctgtg ctgtccctgt cgacggcttt cggccgactg 1980 tctgttatgg gatccatgga cggtttggca ggagcctgat ttgcagcatg gggacaaggg 2040 aaggggctca gaattttata cgagtccgcc cagagctcgg agagttgttg acgaatggcc 2100 cgacatctca aacacccaaa tttggagccc gaagactatt gacacgtatt gagatgttgc 2160 ccaggtcaga cggagcccgc gggcggcgcg atccgtaata tgacccaaga cagcggaatc 2220 cggatcgaga agccaatgag tcaaaatgag tcagggatcc aataagagcg cgccaagccc 2280 aaagagtccg atagtcctat agtccgagcg ggtgctatat gtcaagacat cgaatcggtc 2340 tegggtteat gagaateegt etetetete ateaggttat gatteetage ttgateaace 2400 gttacaatgc aatcttatcg catgaagctc tcggtaatgg cgaatacccc tttatcgtca 2460 cttgctcgtt gctgacatga cggtagtgtc tcaggtgcaa agatcgcaag gtgtgccgct 2520 cgaccagcac tgttcgagga tgctgaccct ctcagctgag atgtgaccgc ggggagccac 2580 aatgcaaacg ctgtcaaaac agcagcgtcc aatgcttgta ccccgaaaag agaaagacac 2640 ggggttcaag gtgggtcgcc tcgtttgccc tcccgactct ggccggtcta atagttgcct 2700 aaggcaaaag teegacatae aeegtettga eeategeetg gaageettgg aggaacaaet 2760 cagggcagct gcggccagaa acgtgagcca ggaatcaccg acccgggctc atactccagc 2820 ggaaaccact cgggtgggaa cgcctcaagt cgatcttgaa aatgtctcca aagatgatgg 2880 tgggttcagc acatccatcc tttctatgca ggcattgaca cggatacctt tagcttttct 2940 atatcggatg gttagtggag cgacgacagc attgagacgc ttaccacgca gtcttcagag 3000 cctccatatc cttggtctca gtccacggtc agcagtgcaa tcacgcgtct ggacacggcg 3060 ttggttcagt tggctgctcc gttccctcgg ccggacagtc gccacccaac gattcaaaga 3120

<210>	2583	
<211>	2192	
<212>	DNA	
<213>	Aspergillus	nidulans

2583

<400>

60 cacacatect tggtttgcat atcgagcaeg atagaaetgg acagggagaa eeegegggtt gagaaaattg ctatccttga taaaaagctg tccatcggta gtgtccagct tctccattac 120 ggaaaggtgt actgcctcgc gagacaaggt ctagtaaggc aattctgtgg agaacaacgc 180 tcaagctctc gtagggtaaa aacaggtcga catcttgctg gtggacgaca gcggagcaaa 240 agggacgcgg aataaactaa acgaaaagaa cgtcagtatc attttccctt gggagatgga 300 360 aagagcactc gaagaggact cgacgtggag agggaaaact gaggttggaa cgcgaccaaa atgtgctatt ataggctttc tggcccaggg aatggagggt gacaaaaaca aaaggtcgag 420 caggtttcca caagcccaca acaatccaat ggcatttgtt accatacctg aggactcccg aagaaagaaa agaaaaaaa agaaacagaa gtcttctcta ttcaagcaga acagaggctg 540 tcgcctggac aaacccgaag aaaaagaggc tgttaaagct gcgaagtcga ctccaaaaaa 600 aaggagaaga ttggagaagc gaagggagag gaaaaaggac cgggggcagc tagtaatatg 660 caagtagaga gcagtggcgc ctcgtagcgc agcggaatga tgaattgaag gaggggtgga 720 780 taaggatgtg caccggagca gtgagcaatc agctgagaga gggaggggcg ctatcagcac 840 tcgaagggta ctatcaacgc ccagggtagg ccgccgatga cagactaatt ctctagctga 900 tcttggagct gaggtaaaaa agaacgggcg aaacgaagcg ctgagagaga aaaagaaaat atacagccac agaaggggat agatacgaga gacgctctta ccttaatggt agtggaaaca atatcgtcgc agacttgaag tcaaaggcgc gggcggcagg gcagattagt gaagtattta 1020 tcatgtcaga tctggacaaa ggagtcccat aattattgtt atgagagttt ccatgggtcc 1080 ttcaagttgt tatcgcagta tcatacggta cagtggagac ccggcataca ttgaaaccat 1140 tatccatgct tgagcatctg tctgctgcga ggagtcgccc catagctaca gcatcacttt 1200 tttcaccacg atagttttct ttggaacggt cagaagcaat tgatctttac ttcagagttc 1260 gtcccgttac caggtggacc gtgaacagaa gcggagccga tagattttta gtttgtcaac 1320 aaaagagtca ttcctctgcc gtccctatcg aaagcagcag tccgtgttac tactagcggg 1380 gttcctacgg agaacggata ctcaactact gctcttcatg agtgagactc ctatgtcagt 1440 catactttat gtcctgttgg cagatgctga acatcccttt cttgaccttg gttgaatagg 1500 tacaaatatt cggtgtttca ggacatacat gccacccctg ggagagactc ccaattcctg 1560 attgtatcct ttctgtcacc tggacggaag tggagcgatg gcttcgggac gcttgagacg 1620 ggtatcccga tcgtgacctc gaatgcgata cgggaaaata tcattgtcga catcgatgga 1680 gtcattcatc gttacctacc gtacacgatt tactccgtcc acaagcgaga tctgtcctta 1740 atccttagtc acagccactg gatgggcgtc agtcggcccc gtcatgggaa gagcaaacag 1800 gcttgatggg tggtggtggt aatatttcct ccgcgctcct aagcttggac ttggatagcc 1860 cttcccaact gtgtcatctc tttgatttga cccggcctct tattgttgct tctggtataa 1920 cacctcttca ccactgattc actttatgtt tctctcgact ctggaatatt ctcctatata 1980 cactaatccg tccaatcgac acctttactt ttctaccctc ttgatactct tctgtgggta 2040 acacttcgat aacacttcca tattctaata cacctatctt actctcccct tcctatctca 2100 tcacctgatc tatctccttc ttctatctct cttttattcc cttaataaac actccattct 2160 2192 ttctttcctc gcacatcatc tctttctcca tg

<210> 2584 <211> 3044

<212> DNA

<213> Aspergillus nidulans

<400> 2584

tgcccagcat atcggccgta acgaggtcgc taccgccgcc atcttctatg gccaggctaa 120
agcctctccc gaggacatcg agaagctttc gtctcctc gacatcgacc atgagaccct 180
aaaagcacag ctctccggct tccccgaccg cggccgttcg gttgagatgc cgccaaagga 240
gcctctcatc taccgtcttt acgaaatcgt gcagaactac gggtatgcgt ataagccggt 300
actgaatgag aagtttggcg atggaatcat gagtgcgatc tcgttttcga ctaaggttga 360
gaaggaaaca gatgagcagg ggaacaactg ggcagttatc actttgaggg gtaagcggct 420
gcctttttcg aggttttagc tggagaaatg aagaaggaat gatagataga gaggaaatgt 480

attgggcaat attatgggat gtgtttgaac aggttgcaat cgctccgtgt agttatcagg caattcaatg tctcataatg tgttaaccac ttacaagtaa atccatttct cctttgctgt 600 tggtattcag gcagctggat tgtttcatga tgccgtatct caccggaatt cccgcagctc 660 tcgcacagcc ggtatgaagt gaacaagagg agtctcacag cattctcacc ttccatcatc 720 tcctcaaatt ccttccttct attcataatc tactattttt catattactc tctattttcc 780 tcatacgttc aactcctatc ttgactttca ctccgtcttc tcgatctggc aactatgcgc gcttgtccca acccccagcc gaagacggca gcaagcccaa ggaacaagat aaagactaaa 900 gcgcctccgc gtgtcaaatg tacctatctc agctgcaact ttcggttcca gacagataag 960 gacatgaaga aacacaagac cgcctcgtct gagcatgaat actgcaacaa atgcgacatc 1020 gagtttgaga tggaagaaca cctcctcctc cacaagatca agagcaacaa acacatcgtc 1080 tgtccaatat gtggtattga ctttgacagc gaaggcggcc gtgaccgtca tatacgtcag 1140 gtgaatgttt ttcccctttc atgttaactg atgccgatag ggctcatcgt ggtgttagtt 1200 ccaccgctca gcacaaaacc tcacctgctt cggatgcaaa gctacatacc gcagcgcttc 1260 tggactcatg catcatatcg aaaacggcga atgcgtcaag atccgttcac atcgtctcct 1320 tgtcgaacag cagaagaagc tgatgcgcaa ggaggctctg gagttcttaa tagccccagc 1380 tgtcccttcg ctcgtcgaca tggatgaaga tgacgacggc ggcttagaaa aagaatacaa 1440 atatactagc tgaatgcgtc cagctcccaa tggcccgcag cgaccttaac cgcgaggcga 1500 tacccaacca accggacagg ataacagcga acacgaacgg gcttgtcgac cgtcactggc 1560 caagactgac agaaacggga ctggagaata ggatgagcga tctcatggac gtctccaccc 1620 ccactggcaa cggaaaggag aatgagagta ataaagggaa catgccggct ggatgagtaa 1680 aggacgcacc atacttttcc agagttgcca gcatcgaaag catctgcatc tgtatctgca 1740 gctggagctg gggctgaatc gaaatttaag tccggaaccc tagccgcctg tgctcttggt 1800 tctcccctgt tcgttgggat ttctaatgct ggagtcgagc ttgcgaggat ctacaaggac 1860 tggaacccag gaaacttcat cgacgtgttc accggagaat acgtatgtgc gtgcggaaag 1920 cgctgtctaa ccaaggaggc gtttgagacg catgtccttg ctgagagcca gggagcacgc 1980 agaatgcagt acgttcctac tcgcctatgt tataatacct ttactaacgt tgcgcggcag 2040 gtgccctaat tgcctgaaga ttttcaagtc tactgctgcg atcatcacgc attgggaatc 2100 cccgagtcta aaatgcgacc agagcgaagc tgatatgtac gcgcagattg tggacgaggt 2160 cagcggcgga ctgatccaca ttgccggcta caatgaggac ggaacgataa ggtatgaggc 2220 tagcaacctg gaattgcaca agaccaagac aattggagtg gctctagata ggattgactg 2280 gtgaaacagc ggcttgacga gggagtctag cggactaaca cactccagct caggctcgtg 2340 gtgcagtgca gaatcgacat atcggtcaca ggcacagcca gccttgagag ccatggaatc 2400 gtgaaatcat gcaatcattc gtgtttcgtt gggactatcc caatatttct agcaacatga 2460 aacagggtat aaaataggta tcaaatccat caagccaacg gtgtcatgcc catggtagag 2520 ctatcgtgac caattcgtaa cgcctgcctc attcttcttc tgctcccttc atcatctgcc 2580 agcagatete geageacteg aagcaageaa gaeeggegea aetaeeaaca aeeggttage 2700 tttattccga catgacgcgg tgcaactatc ttgtgacaaa ctcacagtcc acagcagaat 2760 ccacctccac caccaccgcg caagtgcatc gacatctcgt cttgacgagc ctggaaagag 2820 agettagegt gattatttee acagtggaag gtaaagaate etaacegget geteagtgae 2880 gacgccgttc gcgttcatgg ttggcgcatt aggagacccc ggctggatca ttgtgagagt 2940 gttggggtcg aacttagggt ccgcattctg ggcgctggac ttctggcttg gaggacttga 3000 3044 agagagagaa gaccattttc ggcaggataa gtcagttggg tttt

<210> 2585

<211> 2436

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2585

agcgtgatca acagttgctg caagcggccg aggttgactt tgtacgtata ctcttctatt 60 cctgttcttc cattttcctc ctcatgaagc aagttcggcg ggcctagttt gctaacgttg 120 tgcccctct ttgtttcagg ctggttatct cgtcacctta ggccaggaac tcgcgaatga 180 aaactccgct tcccacatta gaaccgccgc cggtcttgct ctgaagaacg cttttacttt 240 tagaggatcga gagaggctta acgaggttca acaaaaatgg cgccagcaaa ttaccccaga 300 tattaaggcg caggtcaagg aacttgcgct taagacgctc gcctccaagg atgggcgcc 360

cggtcagtct gcggctcagt ttattgtttc tattgccgct atcgagctgc cccagaatga 420 atggccggat ttgatgcaga tcctcgttca gaatgtagcg agcggatccg accagatgaa 480 acaggettee etegteacea ttggttttat ttgtgaatet caggaaatgg ageteegega gagettgget gegeacteca atgetateet taetgetgte gtteagggeg eeegeegega 600 ggagcagaac atggacattc gattcgccgc cataaaggcc ctcagtgact ctgtggactt 660 720 tgtgcggtcg aacatggaaa atgagggtga gcggaattat atcatgcagg tcgtctgtga ggctacacag gcggaggacc ttcgtgttca ggctggcgct ttcggttgtc tgaaccgtat 780 catgggtgct tactacgata agatgagttt ctacatggag aaagctctgt ttggtctgag 840 cattatggga atgaagagcg aagaggaaga tgtagccaag cttgctattg aattctggtg 900 taccgtttgc gaggaagaga tagctatcga agatgataac gccgcggtat gtctgaccca acattgtctt gatgatcaat tgctgattat gttttcacgg cccaagctga gggtttgact 1020 gatgtccgcc caatgtacgg tttcgcgcgc atcgcttgcc gtgaagttgt cccggttctg 1080 ttgcaggcta tgtgcaaaca ggacgaagat gcaggtgatg acgagtacaa catctctcgc 1140 gctgcttacc aggctctgca gctgtacgcc cagtgcgtac aggccgacgt catccagccc 1200 gtgcttgctt ttgtcgagga gaacatccga agcgaagact ggcgccgcag ggacgctgcc 1260 gtggctgcgt ttggtgccat aatggacggt ccggacccca aggtcctcga gcccctggtc 1320 aagcaggcct tgcacgtact ggttagcatg atggaagaca gctccatcca ggtccgcgac 1380 teegetgett aegegetegg eegtgtetge gaettetget etgagaeeet tgaeeetgae 1440 gtgcacctcc aaccccttat ctcttgcctt ttcaacggcc ttgcaagctc cccgaagatt 1500 gccagctcat gctgctgggc gttgatgaac gtggccgacc gttttgctgg tgatgtcggc 1560 gcgcagacca acccaatttc aaaatacttc gaggagagcg tcaagtcgct ccttgccctc 1620 acagaaaggt acgtgcctcg gattttcatt tcttaagtta aacctaactc ccgtctagat 1680 cagacgcaga taatcagctt cggaccgctg gctatgaagt cctcaactct ttcgttacca 1740 atgctgccaa cgacagcctt cccactgttg ctcacctatc cgacgtcgtc ctccagcgtc 1800 tggagcgtac tattcctatg cagcaacagg tcgtcagcgt cgaggaccgc atcatgctcg 1860 aggaaatgca gaccggaatc acaagcgttg tcctggtaag tacacggaag tttccttcac 1920 taattgttta ctgacttgac taggctattg ttcaacgcct cgaggctgaa atcaagccgc 1980 aggccgaccg tattatgcaa atcctgctcc aagtcctttc tactgttcct ccgaagtcca 2040 gcgtgcctga cgttgtgttc gccactgttg gtgccattgc taatgccttg gaggaggagt 2100 ttgttaagta catggagtct tttagcccgt tcctcaacgg tgcccttggc aaccaggaag 2160 agcccggcct ttgcgccatg gccatcgggc tggtcagtga tatctctcgt gcgttgaatg 2220 agaaggtttt gccttactgc gacactttca tgaaccacct gatgaacaac ttgagcgtaa 2280 gaaacctttc ttatattcaa tgtacgaatc ctaacatgat ttccagagcg ccaccaacca 2340 gctcaagcca gccattctng aaacttttgg ggacattgaa caagcaattg gagagcactt 2400 tgataagtac ttgaccgttg tcggtcagag tttgtc 2436

<210> 2586 <211> 1303

<212> DNA

<213> Aspergillus nidulans

<400> 2586

tcgcacacgc gccagaatat cgtggcctgg ggacttgctg gtgctttcct tctttttgct 60 aggtgctttg gcgtcttttt cgttcttact gacgtccttt gtaaatactg gctcaggtac 120 ttccttgaat tcaaccgtgg ctaggcattt ctcttgcggt tccaactggc ccccagacag 180 gcgtgtcaaa aatcgcgaca tgccagcgat ggacacctcg acaaagtgaa ggcccaatat 240 gacccagacc agttttccgt tggtggcatc aaacacaaaa atatcactga catattcttt 300 gggtgaaggc tgatggtgtc gtgcatacac ctcccactgc tccggccgca agtcgagtgg 360 cactgttggc gacctaatcc atcgttcaac acggttggac aagtacatct tgccctcgtc 420 acagtcggtc atgcagttca agaaaatacc tgcaacttga cagaaagtgt ctccaaggcc 480 cacgcccaga atactcttgc tggagtcttg cttgatgatg cgcccagccg actcgttgct 540 cgtggctgcc agtttctgca acccacggta gccatcttct ttgtaattca ccacattcga 600 660 aaacaatttg tagatgttgc gactgccctg gatggtctgt tcggcttcct gcccattgag cagggcaagg gcacggcggt gatccaccaa acgctcgtac gcggcaaagg cttgcatgga 720 ctgcttcggg gtctggaacg tgattcggcc tgaaacgtgc tgagtggtat ttccagagtc 780 840 actgctggtg atgcggaagt cccaggcaga tgatctgtca ctgggcctct ccgcaacaag ccaaactgat tttgacccat ccagacacag tggggtgtcg ttctccatgc cctctagctc 900 aggaatcata ttcccgtcca ccagggttgc caacgcatcc ctagcaataa cctgctggaa 960 catactggga caaatcggcg ccgtttgcgc aataacatgg gcgctaacat aattttggaa 1020 ttcatccgac gtgatgtgga tttggaacct tgcctggcat ctgtcagagt cctgatagcc 1080 cacgaacgtc cagagaccct tttgtgcctc ctgaacagga gatgcgggca cgaagacctt 1140 ggtcttgagc tttctgcgtt ccaaccagtg tcttgacttg gcaaattggt acgggggag 1200 gagtaataaa gggaatttcg gggatgggcc cacatgttcc cagaccctca cttgcagcca 1260 aaccttccac aggttaaaaag tcgcatctgc cacgttctga cca 1303

<210> 2587 <211> 5307 <212> DNA

<213> Aspergillus nidulans

<400> 2587

gcttgactag caacttcgcg gtggcggtct gcatagagac gaatcaccat acaggaaagg 60 ttgtcagtgc tgaaccgcgc aagggcatga tcaaccagaa tcttcgatgc ctcctgggca 120 tcagacacat tgcgaatcaa atcgacagcc tcttgatcac tacatacatc ccagagctgc 180 aaagaactat tagctcaatc gaaatccgtg ctagaaacgc atgttgactt accccgtcac 240 aggccaaaat gatgaactcg tcaaggtctg gctggatgac agtctctgtt gtgtaaggat 300 gcccagtaac aagatctttg atataggcat cgccaagggc tctagttaca gcgagaactc 360 cgttaactcg attattgaga atcaagcctc ccgcgttagc aatccttctc ccttcgttct 420 catcactacc cttgtgatcg taagacaggc gaagggcttt gccgttccta cacagtatca 480 cacgggcatc gccaacattg gctgtatata ggacacgctg gcgaatcgcc ttttcgcgta 540 acttgggggg aatagcagga accggggtag cggcggcttc ctgggtaggg gtgtcatctg 600 cctttgaatc cgctccggcc ttggtcgctg ccacggctgc cggcccgatg gcggacgaac 660 cggtcacgga acttggggtg ggaattctat cttcccatct gagtaatgcg acaaccgcag 720 tgcaaccgct attcttaacc ggcagctttt ccagctgctg gtccacggaa gtaaatgttt 780 ggtcgagaag ctcgggaaca ggcgcattta tgttcttgcg cattacgtct tccaagataa gatgcaactt ctttccacac cattgggcag caaaagttcc tgcatggcca tcgaaaattg cgaagtagcc attatctgtt tcaacaatgg gcgtcaattc tccggtcttt ggcgaagcgt

cgctaggatg cgagctctga tcagaatcat cattttgcgc tgacggtaca gggttaccaa 1020 ggaaattata aagataggca tgggtatctt ccatagtccg gcgacatttt ttgttccggt 1080 cctctgtaac gccgactctg aaagatgatc gaggagttgg tgaagattcg cccgcggaat 1140 tattcagtga gccctgtgga acgttgagcg ctgggtccat atttccgtat ctgtgtaagg 1200 aagactctgg aagcgaagaa ctgagcgcgc tttcggttcg ggggctacta aggctcaggg 1260 agttttttgc gtttgcgaaa aatgatgctg cctttgagac cgtactgctt cggcgcttct 1320 tgtcgccgcc agggctctgt tcctcgcatg ctctgcgtcc gaagaaacta gtggaagggg 1380 gtgatttcgc ttgagatcca acggtaccct cggtctgaat actgagcgac ggtgtattta 1440 tgggacctga tcgggggata gtatctgatt tatctttggg tgggctcgag gagccactga 1500 acatcctgtt cagcaagcca ccctgaccag aaaaacttct tcgcttactt cctgccagct 1560 tgaacgactt ccgatttcag ttttgcaggt gcggtgagaa ttcgagtcag cgaagagagg 1620 acagcgggcg atttctcgag cgacaaggct gagatagtat ctcagcggaa gaatcgcggc 1680 ggaaccgagg ggaagcgctg gataagaggt atacggtcag caactagaat tatgcaatga 1740 catctgttga aactgggggt ttgactgggt gcgtagctat tctgaagcct caaatgacgc 1800 tcgatcagca ctgtcatcgg atgatgctcg ctaccatcac aacagggatt aaagctccct 1860 teeggaaaac eegacaacag taaccaactg aggecaagta ggggtteaaa tggategeca 1920 catgcttttc tgtccgtcct gggctgaatg ggcggatttg tttgtttcgg gcacggcgag 1980 cgatagccca ccccgctgcg cgcttggaaa gatcacaagc cttgcggagt tggaaggatt 2040 cgaggcactc acggaaacac taggtattgg agagtataac cccctggact ggcagaagct 2100 atagcgaccc cgacttgtca gaacggcagt agacgtgagg agccttggag gcggatgggg 2160 attgatcgat atttattaat agtagttgca tacactgcag taaggtgaga ttgcccagaa 2220 cgagatgcca ccggcactgg gggcttccaa tcatcgccgg tagcgtcgga tttaacggtt 2280 aacgtgacca cgaacgggtg gagcccaaaa caacttataa ttttataaga gagtcagatt 2340 cgttgattac tttccaatga agaaatcaag agcatattac ttttgcgtac acgagaaccc 2400 gcaaaccagg ggggttgttt agaatccgat gacagcttcc taacgtagtg acccattctt 2460 ccgtacggtt gtttaggggt tcgcctcagc gtgggatgga ggatggcgtc agtggatggg 2520 ggcgtcacgg atcggccgta ctatgtaaac aactaccccg aactatcatt gatctgaaag 2580 atctggtgcc cagcttatac tatcttttcc ttacctacgt cggcaccccc aggtcaaaga 2640 tgctactagc ctcaatcagg gtcctgtacc aatttgccta tttacctaag ctgttcctac 2700 ttcatgatat tgggccgggg tcgcttggcg cctaccgaaa aggcaagacg cctgtatgcc 2760 acgtgatatg acgtacaaaa ggactaaaag acaggactga ctttccaagc ggaattgagt 2820 tggctgggcc ccaggatagg cgagactcag ggctgccggg ccgttatgcc tcattggggc 2880 tettgteggg cattacagca ggtteagggg ecegtteaag aaggggtgte ttgtettgee 2940 tatcccacat ggagtgtcag ttttgactaa tagattaaaa cagggccact tttcggtgga 3000 atatatagtt gcggcgctcg agattcccta cagcaattga agtctttcaa tctacaccgt 3060 tccaagactt caacggacaa tcaccattaa taggcagggg ataaaacagt tgaagctcat 3120 aattacccta cagaaaacca gaatgatact gaatgacgga gtatagagta ttgtgtaaaa 3180 cctctttact caatgcagca ttatcgataa gataaaattc cacgtgacgc gcgtaggagc 3240 geggttggac ttttgtggat gactteegtt ageateactg etggageaca gegetgtgte 3300 gcttttcttt acagagtatt tcgttcagaa caactttcac aaactacata gtatgggatc 3360 tttttagttc ctggactcat cattccgttc acacgagctt gcaaccatgg cttctgaatt 3420 cataggetac aatgteetgg taacteteeg ageaceacea gaegetaceg tecaaggtgt 3480 ggttgcggat gtcatcggcc agcgcctgat gcttcgagat ggtatgttgc accgaccact 3540 acteggaaac aaatgagtee tgegetggat attgeatage tetaacaaca tttttacaet 3600 tagttacttt gtcgtggatt ggctaccgac taccaacata ctccattgaa gctccagaca 3660 tegeegatet tteettggga eegteagata gaccaagege geaageeteg eaegttttge 3720 aagaaaagca gagccttgga actccatacg cagttcagca accttttgtg gaccccgcaa 3780 ttttgagctt ctcgaaacca tcgagtgagg cccacgcgag cgtacaaccc caagccggct 3840 ttacagaaag ttcaggcgct cggcagcttc ccacgtcaca ggatacgtcc caagttacgt 3900 ctcaggcaac gccagccact ttggccgagc cattcagtaa cctagagttg aacgtgggca 3960 acaggtccac accgcaagca gaggagctac aaggtcctct ttcgcgtgtg gtcgaagagt 4020 ctcctgtttc cgccagtcgc tttggaacga cccgtggtcg ccgtgggggg aagcagaaag 4080 atccgagtgt ctacaatgag catgacggcg cactcaacac aaaccccaag agcaaagggt 4140 ggcgccagac tgcgttcgta gaaccatcta atccaagttt gttggactcc ccacagtcgt 4200 acaaggagac gggcacactc aatggcaaac ggcggaagaa gaagagcaga ggctaccctg 4260 cacaagtcag tggctgggcc accgaagaag caacagatat cagaaaatgg gcgacttgat 4320 tttgcaaagt aacctctcca aattcgataa aagacgtgtt tttaagagat cagaaatgac 4380 gacacaaccg ccgatgaaga acgattggtc agcttcaaca ggagagtacc aaagcctggg 4440 accaatggag gccggaactt acactggtcc gagaacgtcc tcgatgacag cctcgaagag 4500 agtgataatg aagctacgaa ccatgaacca agtgatgcca agcttagtag tggaacaatt 4560 tccggacgtg acgcatcgaa gctgtcaacc cgcggccgag ggtctcggaa agggagtgct 4620 atatttggac aaccacttat tccaacacag ctgaatacca ttgggcgcag tcaattgagc 4680 aactcccgta cgaaatcaag cagcccgctt cctacgaaaa cgcacgtttc ggcatcacca 4740 gttaccggta ttagtgcatc tagcgccacg ttacggcttg ctactacaaa cagaagctgt 4800 ccagctgtca gccctctgca gattctcgaa gttgagcagc tagcaatcgg cgaagttggt 4860 ctgactgagg atatgattac ggagaatgcg ggacggagta ttgccgaagc ggccgttggc 4920 gttctctcga gcgatgccgc tgcacctact atcttggcac tagttggaaa ccatcggact 4980 ggagcgagag tcatttcttc tgctcgccat ctgcggaacc gtggccatcg tgttaccgta 5040 tgcatgctgg gggtggaaca agaggttgag ctgcttgaga gctgccgtaa gcaggttgac 5100 atcttcaaga agattggggg ccgcttcctc aagtgggaag agctttcttc gagactctca 5160 acttctgaat ttgcacctga tttagttctg gacgctctgc tcggaataca tcttcctttc 5220 aacgacctgc gaactgatga tcaagccaca gcctttgaga tgatatcctg gattaatcga 5280 5307 agcggacttg acacgctatc tgtggat

<210> 2588 <211> 2212

<212> DNA

<213> Aspergillus nidulans

<400> 2588

tgaacttggt catggcctgt cagtatgttc taaagatcag ctcccgctcc tggttttett 60 ctcctctccc gtctccttca actcttgctt atttgttcac ctagctgctt gctgtgcttc 120 tatacttgct ttacattttg cgattttagc ctctgattct cgttctgctg gtcgcttgtg 180 ttgacccgat gcgatgtgac cgcaatctgt ctcttgtcgc ataacgatcc ctccacactg 240

acagaccatc tecettggac etetatetag ttaatetgta tegtgaaaeg caetggaeee 300 tgaaggacaa tggactcgaa gctttgagct ccttcttgcc cttagcccac tctcacagct cgactacctt gcggactctc gtcctccttt accccacatc tcgctgactt ccccgactcc 420 480 ctgatattcc cgcgctgcct ccctccttcc atcttcacgg catcatcaaa tttccagaca ctatatactg tttaacaaca cggcatggtt acggaggagc tcctggagga ttgtctccag 540 atcctccagg ataaatccct ggatgaagaa gaccaggtcg agaaaatcga ggagttcctc 600 cgcgaaaaga cctcgttatc agggacatca ctcgaaaatg ccgtcctcga tatcctttgg 660 cgacagcgaa accgcacatt accggactct tctccaccac cgccccgtca cacggtcatt 720 cgtcgctcct ctcctgctcc ttggcagatg gcccgatctt ccacaccttt atcacctcat 780 tcgaacctag ggaccagtcc cgggagtagc tcttggctgc aaagctccaa aggtggtatt tcgcggcctc ctctatcctc cacagtatcg ccattcacct ctcctcgtcc gtccccgagg 900 ctcgctctcg ctcaacctat accgcattcc ccgaatctga acgcatacga attttcggac 960 caacaaagtc atgtgtcgga cttttacggt gaccttggca gtgacagtaa tgtggattgg 1020 ctggtggcgg acgatgcgat gagtacaact tcgtctgtag gcggtttgag catgcatggc 1080 ggtctcagtg caacagctcc ggaattcgtt cctgatatga gtcctcacga tatattgcgc 1140 accgtactcg gagacaagcg atccaatgag gaaatagaat ccgctttaga agcaaacggg 1200 tatgacttag gtgccaccat tgctgctctc actcaaggag ccgatgcagg tgccgctcca 1260 agcttaccag acgatagtcg cgttgtcgtg ggaaagtcca tgacaatgga acctcccaaa 1320 agcacgtcta ccccaggtca caaccgaagc cccgttgtgt gcaagtactg gctgtcaact 1380 ggtcaatgtc tacgcgcaga ttgtcgtttc agccatgacc tgactagtca tctttgcaag 1440 taagttttgg agaaccaaac gctgccttta tatacggagc taacaaagta acacagggta 1500 tagggtgatg ggcaactgcc tagctggcga tgggtgtcca ttttctcatg atccctctgc 1560 actgattgcg aatctcagtg ttgacggcaa ttcttcggcc acgtctgctg gcatcgcttt 1620 ccaagtggat aatgcgccgg atgccttccc tcctttgcaa tctacgcccg gatcttctga 1680 gcagtgggct ggtcaactcg gtagtaaata tccaggatat ctctatggtg ggcctggagg 1740 caaaaatgca ccacatctgg gaggtaaaag aagtggaagt atgacaaacc tgtcgcgtcc 1800 tcattcacgg ccaggaagcc gtcaccaaca ccgagaactt aatccaacag ctctgtctgt 1860

- <210> 2589
- <211> 1822
- <212> DNA
- <213> Aspergillus nidulans
- <400> 2589

ggtcccgccc gatactgaag tgggtctcct gaggtgttct ggatcaggct ctttgcgcga 60 atagccgtat tgtgagactc gctcaaagat gtgattagat ccaatacagc taagacatgc 120 tcgaaccgtt cacgcggtcg agatctacac tcaacctgcc gatgcatgca aacattcgac 180 atctcttgaa gatccgcatg gatagtatgg aatgccagct ttaacggatt aacaaaccga 240 gcgtttcgcg ccaagtcttg gtgtttctta gcgcctcgat gaatggaaat attcaaacta 300 tcagctcacc tgcggatatt tgggcctcag aggtggaggg gagcgccttc aagtcattga 360 gggactcctc ggcggcctac agtttggtta gctgtgagct gacacctatt ctatctcagg 420 ggggagagca gacgtttcgc aggtcggcat tctttctttt tgattcttgg atgagattca 480 gcagttctga ctgcaatagt tgagaggaca tttccagcta gatgttgcga gttacgcatg 540 gccaaggcca gtccaacaac aaggtgacaa tcaagacaaa agcacgagct tcatgagttg 600 cttgttgccc acaggcgaga cacgagttaa actaggtatt gaaaatgcag cttcagctcc 660 attragatgr aatatgratg accagractr traacaggtr aaaagatggr 720 caggtgtata aacaaaggcg agtcggccgt ggcatcactg acgccaagat aattatctcc 780 acgtgatagg cttttatcag cacgtgtctg ttcaccagct gctcacctgt agaattaggc 840 ggtgaaattg aattacacaa gtatcttatc ggcggataag ggccgtgacg acagcccctc 900 tttttacttt gtgacggaat tatccaagtt tcttccgccc agcgccactc acctattatt taggettete gtttgttgat attetaetta gttaacteee eecetagage accaetteae 1020 aatggctgca aacgcaaagg ttcccaggaa cttcaggctt ctagaggagc ttggaaaaggg 1080 cgagaaagggc ttgggagcag gtaagcaaga ggcacaggat catctgatgt aagagccaag 1140 ctgatgtagt actgcgttc taaacagagg cgtgctctta tggtctcgcg gatggcgagg 1200 acatgatgat gagcaactgg aacggaaccg tccttggccc ccctcacgta tgccgcatac 1260 caatttatgt cccatgctt gaggtctagt gtactaaact ggcaccacac gactatagag 1320 cgtccacgaa aacaggatat acagtcttaa cattcattgc ggtcccgagt atcccgatca 1380 acctccgact ctacaattca tctcgcgcgt caacctccct tgtgtcgatg cacactctgg 1440 caaggtccga aatccccaaa gccgaagcaa tagcactcga cgaagctaac ggctcctagg 1500 ttgacccctc caagctgccc tgtcttgccc agtggaagcg cgattatact atggagacag 1560 ttttgattga acttcgaagg taagctcccg gtagtcctag accttggcgg cggtatctta 1620 aacatccagg tacatggctt taccgcaca taaaaaagctt cctcagcctc ctgagggttc 1680 gacttttaa gtttctgcat ctgaatacat cacgagtcga aaacggagta ctctgtcggt 1740 ttatgctggg tttttagcat ctgctcttg acttattaga gcgtgttgta gtccatgcgt 1800 gacggtaaac atcggcaaat ca

<210> 2590 <211> 1279 <212> DNA <213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2590

gtggctcggg caggattctc atgcaccagg ctgacaaacc accctcatac tcaaaacttt 60 tagtctccca cttctctgca aggctgtcct tccactcttc tacccagata acttatctgt ttccctccgc cgagacaagc agcaccatcc cattatccac cagttctgac cagcaaagaa 180 gaccccctgt ataaataaat ttgtgttctg gactacatgt actgaacagc ccggatggat 240 gaggccctcc ttccagctcg tgatagcacc tgcgacacag cgccttatac aggcacaagt 300 aacaaaagta caagaagtag acatteteaa geteeteeg acagtteaca catteateea 360 aatagttggc taaagcctgc atattcagac catcagcatc atcattgtca acaccctgac 420 tttctgcctt ccgtcggtca aacaagtgcc ttctagcaac tgagggagtt ccagtgtccc 480 gcccttattt gcttcctagg gttgtcctac tgcatcatac ctgcccacta catgctcctc 540

agcatcctta agaagatgca gggctatgtg gtggtcttag cggctatcta gatcagccat 600 aaatgtcttg aacagtgtca taaacacctg ttgattattt aaaatattgt tgttagatag 660 taaggcaatg taatatttca cgcgcccctg gagaacttct ctagcatttg taacatctct 720 gtatttttgg agccacatta atatgaccaa agaggccttg tttaccttat taactgtatc 780 caatactaaa gggtactgct tgcttggtag agtatctggc agctctaggt acacagatac 840 tagatatett attaaetaat etgetggtge tetaaeatet gaataaette tattaetaet 900 atcaaggtta tctattaaac aaaacagcct ggcaccaccc gtcgacgcca agactaactt aacctttaga gaataatact gttgtgagta gatacttctt atacagaaca aaatcctgcc 1020 tctacttgta atccctgccg agcctcttca tgactgctat agtatgttca atattctcat 1080 tatcatctaa agtaagcact tattgtaaga catgatagat actatgagaa aatcagggaa 1140 atatttgcaa aagggaaact ctcaaaatca tcagtctgaa gttgtcctct nctgtgttct 1200 tgtagtaatc cacagcatat ttaaatacca ggcatagctg ctggggcttg tgaggttaag 1260 1279 gaaaaatatt aaagattag

<210> 2591 <211> 1029 <212> DNA

<213> Aspergillus nidulans

<400> 2591

ctgggcgaaa gggtggcccc ctacagagga ggcgatgcag gggttgtttg ctcgggtggc 60 ttcgctccgg gctaggggtt ttgatgtagt ttgagtcgac ccccgaactt tggccgcctg 120 ggggggctgc ttgctccggg gctgcctaag ttcgtggagg ctctagggcc gccgcttccg 180 ctgctgaata gtggcggttt ctgagaggag gatttagcgt ctggagaggt ttgcatcgag 240 tcaccaccaa atgccgtatt ttgcgcaaag ggatttggct tgtccgcctc cgatggcgcg 300 aagatgttcg atgaagaagc accagtggac tggccgaaga tgcttccgtt tgatggagta 360 gcaatgccag attgagccga gggtccatta ttagcactgc taccaaacag tccccctgca 420 gagctgctct gctgagaccc agctccaaat agccctccag acggcaaagg ctgttgggcg 480 ggagactgac teccagtega aggeacatta aacaggttge etttgaagee ggaaaaactg 540 ctcgcgggcg cttgctgact agcaccgcca gtattcatag atgcaaaagg attactgaca 600 ggtgttgatg ctgttccacc gaaagaggca gagaaattga aggccgatga accaccacca 660 gagccaaaag agaattgtga tcctccgttc tgagcaggcg gtttaggagt tgggctagcc 720 ggaggaaaac tttgtgattg cccaaaactg aaaccgtttg tcatcggttg ttgagcaaga 780 gatggggaag agactgtgtt cggatcgatc gaattgaatg gcgaaccaaa cgagccacca 840 900 gccgaaccgg acggtgtgcc agcacgcggc cgccttcgaa catccttgat tctaaatacg tcgttagtca atgcataaga tgtgatatgt ctagaagaag catatgcaac cacggcgaac 960 gcaagggtaa aggtactggg ctacagtgga aacaaaaaac aggaaaggta acaagaccca 1020 1029 agaaaagag

<210> 2592 <211> 1680 DNA <212> Aspergillus nidulans <213>

unsure at all n locations

<400> 2592

<223>

60 ccaagtctcc aggtatctgc tgacggacat tccacaggcc atgacttttg gcatacagct cccctaccgc gcttcaacgt tccctcggtc agagtgagcg atggtcccaa cggcgttcga 120 ggcaccaagt tettegacgg egteegegee geetgtette ettgtggeae eggeetggee 180 gccacatggg accagtettt gettttegat geeggtgtte teateggeea agagtgeeta 240 gccaaaggtg ctcactgctg gctaggaccc acggtgtgta tccaacggtc gccccttggg 300 360 ggcagaggtt tcgagtcttt cgcggaggac ccatatgcca ccggcaaact tgccgccgcc 420 tacatccqaq gtgcccagtc caccggcgtg atatccacta tcaagcattt cgcagcaaac gaccaggagc atgagagaat tagcgtcaat gccgtcatga gcgagcgagc gttgcgcgag 480 gttcatttgt tgccctttca gatcgctatc gccgatgcag ctccgggcgc agtcatgaca 540 600 tgctacaaca agatcaacgg gcaacatgtt tcggagagca aggagatgtt ggatggtctc 660 ttgcgcaagg aatggggctg gaagggcctc atcatgagtg actggtgcgt ctgcattacc acgtccgatt cgggcagatc atttgcttac ttggccttga caggtttgga acgtactcga ccgccgaggc tctgaatgcc ggccttgacc tggagatgcc tggccccaca aggcttcgag 780 gaccgttact ggagcttgcg atttcgagtc gcaaagtctc ccgctcaacg cttgacgagc 840 agagcacacg agactttccc gaggatcgta ggttgaaccg caaacttgct gccgatagca 960
ttgtcctgct taagaacgag tcggggcttt tgccactaaa cctgaaggcg ttgaagagtg 1020
ccgccttgat cgggccaaac atgaagaccg cggcgttctg cgggggaggt tctgcgggcg 1140
tccagccata ctacagcatc tcgccgtacc agggaatcat gaaccagctc cctccgggcg 1140
tcgagattat ctacgagaca ggcgctagtt cgtatgttt tatcccggag ctggaggcg 1200
cagaagtgcg cacgccggaa ggcagcctgg gcttcgaatg cgcttctacc gagaaccacc 1260
ctccgtcaaa gaacggcgcg tggttgagga aaccatccta caggagtctt cgtggcagct 1320
gatgggcttc tccaacccac aattggaccg gctcttctac gcagacattg aagccgagt 1380
gattgctcct gccactggtc ctttcgaatt cgccttctac gcagacattg aagccgagt 1380
gattgctcct gcactggtc ctttcgaatt cgccttgct gtctatggt ctggcagct 1440
ctttatcgac gaccagctta taatcgataa cactactgt gcaacgaggg gcaatttctt 1500
cttcggcaaa ggcacccggg aggaaaaggc caccgtggat cttgttaagg gtcagttgt 1560
caagattagg gtggaattcg ctagtggcc atcgtcaag ctcatgaacc cggaggttgt 1620
gaatttcggt ggcggcgtg gtcgctnggg aatggttcag gccatcgatc cggagctggc 1680

<210> 2593 <211> 1980 <212> DNA

<213> Aspergillus nidulans

<400> 2593

agcacaaaag tgataggctg tcaggggaaa gtgtgggtca gaattacata ctatggatcc 60 gttggaggat ctgttataca gtgacgatgt atgggtgtga caggaggtgt tgtttgggtt 120 cttgtctgac tcgtaacggc aatactgaag cttttattgt cctgaagact ggtagcatac 180 gtagactaac tacgagaatc tgccggtctg atgctggatt ctgaagccgg caacgaggat 240 acgaattttt tttccacggg ttttctggcc aaaggagggt tactatgctg aggtgcgtga 300 360 tgctgatgta cctgcgtcgt cagtggttgg ccaaggtggt attcgttcgt tccttgaaac cttctggaat cctgcccgac gcgctacttc tatagagttg cctactttag tctcgtacaa 420 cagatactta gcgtatatta gttgtttcat gactgacggg atcgtgactc gatcgttctc 480 ggcaagccga aaactttgag cttgctcttc gccttcgcct tcagcttttc ctattcaggc

tcgattcatc caccgtggcg agcattttat tttcctctct acgaaagctg agcgtcacca 600 ggttccattg tcgtttcagc cccagcgtat cgacttccaa ccgcccccgg tcgcaattct 660 tggccactcg agactcgaat tgtccgaagt ctctccggaa tgaagccgcg ttgtttcccc 720 780 tgcaccgccg caccaaccaa ttgattctga tagtgtctga gcgagaataa ccgggtatgg ccgagccgac tcacagactt caaaagtggg gtatacgtac acataaaaac cagatcacga 840 agtcgttcag tcttgacccg ctaactcatc cgagaaactg gtagtctaag actagtacta 900 gtagaaagac ggtgtggttg aaaatcttca cgatctgccg ccgttgatgc ccaattgatc 960 cacagataat cataatagat ttttttttc ttgattctgc ctggcctgtc gagactcaag 1020 ttctacagag tactcagagt tacgggggtc tgagtctttt cgtatgtatg acccagaacg 1080 gttgtcagac tggcggtttg gttgcaggta tttcgcgcat aagcccactg tagattcgtg 1140 atactgcatg cagttgggac gggacctgtt tctaccgtca acatccacta cagtacatgc 1200 agagacaaac ctgcgaggtc tagcagcctc acaccatcgt cctattcggg actaaccaag 1260 cagagaatga ggactctgag actgaggaac gaccgacaac tcgatgaact ccggggaaac 1320 gatgatcccc ccgctttgtg catcacctct aaaatatggc tgaaagcttg aaatgtaacg 1380 gggcggatag acggagtgct ctcgtccggc agttgtgcta gggcgctgct agttgatgta 1440 tgtggttccg agaagggaat gattgcacga ttaagtgtga gaccgctata ccgctttact 1500 gaaatcgcac attgcactct ccataacagg caaccacaga aggtatcctt ctggtaagag 1560 gtcgaagctg aagcggggtt gagcgggatt tgagactagt catggtccaa aatcgtgtga 1620 gattettgtt gtagteactt aaaccacacc tttetgeatt egaacagagg ttgegeaatt 1680 taaggttaaa tatgcttggt gctgttactc ctcgagtgca taaaaagcag atgaagacgt 1740 cgatatcgta aactctgtcc taagggtact tggtgatggt cttggtggtg gtcttggtga 1800 tggtgactga tagtgatgcc gtcagcggtc atatgactgc ctggccagtt ccccacatct 1860 gaggatettg gatgeggagt eccaeaactg acaeteatte tgteggttee teaageggee 1920 actgccacgc ctagatgacc atgggactgg tgccacagcg agtgtcgctg gttctgcgaa 1980

<210> 2594

<211> 1648

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations <400> 2594

ttaaatacag agtaatagac tggtcctggt gaaaccattc acgtgctcaa tgcacgggaa 60 attqttqctq ctgataaaga cctggcgctt caaaggttag atattgtgct gctctgaatt 120 180 catgatcaag tgctaaactg taaaaggata tttacaacat atttcttatt tgtcaacgtg ggttcatctg ctgctttagc ttccacaatg atcggacaga agtatgggct cttgacaata 240 tgaccagttg cacataggga tgataacatg acagatataa taatttcaac tcttaccgaa 300 360 caacgaagct gttggactga aaaaatagag tgacgtgatt atgttagtct atcatttagc gaaaccttac agtttccttt gcttaaagaa ttgattagag aggggatgta tgtacagtga 420 gattaaaaga cggtctcaat aagccaataa atgtttgccg gtgccctttt caaccgtaaa 480 540 taaaatacag gtttcccact ttaactgtgt tctcttggta tttacattat caagggctct 600 ctaacgacat aggccagctt cgttacacgc catcgacgtc ctacactgac agcatcaggt aaaaaqaqqa cqtaactctt gctcccagtt gaggtcttca aacaacgtca taaaatccat 660 ctctqtatct ccaaqtaagc caccttcacc ttctctagtt tcatcggtta cttgttcaga 720 cgtgtcgcct gggcgaggtg aaaggacaaa atcgaggacc tgtcgaatat atgagagtcc 780 840 tttcatgcaa gtatcgtaat cactttctct ggaggaaaag aaggtttcga tatgagctgc 900 aaacacactg agacgttgaa taatctcgga ttgaggaaag ggcttttcgc ttgtcgattg 960 qtctqctqag aactgtgagc gacgcagcaa tgatttcgac agcacggcag cagcgggaag accgatgtaa gaaaactaag tatcagacga gaggttataa gcaccagaag agcagttaca 1020 gtcttcatgt gagtacgtac gtcgaatatg gttagatgat tgacacgccc tgtccggatc 1080 tgtttggaga ccagatccag aagaagtgag agaatctgct gtgacgtctc tatcaaggag 1140 tcgggagtct ctcctgtcct ttttgcaacc gtctgataga ggagaaaatc ttgataaagg 1200 aattcaagat gaagcgaagc tgctagtgga tgtgggttat agngcgnnnn ncnaccnann 1260 nnnccaccan nacncncacn ctcatgcana acatnannnc ccacnannna tcccctataa 1320 agcatggaga catacette aatttggaaa tettgttee tttaactaet teetggatag 1380 aaggccgtat ttcccattct gtcttagatt aattccaaac attaaattct aacagtattt 1440 accattagca cacgetttgt tttactaatg tggacaacat accegeacce tegtgtatte 1500 cgtccaatgc ctttctctac cactaaagat agtcccatta agccatgtac cgagctcttt 1560 tggtttggcc gctccaaatc cttttctaac aaaagctctt tattgcaagg gatttctaga 1620 1648 gtttttttta ccccggtttt tcctaaag <210> 2595 1856 <211> <212> DNA <213> Aspergillus nidulans <400> 2595 agggagagaa tagagtgaaa ttaatatata ttttctcccc taaatcaaaa aaaaataaaa 60 actttttat tttccaaccc aaaactttaa aattaaaaat tatacttccc cccatactta atagagacaa aaaaaatatg tatgccagag gccggattcc cttcttcttt cggtggaata 180 aaaaccaaqq ctcagtgtta ccgggataaa aaattctttt tcaactaaag ccaagctaga 240 300 acccacccat ttccaqcaac ccggacccta tgttggggga cgcactttaa gaccggacga aaggetgget tgactttttg caactttace gtattegget ggetttaaac gettgeatet 360 420 tcqcaatqqt atacttqqqt caacaaaatt ttaccggaca gagtaagggt aagattttaa 480 agacgggacg gtcaaaggga cctggacagc aagacaggcc gacgggaaag gcgagatgga tgtgggtaag gctgtgatac ggacgaagct aactagctag atagaaccta acatatggta 540 600 tggctcaatc gtgacagact actctggcga gacaacgtcc ggcctcacca tgaccacatg aaggagaact ttctccgctt ctgcccagtc tctttctaaa acggacattc cctttagcct 660 gagatatcta aaaggtacac cggtagggat tgctgcatgg ccactgcagc tataaagaag 720 ttgggcatag agccgcagcc ggaaaggatc ctttgagatc gctctttatc gcgactctcg 780 840 caagtagaca catttcgcca gagggcttct cagaagaagg cgagggtctt actagcttag gataggttga gatctggttg cctgacaaga cttttagaag cagagaaaac aagtggaaag 900 agaaaagcac atttaatagc aaataaagtg gcaggggtga gataccctaa atggtattgt tatgatteta eccaatatag agagagacat agaataggge aegageteea ettgetatga 1020 cctcatcgat caataaccac catgatgaca ttcaacacct acgcccaaac cctttacatc 1080 ctgtagtacg atgtctcgat agccctctga caatgccata tctacaatgc aaagcactac 1140 cctcgacatt tggctggtac gcatcgcccc tcccttcacc aatatctaat tcacttctca 1200 acatccaaac attgacttca cttccagtct ggcgcagtcg cagttgtaac agttgatttc 1260 ctegtetace cettegacae geteaagaet egegteeagt egecacaeta egeagaaate 1320
tacaaagatg eageeaegaa eaegateaag aagggtgte tetteegegg getataceag 1380
ggtgttgtea gegttgtget gagtacaatt eeagettgta etgggeeeee ateeeeaaga 1440
tteaaaegag tagggatatt aaeagttggt gacaeetege ageaggagea ttetttacaa 1500
ettacgaaae egtaaggtet acceteaaee gaaetaagea agettetgee ataceattte 1560
tteaateagt eeeegeaeee gegataaaeg eeateteete ateeaetggt gaaatggtet 1620
eetgteteet eettacaeet geegaagtea teaageaaaa tgegeaggtt ateaaeaet 1680
eaceaagege eaaeatetet gaaaagetaa aaeaaggtgg aaeeaggta accetecaag 1740
tteteagaeg etteaageag eaaeettgga aattgtggag tgggtaeteg gegettgtag 1800
gaeggaattt acegtteaea gggateaatt teegatettt gaggegatea aggggt 1856

<210> 2596 <211> 1991

<212> DNA

<213> Aspergillus nidulans

<400> 2596

ctaaacacta ggtggaccct tgagtgttag gtcgcattac atgccccacc gttagtttgt 60 agtgaatgca ggagacgggt ctgtgcatga gataagagtc aaggggtcaa atgataaatg aatttggctg tttatgtgtg tttcggggca ccccttcgtt acgccggatc atagcattcc 180 aagctgcctg tgataggtac gtgcccttaa agtgataata cctttctctg tctagttaac 240 300 attcaaaatc ttggatcaat cagcaatgtt gcagcctgga aacgtaagcc tatatttaaa 360 tccatcaqct cactcaatqa tccatcgaag atagttgctg caaggtatac aggcagtttg 420 totocagoac catgotacat coaattotog aaactagtgo cotgaatgtt atcotggtag ttacatgtaa gtacacgctc gttacagtct ttgatcactt ttatatcctt ttttgctgac 480 540 600 caaagatggt accttggtga agcttgtacg tatctaacgt atctaattat caattgcttc caccteggtg etgatatett gtettetagt geetgetttt geegttggtg etgettttgg 660 720 gccatctgct gcgaatcttc tgagagtgcc ccattatcga agcaatgaaa gcgagacacg acaagcgaag tgacatatgt atgtggtgcg aacacattag caaggtgtga ctgacaaacc 780 taggcattgg ctcgacttgt gatcgggatt cagttggtta aagccggcta tgagctgcca aagagatatc tgaagcgccg ccttaaggaa atgacgttat gcctgcttcc tttgatggct 900 ataggatggg tcgcatcatc agcttgcatc aagttgatgg ttccgcatat ctcttttgtg 960 agtccctctg cttctggtat acgctttaac taacccatga cgggatgata gcttgcactc 1020 tcattatcgg gtcctgcgta acttgcacag accccatttt atcttaagct attgccaagg 1080 gcccttggac tgacagtgat gtccgccgac atctccgaga gttcatttcc tccgaggcag 1140 gcggcaatga cggctttggt ttctcattcc tgctgctagg cttagcacta ctccgatacg 1200 ccgacacgcc tgcaaatgcc gctgtattag aggaatttga tctcaccaga ggaggtgcag 1260 atcttcttgg ggcgactgac gtcggacgct ttgggggtgg ggcgggcgaa gctctgaagc 1320 attggtttgt cgaggggctt ctgtacatga ttatcctagg tggcgcttat gggactactg 1380 ttggcttcat gtgccgaaag gtccttactt tttcatccaa gagggtattg cgcttgccct 1440 tgtgttaatg ttcatggttc agtgttgatc cttgagtatg atatgtctta cattccatgc 1500 ttaacactgt tttctgttta tttggtatct cctattcgca cttttctctg tcttgcttct 1560 acatatactt gccctgctct atacatttac attttaattc tatgcttttt tctttgtctt 1620 tttcaatttc ttttttgtct tctccctatt ctcttctcca ttttaatttt tctccttatc 1680 ctattttact ctattcttt atcttatctt tttcttttca ctacatcttt attattatac 1740 ctttttcttc ttttcttatt cttcttaatc aaatcctttt tactttttac atcttattta 1800 ttctattttc ttcttctact tttttacctt tttttatatt atctcattct tctatattct 1860 cettetete etettaatti eattietate eaettietti eattaeatae tetettaeat 1920 ttttctttct acctttaccc tcttctttac tctcttatac ctcttcctca tcaattattt 1980 1991 atttaacttt a

<210> 2597 <211> 2557 <212> DNA <213> Aspergillus nidulans

<400> 2597

tcgtgcggca gtacgactcg tttaaaagtt agcattcccc gtggacttac ctcagtatgt 60 ttataatcat aaactgtcct caaatttaga gtgcatcgat tcttctggtg aatacctctg 120

gaacgacatc gctgtattga acaatccctg cgccgccaca cccaaggcat gctgcatttc tgccaaggat acgtactggt gggacatggc cttcaggaac ccatcttggg tgttttttag 240 agcaaccaga gccggctcat ggggatcgaa cttcaggcga caaacaagca tgttgatgaa 300 360 tggacccacg gagtcctcga tcccatcaag aggagcatca cggcccgagg tcagataccc 420 gtagcagaca gagtctgttc caataaaagc gcgcagaacc agggcccacg cggtttgaac 480 gacgttagca acggtgaatc cccagcgttc ggaaaaggcg ctcagtgtct cctttgtcaa gccgggaagc tcaacattga tcgattccag agcctgagat tggtctcggc cgtcattaag 540 600 aatgggaaac tggcagggct gagcgtcttg gaggtaatcg ttccagaaat tgaccgattc ggccctcttt gcttcttgga ggaagctcac gtagtcgacg tatgcaagag ggggcacgct 660 720 gctgagtttc ttgctgtagg cgcgcttcaa gtcccgctca atgatagcca tagatgtccc 780 atcgatcaag gcatggttga tctccaactt gcaaaacatt cgaccgttct cacagtgaca gattgctaat tgatggagct ttgctgtctg aggtaatgtg cgtaaagcat ggacagggtc 840 gtcgctacgc agctccacca cttgcgccct caactctttc agcaccagct ggtcgtaagg 900 tcggtctggg acagcacttt taatgaaaac ggtccgtagc atcgggtgcc ggtcaataac 960 ctgttgccag gctgcaacca actgtgcact atcgactccc tcgcgggcag tggcctccat 1020 gatggtgaag aactcgtagg caccctcgga tttcaactga ctcatcaaca aacccagttg 1080 cataggcgag caaggagaaa ggctctcgat ctcgtcgatc gacttgactc cagcttcagg 1140 taggatggag gtagccaggt tatccaagtc tttataggac aagttcagga gcgggaaatc 1200 gctaagtgtg ggaattaatt cggactgcct catgagttca tcgataccag tctcgaggac 1260 ttgacgataa tgattgatcc aagaacttat tgtatcgcga tggctcattt tcttgttata 1320 ctcgaaagtg aactccatcc gcccgttgga gaccccggcg gcgatctcaa acaaagagta 1380 acgctgcatc tgagggctga tctcaacaca atcagttccg gtgatagaag actcttgaaa 1440 caaggcgtcg actctctgca gttgctggta aagaccgagg taattgaaaa caacctccat 1500 atcctgcatc ccgccggcca gaagagatcg cgcagtaaag taccgccacc cattgtgggc 1560 aatctttcgt cggctgtcct tcaatctttt gacagcatca agccagttgt cttcgggagt 1620 ctcgtagctg acgggataca tggtcgtgaa ccaacccact gtgcgtgaga catcaatggc 1680 cgatgtccag ggttcacggc catgtccttc taggtagacg gcagggacat ttcggtcaga 1740 gaacggtga cggaaagaat gaagcagtga agctaccatg atatcagtcg getetgtgeg 1800
caacggaata ttacagtete cgagtagcag cgeggteete tgagaatega tggtgaagga 1860
tteagtgaca atatcteece agttattgge ttetecetge atgttecagt aggecagate 1920
acctgtgggt geeteaaggt eccaggtgte tggttttgae aagtgetggg agacatatte 1980
gegttgeaac ttegeceaat tetggaagga aatagtggga gttgagttga taeggecagt 2040
cetaagcaca teeteeaaat eetggaagga aateegeea gataccagat eaataaccag 2100
atgatgggee geeaagaaca gatactgget etegggagea acceagatt gggetgteaa 2160
cattgggee ettttatat egaaggaggt eteageeteg eggaaceggg eeateattet 2220
cteeegacta eeetettete tagggaacat gaaaaaggat eeagaacat egttggtgat 2340
acaactattt eaagegetet ttgaagetee gtetgtagaa eateettggge tagetteaa 2400
acaaagettt ggttaaaatg attetgeeet ttegetgett eetgaagaac agetgtgaat 2460
gggagegage teaaaccatt egtegatgae tteggettet ggegeeegge tttttgttga 2520
gaetgetaat gtatgagete geeegeaaga geageee 2557

<210> 2598 <211> 1475 <212> DNA

<213> Aspergillus nidulans

<400> 2598

tcacgattc ctcagtatgc aaatgttgtt gtgagagttg tgtattgaat gcgaaagtgt 60
tcacgatgca atccaaaact taaccaactg ttgtctctta gtataaaatg acccttatca 120
accgaaagtg agaagtctca gctgtatgca ggtaaacaaa cgcaacgcgg cgtccaagct 180
gggcgggagg gtccacggca gcttcttaag gaaggggcgt ctcagcctta tgaccttaca 240
ctcgcgtcaa ttttcattct gccgacgata atacctgaag accttgcata accatgacaa 300
tatgggtcca ctcggcatag cgtgatcgct catcggcccg atcgacgagc gtgctgttca 360
atttgcacat gaaagccgag accgccgagg gggaatcccg tactcactcg aaaaccgctt 420
cagattgcgg tttgttctgc agactgttca taataatccc agttaaggat gcaagcatac 480
tttttttcag ccgcatagct gtcgtggaca accaccacta tctgtgctga cgctcttacg 540

gacatcggtt tctatatgat aatgagctta catgtgggct ctctatttac ggatcgataa 660 ccagaaggct ctatcggcaa gctcgatgtc agcagaccgc gtgctatagt actcataccg 720 gtctatacac taccacgcca accaagccct aaccgaggca cagcggaagc ggtcaagctg 780 tcaggctgtt aggctgtcag cccattaccc acacgtcata actgcaccct gaaccatttc 840 gcagacggca tctattcctc cgatccccga atggtcccga caagtcatcc cgatcagcca 900 gatttctatt cttggcgaga cagatacagg tctaacctct tgatccctcc cgacatgccc 960 aatctcgcct atcacggcct tcttcaacga acatatccat aacaacactg atcatctgaa 1020 agectetete egeataegee tteeegtatg eteeagtate acaatacaee eeaaeggttt 1080 tcctattctt tttttcagcg ggaacagctg gatcgaattc cgcagctaag aacctaattt 1140 cctaatcagc ccctgaaacg gccatccaat ttacattgga acaagggccc aagaagagca 1200 catggagcca tcgacggccg atgggatgat acttttgggc gccctcggct catttgatgg 1260 tataaccggc ctattaacac tgcatacctt agccggagtt ttattttcct cgtgcgggaa 1320 caaaattccc caggcatctt accettttcc gggaagactt tttctcattc cttttcacta 1380 ttttatcaca catctcccgc ccgcttatac cttcatcatt cactcttact tcctccatca 1440 1475 ttccgtttac ctctaccttt aactacctac atccc

<210> 2599

<211> 2719 <212> DNA

<213> Aspergillus nidulans

<400> 2599

gtggcttgca gattaaccca gataggcat agcgcatttc tcgttcacgg gtattgacgc 60 gcgcgggttc ttacctcacg cgcacggcca acctcaaatt cctcccgcca accttttacc 120 aagagctatt catatttcct agcaaagccg ccaatcctgc tcaaaaacta gcttgtcaat 180 ttcttttat ttccctcaat tatctacccg tcggcaccaa attcgctcgt ccgcgttcaa 240 cttcgctcag catgtccctc aagcgcaagg cttcgttcc aagcatcgca tctccacaat 300 cacctcagac cgcaattgac cgacgcttca tggacgacag cccgaaacac cttcattgcc 360 ggacaagaaa gcggttgaga aacgaccgcc ctgacgacca agaagtatat ggtgggccgc 420

cccatctgcc gcccaatgct ctcccaaaag catgctgacg ctagaaacag acaaaaccct tcgatggctc tttactgctc agcagcgcgt gcagcaagta cctaccccgc ctactgaacc 540 ggaacaagac gaggacatgg agcaggaagc gctgcctgca ttcgaccctc gccaacaaac 600 actgctacag ttctttcgtc gcacccaacc acagccttat cgtcagccct ctcaacaacc 660 ttgcccttcg attcctatag accagttatc aggcgagcca gggccctcgc gaagcggaaa 720 780 tgggttcttg catggtcgcg acgtcgggag tgtctcaccg tcctctgcaa gtgatagcga aacattgaca ccagcctccc agctcgctga tcgtgacatg gacatggata tcaatatgaa 900 ttggcacacc tagtcggaac cacggatgga tgggaagata attttttgct ctaaatcggg caaggettet atttgaegat atacetgegt tttataeeet ggteetatga tegtggaeee tgcgttactc tgctttctga ttgtgtctct tgttgcttgc tcaagcgttg catttgattc 1020 taaagggcca gtgatcgctg gcgatcatag tgtcccagcg aaccctgttt cacggccttg 1080 ccttcatttt gaagtgtttt tttcgcacgt tattacctct gatgccacca tatcatcggt 1140 accggatatc cgaaaaagcc cacagtgtct gtataaatga taattctaca tttctgaagg 1200 aatatactct atatgaacag tatatggcca agttgcatga gctaatttat ttgacctcta 1260 acacagtcat caacggcgta ttctctagcg acaggtctgg ttcctgtatc aggggcgccg 1320 acttgagtag tctggttgtc attcgtagaa ctcaagcgcg aacagcaaga cagacatgat 1380 acaacttggg cagagaagcc agtcagatag gttagacaat ttcagtatag aagcctgagc 1440 agcgaaaaac gttggcctag aagatagcca accactcagg ctcattgctg tcccctactg 1500 tactccgtac cccgtgacct cccatttgtg gtaaagcaat agacagaggt ctagagctga 1560 cactgacaga atacagacac aattgtaatg tcgatgtcta cccctgagcc aaactccaac 1620 cagaaccata aactgagaaa caagaaatac gcgtctgtac tccgtactac gtacgcattc 1680 gcaacttgta ggcactcgcc ctgtcgatcg cgggactcgg ctttgcgaaa ctaagatccg 1740 tgcacgaagg ctggcccgga tccgatagag ccggaagcgc tggcagctga caggctggcg 1800 aagtttattt atagtatgcc gggcctgtgg ccaatcaaac tctgccactg aacgcgggga 1860 aaccccttgt cgtgtagctc aatccagcta ttgattgtag ggcaatgcca ccatgtaaca 1920 gttatttcga cgatggtgtt gggatgaagt caggttagga gctggggagc cgagactcaa 1980 ccaggtataa tggtacgtga cgctagtgcc cgatcctgat tcgaagccac ggtaacgcag 2040 tgagacagtt atgcgagtga tcgcccatcg caatttaacc tgattcaggg ccagggctgg 2100
aattcagggt ccgggtcgct ccagcacccc actctcttgt caacattttt gagctggtaa 2160
tttcgcttgc tgcacgtaga aaagaaagtg tcgaatgata atatatgtat ttccacatta 2220
aatatggaca ttcacgctaa gaggaaaagg tataaaagcgg tacaagagaa aaccaagcca 2280
tcattagcgg attaaaagta aaagaaaggt atgcaaacc gccccattcc atgtaaaccc 2340
ccaaccataa gatgaccgat tagatgcatg tcgtatgcca tggaaacata agttagaagt 2400
ggagatccat aaaagaaggg aaaaaatata agaataaaag gaaagtttaa taatgaggta 2460
tcatgacaga aaagaaaaa atatagagac cgtcaagttg tagtatgttg taaaagaggaa 2520
ggtcttcaaa gggaaacctt cattgcgtcc tgccagatgt gcggacgtct cggatccctg 2580
gctgcggact gctgcttcat gtcttccagg tcatcattcc catgatgcaa gaacgacatg 2640
tgcaaggcgg ttcctgagat gattcgtaga agtccgataa tgagctgagg ccagccacaa 2700
gcgcgacaat cggaggata 2719

<210> 2600 <211> 1933 <212> DNA

<213> Aspergillus nidulans

<400> 2600

gggggcctcc ccctggcttt ggacctttag gggaggctat tctactctaa attttgcagg 60 120 gaaaatccat tacaagtcct ccgggacgcg gggcctttta tccaagagga tcagccggcc gggcaagcca aattttggtc gctttttcaa acggaatgtt cggagcgcgc ttgtctttcc 180 tcctaaagaa gccgatatgc aggcttcggc tccaataaag aagggagcgg gagccggtgt gcctctgggg aaagctaaag gtggaactac aggttccttt aagcggtctt aaaaaggctg 300 aagttttcgc gttacatgaa gctggtcttc ggtgcgagta atagacggag aaatttgcta 360 agtaaagaga tactataatt acatcccgtg tttacgttac ctttgatgga gtgccttctg 420 cttcatctat agccaaccaa ttgcagctac acggtacaaa tacatgttaa atcaccgaaa 480 aacaccacgc cattcaaccc agccgggacg ccgtccggtt ggtctgaaag tccatgcaga 540 ataagatccc agaaaagtat gaggtatgag gtaaagaaga gaaaagataa cgatcacgaa 600 agcggaaaaa taggagggt atctggcgtc agatagtcac acaatatacc cagcctcaga 660 gacatgcaag ccagtcaagg aagataagcg ccgccagcaa taatcaaatt catgttggtg aatttcacct tgtagacggg gctcttctta gtggggaacg cactaatctg gtccggtgtg 780 acaacaacgt ccttgccctt cttcttgccg ctgcccatcc ctggcccaac ggtgccaggt 840 gtctgcgtag aattcgcggc agcggaggaa gccccgtcaa tcttcgtgcc tgcgccgcct 900 tctccggcaa cgcggccctg cgacgggtca tgggcaggac ccataacatc ccatactcga actgtgccgt ctgcgccgcc ggagacaagc acattagatt ctacactcca actaagcgac 1020 caaatgcccc cctttccgtg gccgcgcata cgcttgagga ggcggccggg tcccagatcc 1080 cagagcaaga tagacccgtg gtcgtccgcg gaggcgaggg ttttcccgtc gcggctgcac 1140 gccagggctg tgatgtttcc agtgtgaccg gtgaacatgc gcactgcgtt gccggtagta 1200 acggcccaca tgcggtacag tgcggtctaa gcttcccgtg aagacataag cggagttggg 1260 gtggaagcag acgcagtcga cgtcttgctc gtggccgaca aagatgcgct gttgacggat 1320 gtgatcagtt acccaaagcc gggcagtttt gtcatggccg ccggagacga agtagtggcc 1380 gaaggggccc cattgaagat cccagaccgg ctgatcatgg cccttgtaga caaccatgca 1440 ctgccagaga tcaagggacc aaaggcgaat ggttcggtcg gcggaagatg aaaggagcca 1500 tcgggcgttt gttggtgcca cggcgttctc actgggggtg gctgatgggg caaatgccac 1560 tgcatataca ggccccgaat ggccgattaa gcggcgcgaa ttagttgggg gttcatctgc 1620 actgtcgtct gaagggattt tctttccatc taggctccaa acgcggatgt atgactcttg 1680 cataccaget geaacgagea gattateate egagaaatea aggeagttga teetaaceta 1740 attagcgatc gaccctcaga gacggatcta aattgactaa cccgtcataa gtgttgtgga 1800 aagtgaacat gcacacacta acggcaggac caacgcctcc tgtcctagat tcaatccgaa 1860 acctatcacg attctccttg actttttgca cctcaatcgc tacatcccgc gcagtcgatg 1920 1933 gcggatacgg gat

<210>	2601	
<211>	1298	
<212>	DNA	
<213>	Aspergillus	nid

dulans

<400> 2601

gcttacttgc cgcgtagcac cgtatttcgg gacgcctgga ggagctctgt tagtatgtac

aggettttet ttgggaccga accecactca cetgtagttg agtggataga ggecatatta 180 acaatcgacc cgccattagc gatattctta agctccgcgc gaaggcagta catcagcccc 240 gtgagattaa cgccgagtat tcgatcccac tcgtcatcgt cgagctctgc cacgcttttg acgccgtggt ccttccccac tatgcctgcg atattggcgg cgcgtcaaga cgctggtatt 300 360 tcgttaggat cgacgcgatc caacaatcga cctgttgtct gttggagacg tctacttgag tgattgtgta ttggacgacg ggtgtcttgg agctgaaata ggattctgct tcggcgagag 420 480 tggtcgggtt gacgtcggct atgcaaacgg tgcccccgcg cgaggaaagg agcttggcgg ttgcgagacc gatgccgctt gcaccgccag tgatggcgta gactttgcct tggagggaca 540 ttgtatctaa cgctggatat ttgttgcttg gttggagata gctgtttgag gtggtgcgaa 600 660 gctttgtcgt attagttggc atgcggggaa ctcccatagt ggaggtggtt gtactattct ccaacttctc cgtctttatc ccgccaatgg ctggtctttt caattagtat tatttcctta 720 gtcaaaggtg tctgaaaggc ttaccaggtg ctcctgtgcc ttatagtttc ctgaagcctt 780 840 cgtaatggca ctccacaaac ttgcggccat atcggccata tcggtcaaga gtcatgtttc cgtcctcggc cgaggccgct acgaccgtac tcgctctata aaatggtcat tggtaactat 900 tgaatgtggc atttgaagct ccgaattgtt ttcctcttct aagtgcaaat agtacaatta 960 tctagacatc tatgccagcg atgaaaatcc tcatcactgg cgcggggatc gccggcacag 1020 cgctggcctt ctggctctcg aaactcggcc acaacgtcac tgtgatcgaa cgcgcttctt 1080 cactgcgcgc aagcggattg caagtcgacc tccgtggccc tggcatccaa gtgcttcgcc 1140 ggatgaagct agaagaaaca ttccgccagc acgctgtcgc ggaacagggg cttcaactcg 1200 tggatcgaag aggccgaaga tgggggtact ttggcgcaaa taggtcgggg aaggggctgc 1260 agagetteae gaetgaette gagateatge ggggegat 1298

<210>	2602	
<211>	1412	
<212>	DNA	
<213>	Aspergillus	nidulans

<400> 2602

gagccaccca gccacaaggc aagccggaaa ctgcggaata atctccgagc ggaaccaaat 60 cttccaagaa tgtctcacga tattcccatt caggtccttt ctaattactg accgtcccca 120

ttgttcattt tgcctccact cccgcctctg tctattcttt cctggccctc tcgccgtcca 180 gattagatat ccgcgagctt cacagcgagt gagctcagct ggcggaaacg tgctcctaga 240 gccccttagc cacaaggggt acgaggagat gcagctctgg agccaattcc actgcggcaa 300 360 teceteacag eteageetee cetegeteta aggeacattg ageeteaggg eeatggeeca 420 ggatgtgggc gaagttcgag tccagcctcc caacgccagc ctacaccctg acgatgcctt gacagagaaa tcgtcagtcg cagaatggtc ttcatcgcct ctgaagcatt ctcccggcgg 480 acacattage gataaccete ceatggaage etegegegea gagtegaegg accaaacage 540 600 gggattgccg caaataacgg gggacgaggt ggcggaaaat gctggaccca gtcaagcatg gggtcgcaaa ctgcggacat tgccgggtaa acaagtccct ctcagagtgc acgagacagg 660 aggaaactga aatgctgatt tgtcttgcat ctagcctgga ttcgatcttt ggaataccca 720 gttgatgata ttgaagccac cgccacttct cgactcctgc cgtcgcagcc gaacgaggcc 780 gtagtcgcgc agcataacca ctcaccatat tcgacgtcga aaccgggttt aggtgcagat cgtgggcata gtatggatgg agagccggcg cgcgaatcac ggtggaagag tttttccaag 900 actatagect accetegaga acceggetta gaggagaage ttgtaacgee agaatggetg cacgaaaacc atggcaatta tgcattgccg tggcggggcc agcttgagcc cgacgaagac 1020 acagaagatc cgcttaagaa gaagcgcaga cgcgaaatgt ggttcaaacg ctttcacaat 1080 accettetge aaageeegat tgtaceattg gteatteggt tgaeggtetg gtettttet 1140 ttaacagctc tggcgcttgg aggctctatt cagcgacttt cgagcgactt tccacgtcct 1200 caacggccct cggccttgat ggcaattatt gtcgacgctg ttgcgttggt ttaccttgtc 1260 tacatcacct gggatgagta cacagccaaa ccgctgggac tccgctcccc cgctgctaaa 1320 qcacgactca ttcttttaga tattttcttt attgttttcg attcggccaa tctcagtctg 1380 1412 gctttcgagt ccttatcaag tgccatgtgg ag

<400> 2603

aaggacgaca teegtgeggt aattgeegge ateeaaacea gtettgaatt gaeetegeae

60

<210> 2603 <211> 844 <212> DNA

<213> Aspergillus nidulans

gccaaggcct cccttattta gatcttcagc aaggacgacc aggataagct gttgtaccgc tttatcctct gcatgatgct ccagttcttc cagcaaatgt gcggaggcaa cctgatttct 180 240 gtatacgctt ccaccatctt cgaagagaac ctgggcatga gtgagagcct gtccaagatc ctggcctctt gcgccttgac gtggaagttc ctttgctgct tcatctcttt ctgggcaatc 300 360 gategteteg geegtegtat ttgetteate gttagtggtt caggaatgge etgetgeatg atggccatgg ccatcaccaa tagtatgggc gaagacaaca agggagcctc catcgcctct 420 gccgtcttca tcttcctctt caactgcttt tatcccatcg gtttcctcgg aggcaatttc 480 ttgtacgctt ccgaggtggc tccagcccgt ctccgtgtcg ccatgtctgc cttctccgcg 540 gccaaccatt ggctgtggaa ttttgttgtc gtgatggtga ccccggtcgc cctcgacacg 600 atcgggtaca agtactacgt catgtacact gtcttgtcgg cctgcattcc gatctccgtg 660 tacttcttct accctgagac gatgaaccgc aacctagagc tgatcaacca ggtcttccgt 720 gatgcgtcgt cgccgtggga gatcgtctcg atggcccgca agctgccgca aggagaagtc 840 gctgaggcgc agctcgcggc catccacaag aaggacggca ccgagctgga aatgaaggaa 844 gagg <210> 2604 <211> 2786

<212> DNA Aspergillus nidulans <213>

<400> 2604

60 cacgttaata tatctaatga taaggcattt gttgcaactc tagaattcta ggtctataat caatccgaga attcatttcg tatctcggta aatatcctca ggaacatatc gctgcaacat caatgatgcg ataccactcc tcattcccga acagagcctt ggaaatcatg accctatcat 180 240 tottagattt totattagoc cottgtggat ttacttogga gtagatgtgg acgtggtcat ttcatagatc agcagcagca ccaagacatg ccaatacatc tatcctctgg tttagtttcg 300 cccggattct aacagccgaa tgactattta tgcagattat accgccataa gcagcttgca 360 taaagtttaa ataagcataa gccttgtgca tccatggtca ctactggctg aattcataat 420 480 acacactgcg gcactacggc gttacggcgt tacggctcag ccattgtgct tttattttaa ttcgaccagc cctgtcattc tcaggctggt gttcggacat accacgatcc cagcccgatc 540 tccggtcagg ccctgattca gctccaggct ttagcctaga aggtaggtct gacactgtgc 600 660 cttggattca agacactaga tggtgtgaat ttttatggct atcttactat accgccggca 720 aatccgaaga tgtggctatt cttggaaagg acggatggct ttctctaccg ccggattagc ggcaatgtca tcaccacgcg aatccgtcca gcggactatt caactgttac ggatttttgg 780 cgggactact aactattgcg ggctatgggt attgagtcaa ggtcggatct gatttttgga 840 900 attttttgct tagtttattt gcctctagcc ctatattcta tcctaccata gtgcctaccc ccttctttct cccagttgtt aatgaggtac tgttcctaca gttgcttggt aatgccgctc ctttctcttg tgacacgtat cttgctacaa tatccactgg gaacgctcca acgaactcct 1020 ctaaccttcc ctcctacagc accgccaaga tactttacgg caaccaagcc ctaaccctgg 1080 atatatttat ctcaggacca tgatttgcga gaacccacct gagccgcccg ctgccccca 1140 tcgttataat cttcatcaaa ttcagttgct tcgcaacaaa ctgtatcatt acgggaagcc 1200 acaggtattg agaacgtggt atcaacgcct gcgtggatgg tatatggtca gaatggtcag 1260 gcctgaagta tatgatatgt ctcaactcca aacctacaat ttttgagcac aatccggggc 1320 ccataatgca gaggtgttga ctattaagtc agtttccgcc acctggtgga taacaggcca 1380 tgaccactaa tcatatacta taggacaagt atcgcaacct catgtcagac agcagacagg 1440 tgcgcgccct cgaaagcagc acgcaaatga ctatggcgtc gcgatgttta gaccgttttg 1500 tatgcatttt gcagtttagc ttagacatct actttgaccg tcgatcgacg gctgatgttg 1560 tatcaatcca ttcttaaata ctcctttcca agaatcgccg taactcgcca cgtcctcgat 1620 ctatcatcgg tcagcgcacg cattgcagcc cactctattt ccgcagtcga acacgtgcac 1680 aacatctaac agttctcgcc ctcatgctga tgaataatga tgattttcat tttctgaggt 1740 acgacaaaga cactagaact tcgttggttt aggcctggcc ggcacataga cagtatgtaa 1800 ctgactaact gacttgcaat cagggctagt gccgtactgt gcgcaccggc ttccacattc 1860 catgcaagtc ttgggcacaa cggctaactg tccggtctcg gtgttatgtt gtagctccgc 1920 ccttgcaagg ctgtcgcagt tttcgacatt gtcgcgcgcg caatggggac agtgaaatcg 1980 atgtcagacc tggtcgggtc ctccatgcgg attatggtgt atataaactc aaatagcgag 2040 accgtcatca gggcgcgcgg ctgaaattct taagtgggag ggtgtgctgc catctaaaat 2100 acttctcact catataaagc atgcttatcg ctgcaatgca tcaaaccaat gctacagccg 2160 tgaagtccac agettgtttg etecceagea eactgageca ttgaetgee gaacaaaacg 2220
agecaagtee tgeatgaagg aaagteacet gtggatetta ggtettteeg teaegataat 2340
tgggeeggte tggtteteat ttgtttaaca ttgtetgatt tgagtgaaat ggeetgtega 2400
teetteaceg etgeagettg gaettgagae aggattaggg etggettget egggaaeegee 2460
ggagtgeaca geagetgaaa aagtttgete atetegaege tatetatatt tgggataeag 2520
ggtetgtgte eageaggtat tttgetgt atggateaat egagattaea ategatgag 2520
ggtetgtgte attataatga ategaettge tgeatggee tggteaaaag geeteeegtg 2640
caggatgeag ageetgatga ateatgeeat gateeetge tggteaaaag geeteeegtg 2640
caggatgeag tgatttttgt tteegeggtg gatettteaa tteaggtgag getgtagate 2700
agtteacega agtgtagaat acatta 2786

<210> 2605 <211> 1943 <212> DNA

<213> Aspergillus nidulans

<400> 2605

tccatttctg aagataacca atatctctga gctatgggaa accgcctgtc agccaaggtc 60 ggtcgaggag cattcgttgg tgacccaaga gtcgagagac caccattgac tcatcgggcg 120 gggaaagaca tgcattcgta aatatttatg gacaaggagc aattctgctt cccaaacccc 180 atctcccctt tgtctttgag tagcacacca tgtcaacaac agcggttgaa ctagcttcac 240 agggacaaga gccacagagc tcagtccaaa cgtttgaacc gattgctgag aatgcagtca 300 tccaagcaaa gcaaaggtgg aacgatcctc caatcaacaa atggcgtctt ttagctacgt ttgtcagttt cgcggtcgta ggggccagcg acggcgtcta tggagtgagc ttttcccgtt 420 cggatccccc agaaaaccgg ctaatgactt ctctcgcagg cacttgtgcc atatgtaagc 480 gtcgaatcga attcaaatcc cgtcgccgac aaggatgctg acgttgaata gcttcgtgat 540 gactataagc tgtctaccac ggtcgtctct ttgattttca tgaccccgtt tgccggatac 600 acgatcgcaa ctctcattgt caacaaaatc cacatgacgt tgggccagcg aggtattgcc 660 attattggtc ccctatgcca tatcatcccg ttcgtaatta tggccattcg cccgcctgg 720 ccggtcatgt tggctgtcta cgtaattgtg ggcttgggga atggcctcat tgatgccgca tggaactett ggattgeaga catggttaat gegaacaeea tgatggggtt teteggtgee 900 ttctatgggc ttgggtacgt tgataatgtg caagggctac caatggcaca ctgaccacgg cacagggcaa ccctgagccc aacaatcgca acgcagatga tcaaatccgg cctccactgg 960 aattactttt attatacact gettggtgge tetgteetgg agttgaegae gagtgeegtt 1020 ttgttctggg gagagaatgc ggctagcttc cgagagaaaa cacgcaggag tgctagtagc 1080 agtggcggaa acagaactac agaggcaatg aaaagtcgcg ttacctggat gatagccttc 1140 tggctgttta tctacatggg tgccgaaggt gggatgctct ggctttatcc taggagtgaa 1200 tggttttctg acggttggat ttgatagtgt ctgtgggtgg ctgggtcgtc gattttatgg 1260 tccaggctcg caacggacag ccattcgagt ctggtctaat tcccacgggc ttctgggctg 1320 gcgtcactat tggccgactt ttactcggct gggtgaacga ctggctaggc atgttatgca 1380 ctctacgtat ccaatgcacg aatgctgact gagaatgaag gagaacggat tgcgatcagt 1440 atctatcttg tgatctcaat agctctggaa cttatatttt ggctcgtacc gaagtttgtc 1500 gtttctgctg ttgctgtctc gctgcttggc ttcttcactg ggcctctctt tcctgcggca 1560 attgtagtgg ctgcgaagct gcttccgaag catctacata ctccaggcat tggacttgcg 1620 tcagcattgg ctggtggtgg tgcagcaatg tgagtttact ctgtctgtta atactttata 1680 aaccagtgat ttagacattt ggctaatata atgctctctg tatctgcgca tagactgccg 1740 tttgttgccg gtgctttatc tggggcgcgc ggagtgcaaa gtctacaacc atttattctt 1800 gctttactaa tcaccttaac aatcgtctgg gtgcttcttc cgcagaataa gcatcatgct 1860 catgcagctt gagacagcat tgatactgcg ttgctaggat gcattgagac aatatttgag 1920 1943 gatgcggcat actggaggag atc

<210> 2606 <211> 1713 <212> DNA <213> Aspergillus nidulans

<400> 2606

tectecaceg aaacaggaga geggaagcaa gaagateete teegettete egttaagege 60 gatgttgeeg aaggteete gggegagaga aataatttgt ettegetege tggaaacegg 120

ctttctcttt gcacaccgga gaaaagactg tgactttacc cgttaaccgt ttcgaaaatt ccaqccqtqc tttqtaaqtt qcctctcatc ctcctctcca gcatccgaaa tgcttcatgg 240 ttcctcattt gatataatag ctgacttaaa tgacttcaag tctaaaatgg tggctaaggt 300 360 aagactagtt tgttatatca agtcaagaag aaactattca gctgaagctt ttacaattgg aaqqqacaac tgccaqtgtg acaagtgcgt tcatccgagt accagacaac ggattgtcga 420 cactttctcg gtatgtaacc ttcttgttct cacctacatt tcaaagtctg atgaatcgca 480 tttagattcc ggacgatatt ggtgtcaaag acatctcgaa tggccggagc caggtaacag 540 600 tgacatgtag gataatccct ttttatgctc atataaaatg ctgatcttta ttagggtctg atggccatgt aagttcatat aatcattctt ggctggctca aggcggaaga cgtgcaccaa 660 720 caagtttagg cgaatatcca ttgcgattcc ggtaaagcaa gtcattctat gtgatttctt tcttctgacg gatctatagc aaggggatga cttataaccc aaagcacgaa ggcaatgtaa 780 aggaaatgcc atcagtgtcc tactcagaag ttatggcaaa tgatgctggg gtcctaaagt 840 ggctggagcg tattgtaagt cttcgtgtat ccactcgagg ctatatacta actttgggaa 900 gtatgactgg ggtttctgcc tggtccgaga taccccaatc aaccctgaat gcacqqagqc 960 tctcttgaga cggatagctc acattagaca cactcactat ggtataatgc gattctctga 1020 ttgatagtac agcgcagcaa ctgatgtcaa ccaggtggct tctgggactt cacagccgat 1080 atgtctttca aggataccgc gtataccaac gaggctcttg gtgcacacac ggacaataca 1140 tattttactg accetgeacg getteaacte ttteatatge tategeacae agatggegae 1200 ggaggcgcta ccttgctcgt tgatggcttt cgcgcagcaa gaaggttgta tgctgagtcc 1260 aagcaaaatc ttaaccattt aagaaatatt agacagccgt tccacgcaag cggaaacgaa 1320 gactecattt accaacetgt tgagcaacaa gttgteette gtgcccacge gcaattcaag 1380 categettgt atcaagteeg etggaataat taegateggg eggtaaaatg gaactggagt 1440 cttgaggagc aagaggcctg gtacaaggct gcaaagcact ttaacgatat catccatcga 1500 gaggatatgg aaatatggac ccagcttcag ccaggaacag cgttaagtaa gttcaatttc 1560 tatgccttat ttgacaagct aaacgactaa ttgcgctacg aagtctttga caactggaga 1620 atgctacacg gtcgttctgc attcactggg aagcgaagga tgtgcggtgg atatagtaag 1680 tatccttccg tcacaccatt tgccgaatac tgc 1713

	2607 1115 DNA Aspergillus	nidulans				
<400>	2607					
accatgagtg	tacgatcgac	ttggcccggc	ttgccatgca	ttgttactgg	agtcccagac	60
tggttgacaa	tcactgtttt	gtgcgcagta	tatctagcac	gcctgatatc	attttatcaa	120
tacctggagg	aagatccatg	tgcggacgat	cgaatccctc	tgattcccag	tcctgattca	180
ggccagtgca	gataatggca	taatcggcat	cttctgccgc	cttgacggct	cgattgatca	240
tctcctcagc	gtccaggcgc	agagaggccc	ccagatttgc	agcgcccccg	ccaaaattca	300
ccattccagt	tgtcttcatc	gttgttgtgt	ttgctgaacc	gaactcgatc	cggattttat	360
atgtttggcc	ggccgtaagc	ttcatcgagc	caatctcctc	ccgggtgcct	ttcccaaaga	420
agcttgtccc	tttagtttgc	ttagtcgtgt	tgtcaatgat	caactcatcg	ttgatgtaca	480
agttcgcagt	tccaaaaaca	ctcagcccaa	agtcccatat	gcctgattgg	tcgggcgtga	540
aatcaccgat	cagcgtggac	cagaaaagag	ccctattgag	ccctgcaagc	ttatagtcca	600
tgaattggaa	cgcggtggtg	gtgaccggtt	cggtccccaa	gcatttgcgg	tttggctggg	660
tcattggctc	attgtagaag	tgtataactg	cattgctcaa	caggcgatcg	atcaccggca	720
gcatgttatg	ggcatgcgct	cctgtctcat	acaacacttc	tgcattcgga	agagcctcac	780

gtactgcatc gtacagggtc gaagcatagt acggcttcag cgccgcactg ccgccgccag 840

aaatcgccgg cgttttgata tgggatccga tgagtgcgat cttctttacg ttcttcggga 900

gcgggaggat gttttcctcg ttctttagca gcacaatgct atttgaacag agggttcgca 960

tgagagcgcg gtcttctgga tggttgcgcc ctttctcgac ctctgagact ttggtccggc 1020

tcgctcgctg cacaaattcc aataccttgc gtgcccgcgc atccaacgtc gacgacttga 1080

1115

tgagccgcgc ttgcatagca gactcaatgt atttc

<210> 2608
<211> 715
<212> DNA

Aspergillus nidulans

<400> 2608

<213>

ccttatgcct ggtcgcaaac tcgacgacgc cgtgtggtgc tgacatgacc agtggagcca gcggtcaggg gggtgccggg tctgctggga gaggggatgg atacatatat cggacacgcg 180 acggccaccg gagtacggaa ggattgcatg gtatttgccc caaatgacta gaacagtgag gagtcctaac atgaccaggc ctgaggacat ttttgggagt ctggaggtag acggcgatgg 240 aaagtttgtg ggtggcacag gaaattacca agcaagcggt aggactcttc cccagaagtc 300 atggattctc attattgacc aaggcaggaa cttatcgaat cgtcacgcga gacggcatgt 360 aggtagctcc catcetttga egggateaae getgataaae ttgeagtete ggtttaagee 420 cattecteag ggagaaactt atteagaaac tgegegaaca agaagegeaa tgagtaecat 480 caggggctct atctgtgcaa aatcatgaaa tgtaccatac agcgcgctgc tggacagttg 600 ataatcattc cggattctta tcacagaccg tatcatttcg ttcatcaatc cgtcgtggcc 660 ctattcttta tttagagaag aagtttgtta ttcgcggtgt accagtagtc gtctttttcg 715 gctctggcct tttcagcgac ttctggttat gcgttgcact gcgcatttgt tttgg 2609 <210> <211> 1680 <212> DNA Aspergillus nidulans <213> 2609 <400> cccaaactgt gtaagacccg cagtaagatc ccagtcctga cgagcaggaa cgtgaactga 60 cgttacgtag cctggcgttt acgttgtaaa cagcgagtac gtcaactgtc catgtatcta 120 180 agottacaco tgattotaat acagotttag agaataaaat gogatgagac acatootcac tgcaatcagt gtacacgggg agcgtacgaa tgccccggct accagcgccc gttgaagtgg 240 tcgtccaagt acgaggttgc tgccaataat gacacagccg caagggaaga tgcacgctcg 300 aaacacacca tcaatgccca aacaccagat ctggaggtag atacaataag ttctatcctg tcgccctcgg tgtctgtgcc ggggttaact ccccagcatc tcgcgatggc aaccgggctc 420 gccgaacaag atgtttctct ctataccgca ggctcagatg caagtttccc agactttggt 480 540 ttcaataaca tctcqtcacc gcagtatgaa cagacatcga gctctttctt tgactccgtg aaattttccg atgtctttaa taccaacttg ggcgaatggg cagatctcac ggtgtccttg 600 cccctgccgc tggaagacca agacgctcga atctcccggc actacttttt caaagtctgc 660

60

aggatcaatc cctgctttga ctccggcgca aaccctatgc gtgtgcagat acacgaccag atggccttca gtgggctaat ctaccactgc gttgtgtcca tgtccgcagc gcacgaaggc agcattgatt ccactgcgct cacctaccga tcaaaagctg tgacctgtct gaaatcagaa 840 900 ctcacacgac tcaagggggg aactgattct gagaggccac tagggtcgac ggatctgtct agcgccctac ttggctgtat cctgctcgga atgactgatg taagttgcct caacgtatga 960 tacgcgaaga acaacgaatt cacctagcct tcctaggcgt ggcataaccc gttaatctag 1020 gaataacgca cctacatagt gcaagggcac tattcaaacg atggatatca acaaatgaca 1080 caaatggtgg cgccgtgacg gcatcgcctc agcgagactt cctgatcggg atcatgaata 1140 ttgggagtct ttggcttcat tctttaccaa ccagtccctg gacgtgatag cctatctaaa 1200 tgccttctgc gagaaggaca ttagcaccgg gacccaaata catcccagcc cctgggcagg 1260 tgtctgtaca cctctatttg tatacctcgc gaaagcagga actctggccc gtcagcggtc 1320 cttggcgaag aatctttcaa acctaacggc cggaccgtca gctactagta tccagacgca 1380 gctcatcgct gatcccacag gacaagcccg gcagactgaa actgcactcc tagaatatga 1440 gattccggcc gaggaccgca tcggagagac agccgaccac ctaagcccca tcagccacct 1500 tcagaaaatg gctcagatct accgtctcgc gactctgctg gagatatata ggaatttccc 1560 ctcgctcctg cggacggaga gtaataccac cccggaatcg acaaccagag acaagaacgt 1620 qaacqqccct ggaaaactcc agcggcaagg ataagctcct caccatggca acagcatctt 1680

<210> 2610 <211> 1507

<212> DNA

<213> Aspergillus nidulans

<400> 2610

ctctcactct ttgagctctg gtccccatct gccgctgacg aaggggtggc cgtcagtccc 60 catcccgctg tccctacgac agcattcgtt gcgcatccgt ccagacgagg tcgataattt 120 tcgctgctcc atcgaccgtt ttacttagcc cctgccactt agcatatagc gctaagctgt 180 gcccgccaga ataatcagct tccggatttt cgaatccttg cgcgccaaca gtgtatgccg 240 tcataagagc ttggttatag aagtctacac cggggagatt ctgccgctg cccaagggaa 300 cagagttgag tccgcgcagt agcggtact ccggggtcat gtagcctggg aggtgtatac 360

tcgcagcaga gatggtcgtg atattgtagt gggtgagtgc agttacgttt gggttagggc 420 taaggagccc ccacatcggc ggagctgtgt cgatatcgtg ctctggtagg tcctcgacgc 480 cccaggtagg cagggaggcc ggggttttat actccttggg cttgaatgag ctcactttta 540 gtgcgtcgaa ccccgttccg ttatattgga actcgactgt cttgacaagt gcttttattg 600 ctgtggcgca ggagtacagc gggatggtcc acggcgtgcc aggatccagg atcctattat 660 cgcctccatc ggttcgcgtg gcagcgccga gtacgagacc gcaggcaacc agcgtactgt 720 tgacgttgga cgggcttgaa tttgttgtgc cgccgcatat tgttgctcct gacagtcagc 780 atcaagcaat tatacgtacc taacaaggtg acttacatgc ggttctgaaa tccagagctg 840 taacgttatg cggattgaat gtcctgttct gtgttgcagt gaaattgagg tacgccccat 900 aattaagatt ggtttggatt gctgaaaagg tgatactgaa gttgttgttc ttcccatccc 960 ctagatcgat tcgctggccg tggactgagt ccacccgggt ttgagtctgc gagtcaccat 1020 cggtgatatt caagaatacc atcgtatagt ggttattcag ccaagcagcc ctgtatgccc 1080 ggtctttcag atcgagttca ccctgttcaa tggcagttgc agtgctcccg gggggcgctg 1140 teegtgatag ateegcaaag ceaceategt eeacgagega aaagttetee agaaacegte 1200 cgttaaagtt cgacggtggt gttatcgcat gaatactcag gttcaatggc acacattccg 1260 tctctggctc gatgaagaga atatcctccg tccaggatgc gccgtacttt agggttgctt 1320 ttggcgcagt gtggtttcga aacccaatcc ctccatcctg gagatccgta atcaagccct 1380 ctaccaactt gattttgtcc tcgaggatct gcacagacat agtccggtag tcgggctttg 1440 tgtaccagcc caattcgcta ttttggtctg tcgagttcct gtacattcgg tactgcatgt 1500 1507 cgaatat

<210> 2611 <211> 1084 <212> DNA

<213> Aspergillus nidulans

<400> 2611

caactatttt caaaaccctg aatatttcat gttctacacc cttttcaaca cttccctcgc 60
cgaagaccgc gcatacggcg tgcactccgg tacaaatgca aactttgcct gcgacacccg 120
taacgcaaca atggacctgc aggctgacta aagcgggaaa gggttcggcg aaccgcagaa 180

ccctcatgcg ctgggacaag cgtcataaga agtatgttag tcgccaaaac gacgaggacg 300 qatccaaqgg caccaaactc gtccgtggtg agagcggcgc caagatcgcg gctactttac 360 gcagcggccg gtttgatgcg tggaagaagg ggaagagat gggcaggtta ccgagagtcg gcgaggcgga aacgcctggt ctggctgcgg accttggtgg ctctggtggt tcttttggtg 420 ggaagagatt caggcacaag agcgagaagg cgcccaaggc tgcagacccg ttgagagggg 480 attatgaaaa gatgaagaag aaggctgagg ctgcgaggga gagggccgct agcaaggttg 540 ggggcgtgac gagtggagga aagagcgaga ttaggaatac ggacgatatc cgcaaggcga 600 ggaaattgaa gcagaagagg agagagaaga atgctcggcc gtcgaggaag aagtagacga 660 tgaccccttc cggctgtatc ctgtacatag ttatcatgtc aatgtcaaaa gcactggaat 780 acceteagta tgagaaegea geaaatetet egteataata gtettategg teeatggeeg 840 tctgtatact ggcaagggtc taaggctata tcatagcccc taccctagta cacctctctc 900 tatccacct cttctgcatg tttaccagac acaacaacac aacctcaacc tgaccccaat tgcacaatat ggttgcctca acttgcctat cttgaatcca ctaacgtaga caatggcgga 960 gcgaatatag gtattgaaga gggcatccgg aactacccag gctgtctcag acgacaaaac 1020 ggagatgcat ttcacagcaa agcaggtgta agactgtcac tcttgtctct tccacggtct 1080 1084 attt

<210> 2612

<211> 1040

<212> DNA

<213> Aspergillus nidulans

<400> 2612

ttctaccaca agetgtaagg ggtggcgtta gtgtttcaac tgctataacc aatcttccag 60
aagtacgtag ttgtatccat ataggcggta gccagcgtcc ttgcctagcc agaagcatat 120
ctagaaacag tccttagcat cgcccaaaat accagaatcc aaacggcgcc gtccacacaa 180
tacctatggt aacgaaagcc aacacactag ttccccactg atatcccaaa gactggtaca 240
tatacggcgc aaagagcggg aacgcaaaac ctgccagact gcgcagaatt gcacatgctg 300
ccattgcgct cgcagcgtag gtctgatagc tatcgacaat gtacgtctgc atcccctaca 360
ggcaagagat agtccccgca gcgaagatcg cagcgccgat atcaggcata atccaatacc 420

tggtccctat gctccagccg taccagaaga ggccgatggt actgatgatg gagccaattg 480 ctagagccgg catgcggaac tcgggcttgc cgatattgtt gttgcgcgct ttgaggactc 540 tgtagatgcg gtcgataaac ttgaggttga ggaagaggcc ggtgaaggag ccgagtgcga 600 tggatacata attgacgctg ctgatactgc gggtttcgtc gtagacctca gtccagatat 660 720 ccgggaatgt tgcgagcatg aggtacgtta ctccgaaaat gtaggccata tagacggcaa tgcaggtgac gatgggctgg gttatggata gcagaaccgg acgctcgaag gcgtgaagga 780 840 gcttatgagt gagtgcctca gccctctctt cgacgtgaaa attctcgttg ccagtttctt 900 tgacgagaca atcccgacgc attcgtagta gggttgccgg gtgacactcg cgcaaccaga caaacccggc caactgaatg ccaacggctg cggcagagct tgcccagaaa acccagcgcc 960 atgttgtata ctcagcgata aagcctcagc aataggtccg acgacaggcc caaggagcgg 1020 1040 tccaagagtg taaacgccca

<210>	2613	
<211>	2190	
<212>	DNA	
.012.	Agrargi 1 lug	,

<213> Aspergillus nidulans

<400> 2613

atgaccggta cccctggcca tatgtacagg ctaagcatat gctggaacgc ttgctcctgc 60 gccaatccag ctctatctcc attctcatta tccggcccgc agcaatcgga ccagccattg cggagccttt ccccttgtac ggccccgaca aggcgatccc aatgcactcg ctcatcctct 180 240 gtttcagtgt gtccgatcta ggccgcgtag caaatatcaa tcgtccattc gaagaagtcc 300 ctgtcgacct cgtcgctaac tgctgcctcc tccaccttgc ttctgggacc acgggagttg tgcactgcgc gtctgagcta tacgtccgcc agaccgctgt agagctgatg gccaccgcga 360 420 ggcagtgcat tactccgctg gagatagcag agctcttccg cacgccgcga gcttcgactg caatattgtg gcaaaataag tatcgcttgg acaatattga cgatgtaccc gttttcgagg 480 tcgattgcag ccgatcagag tggcagaagc aggttactgg gcctctcgcc ttgcgccccg 540 tggaccatga tecacaggeg cacetgeage gaeggateag aeggatgtat egggetttge 600 tgggccggaa ccggagtgat aatcgttatc catagtgtgg ctattcttgg ttcaagtgcc 660 ggcagtacag tgcattttcg tttcccattc tatggaacag acaatgatgc ccgagtatca 720 ctttttcaat gttgctgtca agcaaaggct ctcgcggggc tgcagtcagg catcgcatcc ttgatctgat ctattactac tgggatagtg agataggaaa ggtagcagaa gcacgcatag 900 acgatctagt agccggccgt cgataaacag gcatatcaca gtagtcgatc agacatgcgc agctcgcggt gcttctccat tgctaagaac ctatgctctt gtcctccacg ttttactctg 960 catctcctcg tcatctacag cagatccggt gttcaggatg ctgaccgtta aatctatacc 1020 ctcttacact gtatagcgcc agcttcccct gccaattctt gaagtcacgt gacatatatg 1080 cgcctttttc gcgttatcca ctgcttggat tgagcttact taaaaacacc gcaccgactc 1140 tcgagactcg caagatcttc caaaatgcga aaacattgac caaaaaaaat gctattcttt 1200 tcgcgattga cagcaagtct cccttgtcaa ccccggctgc ggatgcgctt tcaccgccgt 1260 ataagccgtc taggtggcga ttctggcgcc tttccgagcg tctacgctgc agatcgcagt 1320 tgtcacactg ggggacagaa aacgaactcg tcttcaaaat cagcatgcaa ggcacagagc 1380 cagactgacc aaaatcaaaa gtctgataca agtgcactgc tgacccggcg cttctggacc 1440 tgccgctcga cgtggcgccg agcaggaatc aacacactcc gttgcctggt aggctgcact 1500 gtgggcgact ttgccgcact atggacgctc cagacatatt gccctgagct gggaatgggg 1560 actataatgg ctgcttcgag tgcgtacctt ccctcgtctc ctgcctaact taggcggctc 1620 agatagtccg ggctgactag atcgcctcca gtggcatccg gtatcacaac gtccatcatt 1680 ctgqagacgg tccttctccg tcacggacca gataggcttc catggtctgc agcggtgcgc 1740 actgcaatgg gaatgagtct agtctcaatg gcggccatgg aagctgcgga gaatctggtc 1800 gactaccatc ttacaggggg tgttatcaat ctcaacgacc cggcgttctg gattgctgcg 1860 ggggtttcaa ttggtgctgg gtttttggcg ccgctgccat ataactattg gaggttgagg 1920 gcgctgggta ggagttgcca ttgaccctga atagacttgc atttccgtaa ctgtacataa 1980 ctatagttat tacactaatt catttcagct ctatacaggc ggattccact ggtccagcag 2040 tcgagaaccc ttccgagtag gctacccagc taaactgact acctaacaat ttggacctta 2100 cgctcggatt cttcttaaca catttcttca gttcgcccga atccattaac taatcatata 2160 2190 ctgggcctga actcctgaca aacttttgtg

<210> 2614

<211> 2099

<212> DNA

<213> Aspergillus nidulans

<400> 2614

ctacactgat taaacgcgtc ttagtctctg tgcgaaacga aattgtctct attttcatta 60 cagcacatct tatatttgta tgcctacatg atctagcgcg tcagatcccg cgcgtgttca 120 180 tgaacttcat cgccaattaa gaaacggccc gaaggctggt aacctccaac gacggacgcg ggattcggcg acgcctcagt gacgctcttg ttttctttct tcgaggcgct tttgttcacc 240 caattggccc agacaaagca atcggggtgg tggcggctgc cttgtctgaa ccgaagtgcg 300 cctctttcat cgacacccca ttgcttcaac tcgagccgcg gtgttacttg ggcataatta 360 tacgattact cccaactcga atcccttgcg cgatcttatt tcttctcttg tttagagttc 420 acactatact aactgcctaa cctcgatacc ttatttacct gcttcgatag cagttgatga 480 tcattttaac tgtatgtggt tgttctgctg tgactggaat gcgctgactg tagaagatat 540 600 tttaattact tgacaagaag ccatgccgcc caagaaagct gccaccaagc gcacgcgggc tgcgaattcg gcttctcccg ttcctgcctc gcgccggtct gcgaggatga gtccaggtct tggaggttcg aacttgccca acatcccgac gaagacgtcg tttgcgtacg gctcgtctca 780 gaccccaatt ctcccgcaca tgctagccgc gaggcctcag atgaatttgg cggaaatggc tgactctatc gaagaagccg tccaaaccgc caaagaacgc gagaatagcg actcacccca caatatgcca gctttgagca caagcggcac aagcggcaca agcacgcgca agtcagctga aacctcgccg cgaaggactc gacgacaacc tacgcctgat caggtgcagc tgctcacctc gctgcacgaa gcttcgtcgg cgacaccgtc gactcccact cgacattcct tctcttcagg 1020 atcgagtgtt agggaggtcg ctgagaagca actctaccct tcttacatgg accaattgcc 1080 ggatcaagcg gaggttccgg ccgacgcaga tctgcaggga ctgggcttgg acaacatgtc 1140 ggttatctcc tacaatgtcg agagggatgt tcacgacgat gacctcaagc gaacacgttc 1200 aaatatcact gccccacctc ggcgagtctc cgggctcgac ctcaagcaca gcactatcct 1260 tgaggaagac gagteetata tacegteeec gteagtggat teetitteeg eteeagetaa 1320 gactatcatc teggateacg atecaaggae eccattaagt ecaeacteeg atgaeteaac 1380 ttcacaatgg gagaagccca aagacggttg gattccatgg cttcttcgag cccttattgc 1440 gacgttggtg atttttggca tttattcctt gctaggcagt gcttcatcct ttgacgcaaa 1500 acctatccgc ttcaacaaca gcgatctaaa tgcgctctcc agccaggtag taaacctagg 1560 cgcgcaagtc tcttcgctgt caagggacat gagatccgtc cgggcagaag tcagcaatat 1620 ccctgcgcca acaaccatat tacaataccc gagcaaacac ggccaggaaa tcattaagac 1680 aaactttctc accaggggca atggtggat tgtagatcca tttttgacga gcccttcagc 1740 atcacgtaaa gtcacgtgga ctcaaagact ctattctgg ctgtccggcg acaagcatat 1800 gcgcccgcaa ccgccacttg ccgccatgac cccgtggagc gatttcggag actgctggtg 1860 cagtgccccg aagaaaggag taactcagct cgcagtcctg ctgggccagc gcattgtccc 1920 ggaggatatc gtggtcgagc atctaccaaa ggaggcgacg atccggcccc aagtggcccc 1980 ccaggagatg gagctgtggg caaggtacc gaaggacatc gccggacaag atcctcggc 2099

<210> 2615 <211> 1238

<212> DNA

<213> Aspergillus nidulans

<400> 2615

gtctgttaac gaggaaatac agttgatgga gagctacctt gaagtgaatg agtttagtaa 60 ggtgagcttt gagggtgatc tccttatttg ctttccggcc tgcttttgtc atgtctgtca 120 cagccctacg agctgtgatt atgagccaac atagattacg gagcttcatc gtgtgcatcg 180 240 gtgcccaggg tgagtgtcat gtgattggcc attcatcgtg tacaccgggt acgcgatgaa tcgacttctg ccatttctga ctgcttactg tatcagatta ggctttgttt tgcaaagatg 300 toccacacto aaggtottog tatacataat totottotto atgottgaga ttotgaatat 360 gagcgccaga tggctgttta aatgttctga ttggcttgcc gtcttaatgt ccaactctaa 420 480 accetaatte ceatgeteta ceatatagtg tattagaeat etgatetgtg cactecetag catgattaaa acagactcta taatttatcg tattatatag tgttgtagat acgctgaaag 540 gggaaaaggc aggaggaaac tgcatcaact acacgaacat agcctactaa gagcctacta 600 agatcgggcg ccatatgacg attgacggtt aatctcgttg acaatagatc tctttttgat 660 ctctcgatac ggtacaagag gcgccagatc cgctggggat ggagatcgcg accaagccac 720 gatatcacgt ggcgtaagcc gccagccgtc tcgagctgag accccgctga gggctgagac 780 tacacctggt gtacaggatg agcatcacat gacatttcca tactgcgaaa taccgaggtg 840 gttcagtagg gccgaattcg gtcatgtgac cagtgtctgc aacggaatca ttgaattgtg 900 gtcttatatc ataactacag tctgatagag atttagagct attatgaggt tttttatgac 960 ggcaaaaagag atgttgatcc tctatgaccg acgggtgaat ggaagattaa aatcgaatgc 1020 gtagtaacaa caataataaa tctgattata tcactggtaa tgtttactga ttgagaggcg 1080 gtacgttatg tttgattagt aagaagtctc ctcggttgac ctgtaaccac accactgacc 1140 acaccaatat ggtggcgcca cccgcggcca aggaggctta tattcgccca gtggatccct 1200 atagtgagtc gtattatgcg gccgcgaata ctcatgtt

<210> 2616 <211> 1944 <212> DNA

<213> Aspergillus nidulans

<400> 2616

60 ctgcaatcca gctgcactac tcactaatgc atgaatatct ctttctgctg atttaaactg 120 180 ttctctctgt getegetcta egteaettca etcttcattt etgttctttg aegeggtece atacgatact tecegagagg egtegacatt tegegetete cettegttte tetatactgt 240 attgactate etettactge ttetettttt tttttetteg ategeetttg ceaettggee 300 caattggtct tgggccttta ccttttcata catttttttt ttttttttt ctttcacttt 360 ttttcttcca ctcgggacca cggatctcct gcagcccgcg gcctctctat tattcagctg 420 atttatcgac cggatcgcgg ggggaactat gtctgccgcc gtggcttcgg cagtctcaac 480 aacqctccca tctaatccta ccqcqcattc ttcaccaatq qatqcqaaaa aqaacaqtqt 540 caagatggat aacggtgagt tctcttgatt ctggtacaaa acattctgga tctatggttg 600 tgtgccaccc atcccggcct ccgatgttat ctttcccatc gtgtcgggat gacctcatac 660 720 aatccttatt gtctacctgg atgacgtcgc acaactactc ccccctgcct tatcctcctg cgcattgtcg cgaacttgcc gtttcatctc gtttcgtatc tgctctggct taattgtact 780 gacttgatga tcttccagag gcctcatcgg agaccaaaga gcagaagacg gatggcgagc 840 cccagacttc attagcacct ccttcacggc ctaacccatc ggctgccacc gatacccccg 900

attacttcaa ctcagttcac aaccetttcg ctttggagee gaateetttt gageaategt 960 teggeggggg tteeggtgag acceegggga agtegattet teeeeetgte gettegatea 1020 catcacctgc tttaccaggc actagctccg ccggcggcgc atacaactgg tctaattcct 1080 tgcgctcggg tcccctgagt cctgctatgc ttgcggggcc tgccgggggg agtgactact 1140 tcgacagtat cggaaggggc tttccgacgc cgaatgagtc ctcactccgc actggtttga 1200 cgccaggtgg cggaggctcc atgttcccag caccaagtcc caactcccaa gctttgttga 1260 accagetgea gaacggagge geaacteegt etactattga gtteeatege acagetetga 1320 cacagaacat tacaacaact atggatataa aacccgcaca gcccgccaca gtcgactttg 1440 ggccgcatga tgcagcagac gctgctaatg gactgttcat gttggccaaa ggtggacaat 1500 cgacggcaaa ccagtttgct gctgtttcga accagacggc aattccaccg caaacacttc 1560 agactagcga aattctacaa gaccagaatg ccgcccgacg cccatcggtt aatgtaaaag 1620 ggtgtagcaa atacgagaga gccaagtggc gaacgggtca gaacaaagtg aacaggccaa 1680 acctgcccga ggcagggggc agagaaacaa cgttacaaag ctttcagtca ggaaataggc 1740 gcaagacggt gattccttag ggggtccacc aggaggccaa gctaacaacg ggcaacaaac 1800 acaaattett aagggggaaa tagagggaga geeeceeece eecaaaaaaa gaggegeeec 1860 caaaatactt tgaaaaaaaa aaaaaaattt tctcaaaaaa gagggaaaaa ttcttccctt 1920 1944 ttttttttc ctaccacaag gggg

<210> 2617 <211> 1412

<212> DNA

<213> Aspergillus nidulans

<400> 2617

taacacccga aattttttg ttaagaacct acatttaatt ccagaaaatt tgaagggcct 60
ttttcgggaa ttaaacgtaa aaatatata tgtccctgag gcccattgtt tcaaaaaggg 120
ccaaacaagc tgcttcaaaa ggcaaaccgc aagtttcagc actaaaaaaa cccgcgaaac 180
agccaggcga ccgtaaatga ccgtacgctg ccaccgaccg ttgcgtccct tcggaccctc 240
caggccggcc tgtccatttc ccgcaccggc ttagaataac ccagatccac cgccgcttaa 300

gggtccctga agaagaaagc accccgctac cattggagac cgggatcttt atcctcccgg gttggcaccg cacgatccta tacgaggagg gattggccct ggtttgactg gtgaaggcgg 420 tggcatgcat ccaactttcg atgatcctct ttttgaagga tctcaaggag gcggctacga 480 ccctcgggca ccgcctggtg caaggtacga tcctgtaggc cctggacaag gacctccgtt 600 tggccaaggt tttggtcgag gccggggtgg ccctggcgga ccaggatctg gggggtttgg tggatttggt ggagggttcg gcggtgacat catctaaatt tgaagtacga cacgacaccg 660 aagtgggtga tctaaatggc ctgtaatgtt agaaacgaag taatgcgata gctacgagta 720 tcataaacaa aaagtattaa tcggtattct ggcaatattc tcgtttcttt ttgtgcgtat 780 taggtgcgta ttggtagctc cccaccatac ggtgagttag ttctccgggt gtggctttgc 840 900 tgtggcgcac gggcggccaa acctcgtcga ctctggttgc cagcaaacct getccctttc ttgttctcga caactcccat cgccatccca tcgctcagcg acacgaatta tttccccaat 960 agacttetet etegeettaa titetatiit eagiteeatt eeceettige tgteeegeea 1020 acgacgtaag cgactgcgcc tcacgagacc cttcgcctag ctctcccacc cctcctcggc 1080 agccgtttcc ctggttatta tccgcctttg agctgcttca cctcccaacg acaatggata 1140 acaatatgga gatcgatgcg gcgcgttcgc cagagccaca ccacctttcc ccgacaaccg 1200 accetgggte gatececacg etegatgget ggategagag tittgatgaeg tgcaaacaac 1260 tcgcagagga ggatgtgcgg aggttgtgtg atcgggtgtg ttcctttggt ggaatggtga 1320 agatactgtt tectaaetee tgaetateag gegegagagg tettgeagga ggagteaaac 1380 gtccaacctg tggtatgtgc tgtgtttttg at 1412

<210> 2618 <211> 2937

<212> DNA

<213> Aspergillus nidulans

<400> 2618

tegtateege gaaattetea tggteeceta caagatgtte ettataceag gggteateet 60
tgattteett gtagteeteg aagttgegaa ataceaettg getaaageag tegtagtegg 120
caatattege catttgeggg teeatgatet egtacateag ttegegegtt teggtggggt 180
tgtggatett gettetgtea ggacatttet gacagagtae ggtatatgte tteaaggaaa 240

gatatggttg cggtggtgga tgcacgtacg acagtccatc tcaaaatacc atacttgatc atcagatcct ttgtcaacgg tgcagagtgc tcaatcatgt gtttgcggta agcttcctca 360 ctcatgcctt gtttgcggta cgcgaggata gtgaggcaga ggagacgatc ctcggaggtg 420 gtggagtttg ttgctggggg attgggagtg gacattttct ttgaattgat gcgggtgaat 480 tctgagctgg tcgatgtggt tgatgagtga ggatgggcga gtggaggctc cctatataat 540 gcaaaatgac ccgagacgag atccggacag cggcgggaaa ttaagcacag atcgggtcat 600 taagctgtta tctacgacga tagatcacat cgaggcttac ttcgtcgcgt caaggatagt 660 gaaatatgca tagaccagtg ttttcatctg tacctatata ccataactct aacaaccgaa 720 780 agcaacagcg cagccctttc actaccggtt aacatactgc ctaattatag tactctaata gccagcttcg cagatcgccg atggtaggat actccaggaa caaactacca gtcaccgtga 840 ccccagctc ctcccgaaac ttctctgcta tcaccaggct catcaagctg tcaaccccga 900 ggttggcaaa cgaggcatcg tccgtgagat ccgaaagctc cagcgcagct tctttggcaa 960 taagcacaag agctttggct gctacgctgt cgctctcacc agcggcggct ggtgcagctg 1020 caggtgtagg gccaggagca ggggccggag caggggctgg agtaactgac gccggtgctg 1080 caggagactg ggcaactggt gcagctgcag tagccggggt agcgactgga acaggctcgg 1140 gtttggttct gggggctggc gtactcgaag cggcggcatg cgaaatggct cctgcctctt 1200 ccggtgccgt gaagaaccta ttaagcagga tgcgtggata ccgccggaac tggattccac 1260 cacacatece aatgategee eegtettgea taatgtatae ategeegagg taaacagtag 1320 gatcctcttc ggtctgaatc atcttgacgt atgaccggta tttggcacct gctacaagcg 1380 gtttggcgaa tcgcagagac ttccatcccg gagtcacgca gtagttggcc ttggtatcaa 1440 tagcgtcgga cacattcatc acgaacccag cgagatgcgc gacgctgtcg ataaagtaag 1500 gcggaatagt ccaggtgcca ctcttctccg tggacagcgt gatatcggcg aatgcttcca 1560 gctcatgcag aaccacagac tgcataccgc ggtacttctg cgcgtagtcc acgaggttgt 1620 tggcaaagag caggtaagcc atattgcggg taaagcggtt ggcaatgcca tcttccgcaa 1680 gtcgctccaa agcctcaatc ctaccctgaa ccagatgcgt gcttggtatc caagacttga 1740 gccacagagc cgcatcgtcg tataatatcg aggcacttgc aaaaggctca tccgctgtgt 1800 tgtcattgag gacgttctgc cagatgagct cagcaacccc cgaattgata tctgtggttg 1860

aaatggtgac teggatatac tgeggetttt tggtgttttt etgegeaaca agteeetea 1920 acactacaag attggccatg ttcatatcag gegeettgec acetttgace aggttettgt 1980 acagataccc tcccagagta aaaccaatgt cgccgtgtat agactataaa atgtcagatt 2040 ataatggggg cgctgagtgg aatacttacc gaagttacca caccgcatcc gttcatctta 2100 tqtccatqtg caqcatccaa aaaatctggc tgcatcatat cggactgcat caccacttta 2160 cccqccqaqc cqttqaaqct ctcctcqata atctqctqaa cagtqqacqt cctcaqcccg 2220 gatggtacgg aggccaattg ccctgtttgc tgtgccttga gtgacttttc ggcatcgtaa 2280 aaqqtqttcc cttttqtcaa tgcccagtcg ccgttqtact ggatccagta cgtcttqtcg 2340 ttccaggcgt atgtaggaag gtctaacagc ctcagccctt tttcgaacgg gcgttggtat 2400 tegttecatt egattggeac accageacag tgeaaggeag taagaetatt acataaagte 2460 accoagtigt cotcacctot ottoattgag gegacegtot cattgacage tgggagagtg 2520 gcattcacaa agcccatgca aacgggatgc ggcccaattt ccacccaaac agtctcttca 2580 tcaaccgtcg agaaagtctg tgccatctca agtgcggata agaagtttac tgtctctcgt 2640 gtggcacqqc gcatqtattt agcggtaatg gtcttgtcat caaaaatgac tttgcccaac 2700 aggggagata tcacgggcat attaggcgca cgaaacaata ctccatcctt tgcagcttct 2760 tcaaagtcat caaggatagc ctctgtttgt gaggagtgaa atgcaaatgc gacgtcaagg 2820 ctggtgcatc aatagcctac tgagtggaag attgcagaca caacctcaaa ctgagcctgc 2880 gatecegtga ggaeggttte ttttageceg ttgatgeatg caaetteata gategge 2937

<210> 2619 <211> 3324

<212> DNA

<213> Aspergillus nidulans

<400> 2619

taggtgtcgg gtcaagttcc acattgactt ttctggacga cttgtaatca cgatattcct 60 ctgcaattcc aaaattggtt cggagtgacc agctaggaag cctaggtgat tgtccaggcc 120 gtagccctgg tatgtgcagc aaatccaagg ggtagtctct caggttgacg cgagcctcac 180 ccatgtccag ttgaatgctc atcggaatca gtaacgcata cttcgtagac atcggcatgc 240 ctttgccaat attatggagg aaaagagggt agttttccga aggaaatgtg ggtttatcga 300

tggtcagatt tatgtcgcta attagagctg ccatgagagc aggtctattt ggaatagcca gcactgtctc ggtttcttgc acatcttctg gaggatcgtc agcaccctca aaaagatttc 420 gaacctctct gattgtagag ttttgaaact gtagagccgc atcgatcttg gctttccagc 480 tgcgcgcatt atagtgctgg agccaatacc aagcactttc cgacgatacc ttcgcttcgt 540 tggaaaaaga cgacgctcct tcggtatcgt agcggaatct atgtgcacgc ccgcgctttt 600 cetetttete etetgeteta tegttteteg getttggate egegetettg eteetgegag 660 agtetgaact gaccegeteg etgegeagtg tteggtgget ggategagta egeaaceteg 720 aagaageteg eetttggtea gatteettga gettetggag tttgaggtga aaegeateet 780 ctctagcgcg gcgctgacgc tgttcaataa ggccagtccg atatatgcaa ccaagcttcc 840 actcaaatgc atcgtcctcc aactcgaaaa gcagagcttt acttctgaat gagatcttag 900 ggactttctt tggcccttct gggtccctag cagatacgaa gtcgggaatt tggtgtttta agcggtgatg tagttgtttc aaagctttgg aagtgttgat cacattgtcg aaaatgcgat 1020 gcatgatcat gtggtgagga acaccgatgc gtacaaagtc cgtccaaacg tcgatcgatt 1080 tatectetae caaagaettg eeetgettea getteatttt eegeaagtee agteggaaat 1140 tattcatgct gactattcgt gcccagacgc ctctgagctt gggtgcttca gcatgtaacc 1200 gaaccagatg ggctcgaacg aacggagcgg aatgtcgatg agagccggca gtaacgccgt 1260 cttttatgtc cactgtgata agctcgcccc gctggatagc caagcgaggg gaaagtggag 1380 gcgaagtatc acccgcaaca tttggggatg acggttgctt ttgcgaggat ggtaagaacg 1440 ccttctgaag tactgacaaa gcaacgctga gacaatagta tcggtacagg gaatattgga 1500 ggtaaacgcc tttgataaga gagtttacat ggaatatcgg tcccaggcga tcacttgacg 1560 tgctgagggc tatctcgaac cttgggagcg agaggaatgg ctcagactca aggtagtctt 1620 cggattcaat aacgaatccc tcaaaaccgc gagcatggaa agccaaccgt ctcccatcag 1680 cagctccagg tcgggtttgc ttaggaggag atgttggatt gaatctgaac ggcgactcgt 1740 caccaatggt ggagtgactg ggagttcgtc gacgtacaac gctcactgca gtaggctctg 1800 tettetgage teggtaatea getgteeagg attggagttg taacgaaacg eecegegtea 1860 ctttcgacac actctcatca acgccggcga tctctaagct gaacccggtg gcctcgaatt 1920 ggaatctaag tagccaagga ggaagacgcc gcagaatact cggcttccgg tcttcgcctg 1980 gcaagccgta ctttttcttg ggtcgaattt gggcacgaaa ttgctccacg acttgttgaa 2040 tcccgcgatt aacctcgcta ttgaccatat ggccagaaaa attgtttaga ctgccagaaa 2100 ccacaacgca cacctctggc gacgcgctta gaagaagctt aagctccatg ttgtcggttg 2160 tcaaqaqatt atqtttgatq ccgqacqqtq tctqqtaqta gaatttatqc gaagcaactc 2220 gataaataga ggaaagcgag tagtgggcac ctccctcaga ggaatgggag gattcaacat 2280 ccacagatat agaagatatt gatgaaataa ggaggttgta gtcgtcctcc cctgtggatg 2340 aaqaatctgg aatgggaaga acaaatcgaa ccacaggctc atgaaccgat agcttgatat 2400 ttgccttqqq aaqtaagcga gatattagtt gacctctggc tctcttcttg cctcgggaag 2460 tggatgcctt cgtctgagct agacctaaga gtcgcgagac atgcctaggc tccaagtcga 2520 qaqcqqqaqa qqtqaccacc aagttqqcga aqaqaatqtt gqtatttcgt tcctccgcgt 2580 tgaacccatc atatgaactg agtgttttgg acggcaaagt tgttttaata gtcgtagttg 2640 ccatgggtat atacaggata ttatccgttt ctcctgagct gtcatccagg cttacggata 2700 gagagatagc ggcgagaagt gcttgatgag caacgtcagt acgttggaag tacatccgat 2760 gtgctggact cgtctggtcc atccggtgga gatcgatgcc gatctcatgc gaaacaacat 2820 tcaggtaaac agagctttgt ccaggcgacg gtgactggac agatcgagat agtctgaaga 2880 agettagtge cacctgaate teetggatte egegeagaag tgaaccagea aacteetteg 2940 aggeagteae ggtetegaea attgteteat etgtgetgee gggettettg agetetteea 3000 cgtagtcggc aaaggtgact tcctcgtcgg gtttggtaac gtctacctgc actaggggtt 3060 ttctqqattq cttqattcqc tqcaccagaa qcqtcaaqtc atcataaqqt atatqcatcc 3120 tecegatttt gaaagegace gaegeateee geaageeate aagteettta tgeaggatee 3180 catggatgtt cacgccaaca ttatctagca cctcgatcgg ctcgttgcca tcgacagcca 3240 cctggacatt gtgcacattc aagatccact cggcagggcg ttgttcacca gattagacca 3300 ttttctggcg aaaagccttt tgga 3324

<210> 2620 <211> 2519 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations <400> 2620

60 acqtctqtct ttqtqqttcq qcccqgctgg aaggaggcgt tgtgtaaacg ttgggtttcc 120 ttqacaaaqt tqttqaggta aggaaggctg tgtgctaagt caggggtcca ggttgtcttg ttqqqctcqc cactqqqqcc qacaatqccq tactctacaa gttcgctgta gaggcgatct 180 tgggtgcctt cgtacqtgac qaqacaqtag atcagccacg ataagagggc cgatgtcgtt 240 300 gtqaatccqg cacccgtgac aattaacatg ttggccagga tcaggccagt tgggaagtgc 360 tegeetttet egteaacege atgaagaagg taatecaega egeaggatge geteagegeg qcatcactca tqqqtqcatc tttqctqqca gaccqggccq caacctcgtc aatagcctcc 420 tqtaqtaqqq tatatatggt qtgctgqaca gaccgcagac gcgctgggtc gccaaacggg 480 540 agaagtcgat accactctcc gcgtgctgtg attttcttat tcagtgagag caaggacgca 600 atgttcqtaa caatcqqatq caaaqqqqaa tctattgatg cgaaatgccc aaaatctttg cccagcgaga acgacccgat cgtctgcgaa gcgagcttca ccatgtactg gtaaacattc 660 careteteat egeggeate aageteateg aataetggga gtgeettgeg egegeaatte 720 tgcattagtc ccgtgtagtg tctcacggct atcggaccca tggcaggggg aagatacttg 780 tgcgcaagac gccagttctc cgtctccgta tcgccgatga aaatggccgt gttgtccttg 840 acgcencaga gegggtggte tteggtaate ttettggtea tgtagattga eteggegaag 900 caqctcgccq ccacttgggg actgtcggtc aagtagattg ttttccccat gttggttgtc ttgatgacgg gcccatattt gcggaagagt cggtagtggt tgcctagatg gtcggggaag 1020 atctcgtaga agctgccgac gagggggaga ccaggcggcc cctgagggga ttgcacgggc 1080 ttcccatcta cgaggatgcc gatggctgag gaggagtttg ctaaagtgag gacttcgtct 1140 acceptigaca gggttcctga ggaggtgttg aaagagagtc ctactctgtc agcttcgagg 1200 ccgaggatca gtagacctaa tgacataccc aacggttgcg caacgtgaaa cactaagccg 1260 acagcacgct gtagatcctc gaacttccac cgggtgtcga cagtgacgga ttgtgctgac 1320 gaaggttcat ctccaatgag gtagaactgg cactgcacag tagggggtct cattatgata 1380 actegttggt gactacattg getegtattt gegetgteca etteattttt atatetteta 1440 aatcaactcc gacccgtatc cgagcaaacc ctgagctcat agtgtgctcc tccgggatgc 1500

eggeattgee agtgtggtga atcegaatea egtaegaagt teggeegage teteegtaag 1560 ccqqaaatcq qcataccqqa ttatattcqa qaaaacqqac aqagqaaaag attcgttaga 1620 acqcttattt aaaqqcaaaq aqtaatcqat ttactqtcta qtcqctatac ttcaaaagaa 1680 actggcatca tgccttccta cacgcttgaa caggtcaagg cccactgcac accggatgat 1740 atctggataa teetgeacaa caagggtaca tattgeteee atagtegagg atttattete 1800 taaccatqta caqtetacqa qqtqaccaaq tateteqaaq accaeeetqq tqqaaqeqee 1860 gtccttattg aagttgccgg ggctgatgcc acggaagctt ttgaggagat cggccactct 1920 gatgaggcgc gcgacagctc gagccgtatt atattggtga tttgccagat caggtaatgc 1980 eggetettga tegttgaetg etceaceaag eeetgaeggt gtacaggaac aageegagte 2040 cqtcqaqatc tatcqaccqa ccttcqaqca agtctcacag tctgccqtca tcaacaccaa 2100 gaagacgage aagteettet egtegettet tagtgtgeta gteaageteg geettacagg 2160 tgcagtaggt getgeeacaa ttgcggtett teagaaaaae tggaegeeee gteagetatt 2220 qcatqctctc cctqcqctqa ccactccaat cccqctccct cggatatcag gcagcggggg 2280 atcccagttc tggtctggtg ttgggattgc caccatcacg cagctgtctc tatcctttgg 2340 tetgggegte tgggtgtega ceaagetega egtgeageaa gagtttaege aetaeceaee 2400 tegaegaeca gegteaageg caeggeteat eegeeteeet tecaetaeae gtegetggea 2460 eegegeagee eggteettga eteeggeaat ggegeagett eeeteteact ageaagaaa 2519

<210> 2621 <211> 1686 <212> DNA

<213> Aspergillus nidulans

<400> 2621

gtggtggctg tcgcggctca cgggagggc accaagtggg tcagaccaat gaatttgaac 60

ttcatccagc aacctcccca gacttcgacc tacggtagag tacaagacct tcgtacacaa 120

tggcggaaga cctggctgat gtctcgcttg aggctccgcc aactcactat cgatctattt 180

tcctttttct cggctacctg tctctaatac tgtcccttgc tttcagttgt tgtcgcacca 240

tatatgttcg atatcgcgca cgccaaacga acaatgactg ggctactagt cagcggcagg 300

cgcatttatc cttatttgtc tttctggcag ctttgagtct tggtacaaca tggttttaca 360

tgatctcact ctttgtccgt acgtacaata attgggcaac tagccccaag ggaataccct atgcaggcga agagacgcct ctggtcactc ggatgggtct ttggctatac aatacgtaca 480 tettecaaga ggeetgggag aeggtgteeg aggaegeage aegagtetgg tggagtggee 540 600 agatettttg gtggaecatt ggttggagte tttteetegg cateacaggt atgecateet 660 caaccatgaa gcaggcgact ctgaataaca tttatggtaa caggtcggag atatcgcatt 720 cctcacgtct gggtttatat gctgctggcc caggctgtca gtgtcgcctt ctcggcaaac ctcttcttcg ctgcaatcac cgtctctaca cgaccggatg agaagagcgt tgccttttca 780 tggtcccgc cattattcta tgaagtcgtg ccagttgcac tctcgcttct cgacaccctt 840 geogteecta tettigegta eeagaaagaa tieatgetag teetgetege geeteaettt 900 ctggtcttcg tcccctgttt gttgagcccg aagagctcgt cctcggagcc tactactaaa 960 gcgcagggac agcgcacaac ccagcgctac gttgccttaa tqcagtgggt ggcggctgtt 1020 teggttgtta tgeaggeeta ttteaettte etggegttge aagaaetegg caeggatetg 1080 tettaeggeg agttegegaa geagttgtgg gaeactgtgt atgteeatee agettgtage 1140 agtgtcagct gggatgccat catgagtgct gtgagtgcat tctcctgggc gtatgtgcac 1200 ggtttcgaca caagtcggat gcttggtggg gagtaagtgt tagatgggta gatgtcgtga 1260 tctcttcggc gacctaagca ggtacatata tatgtccagc aattctcatg ttaggtgttg 1320 gggcttaccc gagagagccg gaaaatccgt cttgatatgc cgacttttga gcaagcaatt 1380 tatttagcqt agcagctaag gaatgaacat gcgagaactc gccttgttca agtatcggta 1440 tagtttccgg ccagtagcta atacaatttt ccatttgacc ggctgcccct tagagttata 1500 gccatgcaga gccccttgcc aaacacctat ctaggggcta ccccggcaac tcaagtggac 1560 gcagacgcac tatttccaac gaggccatca gctcgtgaat taagggcctc taacatcaca 1620 gtcagcaaat attccagcaa aaaaagggag aaataggtca agcaagcctg agtccccggg 1680 1686 ttcggg

<210> 2622 <211> 620 <212> DNA <213> Aspergillus nidulans <400> 2622 tttccgcaag tcgctcatcc agatctcaat ccgtgcagtt ctgcttactt tttcttgaat 60 teattgegee tegteetegt etteaagetg egtgetaata tgteeaaggt ggtttegtee 120 aagacaataa ttatctctca ataacggtta cctcccaatt gcaacctccg tcccctgcag 180 240 cqtacctttc ccqatcqata ggacgcgccg tctatcgcct tctcgaaacc acatcaaacc 300 cacagetett tgteteegge gettageate eegtactage gagtataegt cetegaacet gagtettata ecaccaatgg geagttagee etaagaeeca tegecegttt etteattgae 360 420 acgcccctat actcgtcgtg catcgccgcg ttgggtagtt ttcagcctct caataagctt 480 gcqtqccaac qcccacctqa actcqaatct tqagcaqtgt ctqgtccqgg gtqggaactg 540 tcaagtggcc ccaaatgaat caatgtaaga aacgccatcc tctctagtcg ctgcctcgtc 600 aagtccccca ccctcaattc acccgaaacg tctggccgtc acctgcccct gcaagtcaag 620 cagcaaggct gatgacatgc <210> 2623 <211> 1041 <212> DNA <213> Aspergillus nidulans <400> 2623 tacatecgte ettgtttacg etteteggat gaaacaccaa gecaceteca eggaaageca 60 tggggtcgcc gctgaaaaga aagcgtctgt atctttggtc aggagccgac gacgaatacg 120 agacgagcga tatcgatttg caagaagcac gtacccagaa cgacttgcgt ctgaaqtcca 180 tetttgaggg gattttegaa aagtaeggte gggattttae agaegtegge gaegagateg 240 accttcagac agggaagatc acggtaaaca acgggcacat cgatgcactc gaggtggaag 300 qcaacqqtta tqqqqactqq ctqtcqqatq caaqqccqca qqctccqaqa catqtactaq 360 caqaaaqqac qqattatqag qqcaaqccqq cqcqccttgc ccttgacqcc gatqcgtggg 420 gtgcagaaga tactgccctg gaaggcgacc acgacctgca acatcccggc cggaggacgg 480 tccatctact atcacacatg cggccaggct ctaggagggg attgggcqaa actacqqaaa 540 600 cagattcaga tcagggtgcg gcgggtgacg gagaggatcg tgctacgtcg gaggctgaag acgacaggtc gagtgtggat tctttgttag gtaccgcact atcaatcccg gcccagaaag 660

teggtaagae caccaaggge gagaetggea eegaaaaage aatteeteee caegaeggat

720

cccaccaata ccaggccgca catactgaga gactcgatga gactgtggac cccatttggc 780 gcgttcctga gatcagtgcg aagtttacaa caccgacttt gccgagtcga cctagaccta 840 acccaaagcc tgtcattaac aatgcagtac gttcgcagtc tccacccggt gcgagctccg 900 tttgggctct atccggtaca agaaagcggg ataccgacgt agtgaagatc atacagcaaa 960 agggcagccc gaagaggcgg gtcacacacc attctagccc tgatgctgtc tgggactggt 1020 catttgctga tggtcagatg g

<210> 2624

<211> 1108

<212> DNA

<213> Aspergillus nidulans

<400> 2624

tagtttggtt tgtggtgtgt gttgatgaca tcaaccaggg aaatcctcct tgagatcttg 60 ggcggatgta gaggagctca ttggatggag tgagatcgga tgtttattcc ttggatcggt 120 ctgcggcaaa acattcgtta cgattagctg gcaatgcggg ctgagaggaa agacgatctg 180 aagagtaagt ggaagggtga agtgatgagg gtaagagtac acaatcacgt ggaccatcct 240 atacaatatt gtacccttct ctattctctg atagaactgg acaaaataca ttatgggttc 300 tcaggaagct taaactattc cttctcaata ataagcttaa tctgggaatc ctcatttgct 360 tctagccttg ttaagcatca caatttcgcc gcctccccct ccaagtcgaa ctccgtggta 420 cacagcagga aagtgtcctt caacgcctgt gacaattgaa tcaagtcagt acaccaatca aactgcgaac gctgtccgtt tccctgcaat aaatagaggg gaaaaaccca agggtaactt accccaagte tataetteet ggteacetee tgataateet eegeggeeag catateaeag 600 aaatgcctaa tagacgggta gtgcacgatc gaaatctcat tccaccagtc ctcttcgggt 660 ctgtcaacgc tccccctcga gtctgagaag ccggagtccg agtccggggc cgcagagcgc 720 780 cccgctgccg gtctaatgac attaccgact agtttggcgc ttccgccacg ttttgcagca acaggattga agccctaact tgcttatcag atgacgagtt tggaatggga tgatggattg 840 900 gaagggtcgg gctctacctg tccatatttg aagtaattct ccttcccacc ggggaaatgg aaatgcagca ggttcaacat cgtcaccggc ttgtcgtgct ctttggtgag ctcctgcatg aactcgagca gttccggact gacttcgagg ttctggcctt gtccgtcatt tccctgcttt 1020 tettteaatt tgteeagact teetgteaac ggeacteget gtgeattett eteeetette 1080 1108 agctccgcat cgcgcgtctg gataagtg <210> 2625 2350 <211> <212> DNA <213> Aspergillus nidulans 2625 <400> tcagatctct aacaagaatt gatatgcgta gatgagtatt aaaggattta aattcatact 60 atccgagaaa tacaccgtca aggcgtttca gattgcgcaa attgtgctat atataccgag 120 agegetecat teatacatge gaeatactea tateatette teateacece tacataacea 180 tacgttcaaa ccccgagaac ccagctctcg aacctggagc ccctagtctt ttcacccgtt ctccctttct ccagaatggg cgcaaactga ctaacctccc catacttcct tacaagcgcc 300 ctccaataac agctctccgc cgcaggggtt aaatacctat ctcttaacgt cttaacgcta 360 ttctccgcaa tccgttccgc cgactgtggg ttgtccagca aaaactccac cttgcgttca 420 agatcagacc agtcccgatc aacttcaaca tagtttgcat caggccccga cgagacgagc 480 gcagaatggt gcgcttccag ccaggttagt ttatgtgtta tgaaaacgct cttgcagttg 540 aggaggtatt taccccttcc agaaaaagag cggccttcgg tgtgtacgag gaaggcgtag 600 gtgcagtgat cttcaatagg cagtacttcg ttatcagatg gattcgactt cgagtttggt 660 tgaaagcgag agtcagccca gctgatctcc ttcacattcg cccagctctt cccccccaca 720 gtatcaagca aggettteet gatttetggg tttgeggaea caetaeeeeg ecaaaggage 780 tgtttctttt tatcactgaa cggcagacct tcttccttag caaatatccg gcgccggacg 840 tecttgtact egecgaeggt gteaacetee ggecaegaee aataaceaaa ategggeatt agccagatag cagcgtcttc gtcctcttgg cgtttagtgt aagcccatat cggagatgga tttgtactag ttctggtgct gaagtcgtct gtcgtcaaca caaattcgat gtcagggaga 1020 ctgtgtctgt cggggtatga cgatagtgcg cggtgcagag aatgcaaggt cgctttgccg 1080 cgggtgaagg tgtagggttg gggcccgtag tcgattatgt ataactacaa ccacatacta 1140 tcagccacat ccccttcttg aaaacagagc gaggctgtcg gataagggta agggaatacg 1200 tacctcgcca tctttgacaa gcagccctaa caagaccgtt cccgttccca tcaatccctc 1260 ctccgcgtgc aatatcatcc acgtccccat aactaatacc accattcgat gcccagaact 1320 ctgcagtccg ttccagttcc gtaaagagct ttggaaaagc taaggaacat tcgctctccg 1380 agagcccatg cttatcgccg tcgcggtgga cgttgaattc ccatcttgac tgctgagtgt 1440 catttactcc ggtttcaccg cttgtgcggg ttgttgagcc ctgatatacc tgtgtcgtcg 1500 tgcttgcagg gtctattggt gtatagggtc cgctgccacc atggccaaaa tatgacggcc 1560 gtctgaagac taggagtgta agaagtgtaa gggataacgc ggcgcctgcg ccaaggaagc 1620 ggagagttag agagtggctc tttgagccga gcattgcttg gttgaaatct gcaagtgctt 1680 gttgtacaaa tatgcgtgtt atgcgtggtt gtttgtaggt gcccaaatgg tatatgcaat 1740 gagtgcccag acttggtcgt aactgcagag ttggtttgga ttacgatatc gagcacaatt 1800 gtgcagccat ctcagctctg cagtaatgat atccctagga ttgatgagat atatcgtgag 1860 cctatggagt gatttcgcga tgctgtactc tctttcgtgg attggctttt gagagataga 1920 tggcgttacc atggcaacaa tcaatctcta catattaaag ctgacctcca actctgaacc 1980 gcaggccaga tacccgccgt tataggtaaa caggcactgt cgccgacgga caaaagtcag 2100 acttgagcga actctatggc tgggttttgt tcttggatat gtacatggga ttccattcgg 2160 agtgctatat aaggcagggc aggtgtattc ggggggtactc aaagccaatc aataggtagg 2220 taaggaaggg aacaagagtg acatcgacag gtgaggtaac gaaaagggta catagcaacc 2280 2350 gaagagtggc

<210> 2626 <211> 1409

<212> DNA

<213> Aspergillus nidulans

<400> 2626

atcagctgct agctagtatg tcaacgtata tattctcttg acattgtggt gcaggcgcaa 60 ataaaacgtg gcctgacaat gagtggaaat ctatgaccga aagtcgtcca tgctctttc 120 ctttctttc ttttctttc tgttttgttt tgtgatgggg atccctgcta gtgaatccag 180 agacagagaa gcgatgaatc gacgtggcgt gcacgaaaca gtacaggata gagcgggact 240

ttttgaagcc tcgagtttcg aggaacccca gaatgatcgg cgatacctag ctgaccgcct 300 tggaggctta gcagtccggt tagcagcttc ccacgtcatg gtgcctgcct gttctccttg ctagccgaag ttagactggc cacaaggtcg ggtacatcag ccgtgattca tacttggctt cccaatctct ttcatctttc ccatgtgatc tcggggatga tttattgcat tcattccctt 480 ctctcctctt cgtcccgaat gaaatggctt agcccacgca ttctttaggt atccttcatt 540 gattegttaa aacatgagge tattgttaaa gtaageaaat acaaetettg geetttgaet 600 ccaccaacat ggtcgcgtgg tgaatcctag atcttaggaa ctaaccgtaa cgcaggaacc 660 tgtctcgctc tcttcggaag aacagtgtcg tgcttcgcct cccgccacat aacgatttcc 720 tgccatcatg agcgaaagcg agcttcgtca gcggaagccg gcggctcgtc tgcgagacga 780 ccctcagcct agtcaagatg ctcaaccacg tctcaagcac ggaataccca tgcaggtgct gcggtctttg cttcttgcaa cttggttcaa ctgctgttgc gtcgttatcc ttatgacgca 900 gctgatcggt tgccccctgt acatcatcaa caaacactat tattacgcct ggatggcgtc cacgaaacga tcttttgggc tggtgataac ttcccttacc gagtggggct gcccgactta 1020 tgtccgggtc agcggtgacg agagtatacg cggacaagtt cgcatcgccg acgatggccg 1080 tctaaagaca acctttccag agcgccttgt catgatatcc aaccatcagg tctacaccga 1140 ctggatctat ctttggtgga ttgcttattc gaacatgatg catggccaca ttttcatcat 1200 actcaaggag tccctaaaat acatacctat cattggccag ggtatgacgt tttacggctt 1260 catcttcatg gctcgtaaat ggctgtctga caagcccagg ctccaacacc gcctagagaa 1320 gctgaagacc cagcacatag gctctgattc aggcgccccg aagtatgacc ctatgtggct 1380 1409 tttgatattt ccggaaggga caaacctct

<210> 2627

<211> 1582

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2627

taaatgttag cgctttcaat tcaggcagac taaaccactt ctaagaagta atatatcgag 60
tgctaagata aaggaatcat ggtgctacac cagccaagcc agaaaagaac tagatcgcat 120
tttcgacctc gtctagtgct gttgcgtgag ccagtatacc atcgggcctt aggatcacca 180

tcgcacccct tccaggcgag atagtatatg cagcatgggc cgattgatct tggtcaaagc agaaataccc gagtcttgga atactgaaga acctgtcgcc atgggccaca ttttgggcga 360 cgacagttat gaaccggatc atgtctctgg gaaggcgagt gacgagtgca cccagcgctt ctactactat tgctagattt gcttgggttt cggacggctg cccggcaagg attaagacgt 420 actattgacc gaaattcttg gtcagattga ataaccggac cggcaggcgc gagcctgggg 480 ggatacacca ggccgtctgg agctctccaa ccagcggatg tcataccggt agtcgagggc 540 cgattaatca tgttttcgtt gtagtgaatt ccgagcccaa ttgagaactg gatcgtctcg 600 ttgaaaagct ttgtgaagag ctcgtttgcg gccgtgtacc gtcctttata cgaatctggg 660 atctggccag atatcacagc ggagaaggct ttgtcgagct caataaggcg gtgcgcggct 780 gggcggcatt cactgtcgta ggtttctagg acaccttttg gtgtaccagc cattgatcgt accaccgage ttccaggcca gattgactgc gtcgtgcacg ccggtgttca tgccctgggc 840 ggctcccgag gagtgagtgt ggcacgcgtc gccgcccagg acgactccat tgttactgat 900 gtaggtatcg gcaacatgtt ggttgatact gtatactgtt agatcatttg atggtctagt cttttttcaa gactgacctg tacaacgtcc accattggat actctcgagg tccagggtaa 1020 gatggttcca ttgacttgac ggcttcctgt ttcgcgtcct cctcggtaag ccggttaccg 1080 tatttagcca gcatctctgt gtcatggtga attcgatgcg cttaacgcca tgatctagtt 1140 gcacccagag gacgttgccg tggtgcttgg actcaatgga agcaaagcct agatcagcat 1200 ccggcatgtt cgtcctgaac cttccatcag ttcgcaccca ccggtggtgg tacgctctcc 1260 ctcaatggga acgttggcca gacgtcgaat cagcgactga cctccatctg caccgatgat 1320 gtatttactg agagagagat tagttagtac ctccagtttt gatatacctg aggccttacc 1380 atttcaccac cagaagctga tccgtcttcg aattgcgtac gtgcgaggtc actttatact 1440 catneteact etegtggtea agegagaatg actetagett ceagecaatg tagggtteaa 1500 cacctaattt ctggtaagac tgtccaatga cctccttcga gtatttttga cgatgttgag 1560 1582 gcaattccca gtaagtcccg tc

<210> 2628

<211> 655

<212> DNA

<213> Aspergillus nidulans

<400>	2628					
caagaaatca	tctatgggca	gattcaaaac	gtacgccaga	cggttgcctc	ccaggctaac	60
caactgaagg	atctagcgga	ggagcgcacc	taccatgcta	ccggtgtggt	gaaacagtat	120
gttggagact	acagcaacaa	agcccaggaa	tatatcggcc	gtcgttccgc	ctctcccgag	180
gtcgccaaag	gccctgctgc	agggcctgta	gtcaagaggg	aacccgagcc	cgaggctgtc	240
gtcaagacgt	ctgatttccc	tgaagcacct	aaggttgagc	cggtggcgca	atcaatcgag	300
actcaatcag	agaaggagcc	tctcctggct	atttaaatga	gtctgcacga	ctcctgcggt	360
cctaatctcg	cctggtttca	cggattagac	gggttgcgac	gcaggaccaa	acccagctat	420
ctggcttcaa	cgtccaggaa	aaattgagac	ccagttttgt	gcactaaagc	agtcgtaaat	480
ctgcttcttt	gacatgaaag	ggcctcagat	ggcttggcct	gtacgatgac	gagttggtac	540
gattttgaag	tcttcttcta	gcctttttac	tttcgtcttc	ctgtcgcacg	tattagttct	600
atctacctgc	gcttgctgct	ctgtttctct	tatactcatt	atttccgcaa	tagca	655
<210>	2629					
<211>	712					
<212>	DNA					
<213>	Aspergillu	s nidulans				
<400>	2629					
ttttcctttt	tctacttgac	tgtcactatt	gacaacgcgg	ataaaagtgc	aacgagcccg	60

gagtgtgttg ccgcttttaa gggtgggaag tcgttgcaac atcgaagcca acccatacca tccgctcttc atcgccagga ataacaatta tgtttttggg gtatatatct cagtgggtga 180 240 acatgccatt gtgtatctgc ttcatgctct ctgttgcttt gtgataacag gcctcagaat cccattctgg gcaccgtgcc cagagaaaag taccccccc ttccactgcc ctcatttcct 300 gcccctcccc tcccctcccc catctcgtcc cccttccggt ctcgaccagt caacctacgc 360 420 gaccgcaatc caaactccct cagctggcgc tactgccacc accatgaaga aggcgggcag ggcaattaac tcagagccct agctgctgcc acgaaacaac gccgcttgac acttgtctat 480 tcgtatgcct cccgtctttc caattgtaga gatcgcgtac atatacggca atctggcaca 540 gacatctgtc cggctcattc gtacatttgc gcttgatttc catttggaac cgattcaccg 600 gggatgatcg aggatcgcca tacgcctacg gtgaccgatg ttctgctgaa ctgtagtcag 660

acgggccctt	agcaagttct	tgtttcggga	aacactgtac	gctgtagggt	gt	712
<210> <211> <212> <213>	2630 638 DNA Aspergillus	s nidulans				
<400>	2630					
caaccagagc	tggtcccgct	gagatgttac	ggccattcag	gctcaggccg	ctggtcagca	60
tatccagggt	atgaagatgt	gctcgtacga	cgacaccaac	tgctccatca	tcactaccgg	120
tgcgaagaag	gtccaggacg	cctacttgga	gaaggacaag	tgggtcgacg	gcattggtgg	180
taaggtccgg	ccgggtcctg	tcaggattgt	tacctacctc	gactacgacg	aataaacgca	240
attacgtgta	caactgagca	cgagcacgag	tacacctata	cgttgtatat	acctaatcta	300
gtcagacgtt	cctacctagg	tagttgggcg	tggcggtcaa	tgtatactta	atcctaattg	360
cacattcttc	gctggccact	ggcctgttga	taatttattt	tatgattctt	cattctccta	420
atatagatga	ggagagaagg	gggcagaaaa	gcacttgtga	atttctcagt	ggatcattga	480
gcatcatccc	tgctgtttag	ggagcattcg	ctaggatgtg	ccgcggaata	tatctcgagt	540
gggatattca	tgctcttggt	tctttacttc	tggtatttta	aagaatgaac	aacattcata	600
aatattagaa	ctgtggctac	cgccttctga	gctaatgg			638
<210> <211> <212> <213>	2631 2367 DNA Aspergillu	s nidulans				
<223> <400>	unsure at 2631	all n locat	ions			
gcttctgatt	tctctaacct	aggtctaggt	attgtttcta	. agattgtcac	: ctgtacggat	60
cctatataca	gcatagttat	cagaaatgta	cagatcacct	gccgcgaggt	catacagcct	120
agctgtttta	ı getteageae	tegeeeggee	gtatgccttc	: tttacatatg	aacaatcttt	180
cctagccccg	g catggaaaag	aggtggtcat	: ccgtcttaca	gacgctgaac	gactggtctt	240
gggttggacg	ggtcagacag	tccacagatt	: cataaggtca	ı ttgtgcagco	ggaacactca	300
tcaccgctaa	a gaggatcacc	: atagccaagt	attgaaagtt	: tgtaaattct	ggctagttac	360

420 gggttgaacg ggtttgacat caccactcag atcgatgccg atctagggct ctcgatgcta 480 ttgtctagac tacatacccc acgccttgat gacttgaaat agacccctta ttcagagaac 540 cgaacggata gggacctata ttttcttcct cgttcccaag atagtgcctg gtaatttgtt 600 gcctaaattc tctacagtct ccgatcccaa cgctcaatct tggctgagat tcaggaactc taaagccaat ctatttccta aacccccact gatccaacca gagctcgatc caagattcat 660 720 tgacggcacc aacggtcgtc aaataaggaa tcttccctgt cgtcaaggtc gtatcgagca tcacattcgg ttggtccagg ttactcgcca aaccctggta gaactccaat aaggctgtgg 780 840 ctgcggtcat atatgactcc acggccttcg actcgccgga gtcagtgcca ttgctcgttg 900 gcgtccaggc agctagccgc tcggtccact cagcgagggt gtcgacgagt tcaagcttca tggtggacgt tccatttgct aaatggcgtg taattgccgg gatgagctct gggtatgaag agacggaggg gttggtaaag tggtaatatg ctgctccttt gttagtcttg ggtcctgttt 1020 gctctgtatc tagatcgtcc aggtcgagtg cgagtgtgac gagggccgcg gacagagagt 1080 caacagggag ccagtctacg tcgtcgaagt gtcctatgga attcggcaag acgcccatga 1140 cttcagacgc acgcaggaga gtcgggaacc aatcgcgctc aggccattta ccgtccccat 1200 gaataggccc gcccacctgg ccgactcggc agactgcaga atgaacaccg cttgtagcaa 1260 ccgcctggcc gagcagtttg ctcgcaagca tcttgctctg tccgtacccg ccttgggtgt 1320 atttgatcaa atcaagcggt gcctccggga caggcgtacc cttatcccag ccctggatgg 1380 tagcgattga ggagagaaaa atgatgcggg cgttctgctg tgagtcataa gctagctgaa 1440 cgagattgac gataccggca aactggggct caaagagggc gagcgggagg ttgaacgtga 1500 ctggccattg gcaatgaatc acttctgtga cggttgagac aaggtgtgta taggcttctt 1560 cgtggaggcc gaggagaggc tgtgagagat cgcccttgaa gtggttgact actgtggctg 1620 gattcgaggc cggctctgag tcgggaactc tgcggtttat acaggtaatt tcagcgacat 1680 ccgggcgttg caggagagct tggaggatga agccgccgac gaacccggtg ctgcctgtta 1740 gcaggacgtg gtgggtgtct cttttggtgc tgggtggtgc tgattttgcc ggctgtggta 1800 gcgttgacga atacctactt cgttagttac tggatatgcc aaggcacgaa tagcttcata 1860 cttctcgaat agagcatcaa gagttgctga tacatcctcc gtagcgttac ggcggatata 1920 gttcaccaat ccactcgcag tcggattcat gtacactgca ttgcgtagga acaggacatc 1980 tttctggtct ggcaaagatc gagccaatgt tgccgcagt atctgtacct gacgcgagtc 2040
taaaccactt gcgaagaagt catcactgat gcctaggtct ttgaccttcg tgaggtcgcc 2100
gaccatagcc gcgatactct ctgngagggt ttcatcagtt gaaggatcca gccgagcttg 2160
gagtgcctga tctgggatct ttgaggccga gctgtataga gcttcaatct cctttgcata 2220
cagtttgttg ggctgctgcg gttattgaac tttagaatgc gaacaaggct tttcggttgc 2280
taaaggaccc ccgcggggtc tgcccgatta tgtcattgt agcttccaga tttgaggctg 2340
ggggatccca tgtggaagtg cattacc 2367

<210> 2632 <211> 1023 <212> DNA

<213> Aspergillus nidulans

<400> 2632

cctcagagcg tcactgaact ctcttctgga gcatgtgaat gtctcctacg agcgagcgcc 60 ggtcgaagag tgagggatgg attaggtgtg aagctgcgtg acggggtgtc ctgaggtgag 120 tttgatgaca acctctcccg cctaaatgga acggacgacg ctacagagac ggcatcatcg 180 240 tcctgatcgg ccgaaaccag atggatgttg cctggaaggg aggtgagtat agagtttatt 300 ttctcatcca tttgatcctt gggccgaacg ggctttttgg atacggagga tgaccgagat ttagttttgc cagctaaagt cctcacggtg ccaggttgtg tctttgattt gtaggcacca 360 atgctttcaa gactgggatg agcagtcagc tgctttttga gacgagctgt agtggcgctg 420 ttgagaggtt cagccctggc cgaggcagat ttggactttt gacgtctttc agctggtgac 480 tgagacttct taggcctaga ctcatcctca ttgctggatc cgttgtcgta atttacgtca 540 attctgtcgt ttataaaacg ttgcagcggt agactgagcg ttcgaccgtg cgcgaacgca 600 tcccgaaggc aaggcttttg agactcccag tggagcaagt gatcttcgtg caagtcgtgg 660 tcgtcttttt ggcgcgtaga agttgatggt ctatacggcg gcgtctcaaa gatcgatgac 720 gaagtccgtg gctccggcat ttctgggctc gacacaagtg aagggtaatc agacagggag 780 ccatcagatg tgttggacgt ccgccgcgca cgagatttct gtttatctga taacttaatc 840 ggactatcca agggcttctt tgcgcctttc tcatcttgct cgggttcttc ggactgctgt 900 cgatcactag gcgccttgct attgccatag ggcataaaga gattgggaag agatgctaaa 960 tgatctgctg ggggtgttgc gcaacgcgtt gatgggtttg aagtatgagt ccctggtgtt 1020 1023 atq <210> 2633 1393 <211> <212> DNA Aspergillus nidulans <213> <400> 2633 ctgagcggag gccgcctgtg gatgaagaga cggtcgcgag ggactggtcg cggtcttcgt 60 tgctttctcg accggatatc aaaatagcta tcgtgattgc cgcagatgac aaccttctgt 120 ggatgaggaa gcttgcgcag ccagtcgaca gcggcttgaa tctccttggc actgccgtcg 180 ttgcacaagt cccctgcgtg gattaggagg tctccgtcag gcacatcggc caattctaac gtgtgagtat cggagatgca aacaacccga atcggacggg cgtctggagg aggcaatcga 300 ggagggccgc gaagttgtga tagcaggtgg tggagagggt agaggaacgc ggcgagaggc 360 gaggcgaaga gatagtcggg aaaaggacgg cgatggaatg gagacgacat cgtaatcaac 420 480 tccaataatg cactgcgtac tctggggtgt tgtggttgaa ctgactcgaa tcgctcagtt cgtgtctccg agaagtagtg aagagtggag agtatcggtt agagaaggga acggatgcca 540 tggcgctatg gcagacaaac accgcggcag atttacaccg cggcagattt aggcggtgag 600 ataaagcgaa atagtgcgtg tgatacgata gcaacagatc agataagcgg catcacccta 660 tctctgaggc atcaagacag cctcgcaagg agcgaacaat ttcaaaacgg ggaggaggta 720 ggcataggcg agaagtcaga tcaattgaca caatcatgga caccagtctc aattaaatgt 780 accccactgt cgcactgtcg cagtagggtg gtattctcaa agggaacaaa tataagcgag 840 gtctgtccag ttgctaaggt tctggctagt tgtacggagc atacttcatt tcaagatatg 900 gtcgaactac gcaataacca tacgatggtt caagtagaaa tgtgtaagaa tggcctatca 960 atatgcacaa gacataaaaa taactctccc acagtctcga gtataaacaa cgaacgccct 1020 ttgatccaat cagggagttg acaaacgcgt actctgcata cactattgct gcttcttcat 1080 atccggtttc gcctggcttt caataattga agctgccacc tgggcagact cccgccaacc 1140 cttctgccgc atccagaacc gctcctcagc aaccgtatta tgcttcgacc aagcccgcgt 1200

gtcatcttcg agcgacttac gcgttaggtc ggacagctcc atggactcat ccttcgccgt 1260

aacctcctct tcctcatcgc tgctgcgcgc ccctagagtg gcctccaggt atcgcttgcg 1320 gatcatgtac tgttccgtct tctcgcggcg gacattgtcg gctcaaactt ggcgatccct 1380 ttagtagggt tat 1393

<210> 2634

<211> 1437

<212> DNA

<213> Aspergillus nidulans

<400> 2634

60 aaccttcgtg ataggcttga acccacgggt ttcaagaagc gatttgagcg caaatggctt caaatacggc ggtaatgatg aaaagtacac gacgcccgtt ttgttcttct tcggcggctt 120 attttttagc ttgtcgagcg gcttctggtt cttcttggcc ttcgcttttt ccacttcggc 180 240 ggtcacgtca aggtactggg attcttggtt catgtaattg ccatcatcgt ctgagtcatt ctcatattca tcacgctgtc cgcgcttctt ttcacgtagg cgtacacctc ccgcttctgt 300 atcgctttct tctccctctg atccgcctga gctctcgtcc tcggaggcgc tttctatgcc 360 atcttctcga gattgtgtct ttcttcgctt cacagtccga cctttactct cttcagcggc 420 ttcggagtca tatccggcat cgttgtcttc gtcgtcgctg gttccgatgt ccaagaattc 480 gttgtgtttg cgggtcgtca ttgtattaca tggtatattt tcgtaggtaa agtgggtgaa 540 ttatcttggt aacacttcga ttgttaaggt tgttctagaa ttcgatgttg caaacttgcg 600 agacttaaga tggctgcgga gatcaacttt ttagaccgcg gatggtccgt gcgtcttgcg 660 720 ttgatgcctt gtaattcagg tagcacaact aactaaataa ctaactagtt aacttatagg 780 cggacgctac gttgatgttc acataaactg gtcatgagaa tgctaacaat ctgaaaatgc ttatggaagg tcagcaatct tttgctcaca gaatagaagt ttaagatata ctccttccga tcgtgcaata tcaattccat tgagttttta aagaaaagcc acctcagctc tttagctgac 900 aaatgtcatc aaagtatcta atctttatat tcgataaact tatctacagc ggtcgtgcca tagttcaact atgtatagaa cgtaaatatg cacatgaagc gggtatgatg ataagatacc 1020 aacatcagga gacacccagc ccgaaggacg ccaaaccaga tagcaaaaat gaagcagtct 1080 cgaagaggaa gagagcaggt ctaaatccct agtgaccatt tgagccgttc ataaacaaaa 1140 aaaccagtag ccgtcatggg tatcatctta agataaccaa tcgtcaagcc tataaagaac 1200 ccgcgaaatcctctttccatcattattattcgcgctgtttccgccatgcccaaacggcg1260ccatcaccaacgactccgccgacttgcattcgccggcgcaccacttccaaaggatatgaa1320gatgtttgggaaacaaggccggcgattgctcctgacaataattctgcggcggcgtcagtt1380gcagtttttgccgatccttcttatggcccgaggacgaagatcgagggatggtggtgt1437

<210> 2635 <211> 1046 <212> DNA <213> Aspergillus nidulans

<400> 2635

gctttgggcc cgaaatgtgg tcgggagggg ccgggccaag gtaccccccg tggggtttcc 60 ccccgaagg gggcccccc gctttttgtt tccccaaaag acccaaattt ggctcattgg gcctttgaaa gatttcttta aggccctttg gatcgcgcct aatgcctaaa aaccatcgaa 180 aaaaggcaaa gaggtgaatc caccggccga acccctgttt tttaagggtt ggtccaagac 240 tggaaaaacc tgccccggcc gtgaaaaaag gtggttccaa gccttgcccc accagtagct 300 ttcccttcgc tcatcgatcg ggaagcatac atcggctgct atcgcttgtg cctgcgcctc 360 ctagcgggta tatccacttg ctctctggta tacctagttc acgggcgaag gttgtcgtgg 420 tgatgataca ggcagcagcc aggttgaccg tgttgaaagc attcatgagt aggggatcta 480 gtgtcctgtt agagaaatct tcgtcttggg gccggtacta acatggcgag caaatcatgc 540 ggttgcgttt cgtcacgttc ccgatcgact ctgccgtctc tggtttctga ccataggacc 600 aagagaaagg gagtttagca gcggtctgag cgaactcagc gtacagctcc gctgactctt 660 tgtgattttc tgatagagtc tgcttattgt gcgctcggaa agctgcttcg tagaggggat 720 atacttggat tggggcccct aggaagtgtc ggctacccag gtctaattct gtgagcttct 780 gtcaaacttg agaaggcggc agtgctaacc ctctggccgt tctcgatccc agattgaact 840 gtgatcatca agcttagtcc agtgcgatgg agggaatttc tccgcttttt taaaggcctc 900 cactgttgcc gttagcatgg ccatccgctg ccatatcacc taggaaaaca aacatgaagc 960 caacgcctcg gcaccagtca cgactgccac tttactcctc ttatatgcga ctcgtcgcgc 1020 1046 acgttcatca aagagcgtac caggtg

<210> 2636

<211>

1	DNA Aspergillus nidulans	
	unsure at all n locations 2636	
cttctccgcc	acaggtacat agctcccgtt gcgaacctcc catagcagcc ccggtccaac	60
aggtttccaa	ccaagctgct caacagccct tcggttcgac gcacggtttc tgatgctaat 1	120
gaatccagca	aggaacgggc cccagcgagc gactgcctca tcaggagtaa tagagcgagc 1	180
gggtactcct	acgagetege tgategeagt egecatggee etgtatgteg tggttgtgtg	240
cccagtacca	ttgaagacgt ctccgggctt tgcgtgcttg gcggcaagaa ggtacagttt	300
ggcagcgtca	togacgtatg tatoogagaa goagtactog coatogocaa tgtacacgga	360
ttcgccggat	ctgatcgcta gcttgatcaa ttgcgcggcg aagccggttg tactaccagg	420
accgtagacg	tactgcggga gccgtatgga gacaacgcgc acgctcttgt ctacaaacga	480
aagcgcatgc	ctttcggcgc cgtcacggtt ggtaagaagg tggtctgcta acggggcatc	540
ctcgtcggtc	tegeetecat tgggateggg egegaegttg gttgteeegt tegaaaegae	600
aagaggcttg	ccggatcctt caaggccttt ggcatgggcg gtcacagcgg caatgtcagt	660
gttaactagc	tcctggtacg gcttggtaaa atcgtgatcg aacgcaaggt gcaggacgat	720
gtcggcgttt	ctgctctctt ctgtgagaag gtctgcattc ttgaggtcac cgcggacggg	780
agtcgagccc	agcgactcga acagcgcatc gccttcttca cgtcgtgaga gaccgcgcac	840
gctgtaccct	tctttgacgg cgaactctgt gaccttgcgg ccaataaagc cagttgcgcc	900
ggtgacaaag	accttttgtg acatggtgag aacgagtcag gctctaaggc gaggaataag	960
atacagagtg	atagcttgca atggagagac ccaaacaaag ccctgagaga agatagggat 1	L020
ggagtttatg	accgcaagac gattgtgttg cacgacagcc caaaaaggcg gcagtacatg 1	L080
cttcgtggag	ctacccgacn gagattacgg actatttcat acaca 1	L125
<210> <211> <212> <213>	2637 1868 DNA Aspergillus nidulans	
<400>	2637	
aagcatgtag	ataggaacaa acgcagcggc acggcggcgg ctgtgcagga acacaggatc	60

aggaccgtgc gtgagccaaa gaattcgaca ggaataatgc gacgatcaat ggaggtgagg acaagaaaga cctgctgcag gccgaggatg atgaacagga caccagatgc cacaaagcag 180 ccaatgactt gccccgagtt ccatgggtag gtgactccgc cccacgagat ggcgaggaca 240 aaggtagtca aggctcccat ctgcaagata gccccaacat aatccagttc ccgagagcgc 300 tetttaagtg aaacgeeegg eegaggatee ttagteggga geaggaacag gtagaeeggg 360 gcgcagacag ccccaattag caagttgatg tagaaggccc agcgccagcc gactgatgac 420 tggctgaatc cgcctccgac aacgggaccc aggacaatac caattcccca ggttaggcca 480 gttccgccga catatagcgg ccgctccgac agggtcgtcg tcatggcaag caaggtcatg 540 actccaacat agaggccggc accagccact ccacacaagg cacggcccac gatcattaca 600 ttcatgctcg gcgctgctcc gcaaatggcg gatccaattt caaagactgc gacgttgaag 660 aggtatgtcc attttacatt gaaatggccg tagatctttc cccagatcag gtttgtagcg 720 gtagccccga gtaggaaggc aacgctgagc caggtcaatt tttcgagctc tccgagggat 780 tcgataatga cgggctgaat gtcagcgacg acggtgttat cgagggcgta gaagaaaatc gaggaccaga tgcagaagac cgagagccac catttccatc cgtcgatgtc gcgcggagga gcctcaggtt cggggacagt gccctgcttc tcgttttcag gaatgggatt gtagttggtc aaagagtcgc tgctctcgac agccttgttg ggcgccctgt cttcagtgta gtcgtacatg 1020 gcgtagtata caggacggtc aatggcgcca attgtgtagt tcgaattata ggaccgcaag 1080 gctctggtct tacacaaaca gcgacatatg gtgtctcttc agcatttgtc aggattaata 1140 aaagaaacca taaagcaaaa caactgattt ttaatgaggc ttcgttcgca ttctctggtg 1200 gagacagaaa atcatcgaag ccctacctag atagagatga tcgtcggcgt tgcccgattc 1260 ggacagettt eggtatette attacecett caggattage gtgeggaata tteattteec 1320 tttcgggtca gccttaggga gtgcctaaac ccacgagccc atagcattac gctaaggaaa 1380 tcgttctatg taaacaccct agcgtatccc aaactactgt aaaatgcaat aaaggtctgt 1440 actaagagca aggatgctga attctgccta atcaatcagt taccattata tctatgcctt 1500 cttcgtggca aatactatgg tcaaaggagc ctcaattcgc acctttccac ccccgagtgc 1560 catctccgga tcattccaga gatgctggat ctcattcccg gggactaccg gcacccatgt 1620 tgcgaggtat cccttgaacc acgtcacatc ctgctcgtca gcccaatcgt cgtcgccttc 1680 cacccatacg acctected attentiac ecgaettet ttgeegeag aateaagetg 1740 ataacteteg atgetgeet gegeatttae eegeeeeeac teatgetgag gggattegag 1800 acagteeage geegtattta egattgagae tgeegtgee ageaacggge etgttgeegeg 1860 ettegagt

<210> 2638 <211> 4502 <212> DNA

<213> Aspergillus nidulans

<400> 2638

gtggcataaa tttcctacat agggaagaag aaaatagggc cccaataccc caaacggata 60 ttgtgaaact ttctttggaa aagtattaaa gcaacagtgg gcatttttt gacattcgtt 120 attgaactta accatcccaa caaagcacgt aaaagtaagg caccgctaat ccatggggga 180 tttcgggaac gggcaatacc ttgtattggt ttttatttcc ttgacaagaa ttgacctccg 240 gtcccgggct tgacaattga gggccagggc gactcataaa gcattgcccg atcacccggt 300 ttttgaagaa acaaaaccca ctttgaattt taagtcatcc atccgttagg gccttttggc 360 420 atccctaaca gtatgcgtca gcttcgccag tcaaaaccag gtctatcttc aattctatag acctctccca ccgtgtttac catgtcagtc atgagtggac cagccgaacc tattccctca 480 ccagctcaag aagttggtcc agtctatcgg tcagacaggg gaaagcctac agcaacagta tcgaaaagca tatcacatga aaatgtccat gtccttcccc agactccgca attgatagca 600 cttttaacgt aggtcgatgc gcacatgcga aaccgatttt tgtctccact gacagtcttc 660 cagtatgatt agagaccaga atacaggtcg cgctgatttc atcttctatt caaaccggat 720 aatccgcctc ttagtagaag aaggactcaa tcatcttccg gttgttgaaa actccgtcac 780 tactcctgtt ggtcggtcat atcttggcgt taagtttgag gggaaaattt gcggcgtttc 840 aatcatgcga gcaggagagg ctatggaaca gggattgaga gattgttgtc gctctgtccg 900 aataggaaag atcctcatcc aaagggacga agaaacttgc atgccgaaac tcttctacga aaaactacct actgacattt caaatcgatg ggtccttctt ctcgatccaa tgttcgcgac 1020 aggtgcgtgt cattettcgg caccgcggta tgaaacataa ctaaaggaaa cagggggate 1080 tgcaacgctc gctgttgaga ctctaaaggc caaaggtgtg cctgaggaac gcatactttt 1140 cettaacete attgeaagte ettegggtgt tgeagattte gegeaaeggt tteecaaget 1200 cagggttgtg accgccttta tcgaccaagg tctggatgaa aagaagtaag cgcccagtaa 1260 tgacagtgaa gatcgcccca atgctgagat ttttcaatag gtatataatt cctggcctcg 1320 gggactttgg cgaccgctac tatactctgt agtactagtc tcatagaagt acgaggttcc 1380 ctaggcatac tgtatgaact gaatctgttt aaacagcaag aaccaacact tatgcagcac 1440 agctgtgcgg ccaggtgtaa tcgtcagggc atcgtaccta ggcgaaatct gatatataag 1500 gcgggaattc atgaaatctt cgcattttag agagggatgt cctatgtgca gtaatcccat 1560 cagtcctccc ccaagtcgct ggcaggctct gcgacgccaa tgccgcggcc ttccggtgaa 1620 taggtccgag gactgggacg tgtggcatat tcatcggctt catatttact agctgtgtcc 1680 ttggcaacag catcacaagc atcaacccag tcggagtata catcgacagc agcggaaaga 1740 tctgcaaata gaaagtggtt agttggtgag aggttgtaga agagcccaat gcctacagtt 1800 gatgccagtt tggaatcttt gtccgcaaac cttgcaggac aaatgaccca agcccagctt 1860 tttgtctaac ttcaccacaa tcgagttctc gtgattgcaa aaaaggcatg caaacgtgct 1920 cggaagaggc tctttctgct ccttgagatt agcatcgatc aagtagaagt tacttcgtta 1980 tacctttttg ggctgctggg gttggcggct tgacttcttg cgtttgccct gtgatttaca 2040 tgtcaacata acgaacgcca cgcgtccaac attatccaac tcaggtccac atttggtgat 2100 taaattaaac ataccattct caaaatatgc aaataagaga tggaagtcaa aacttaatga 2160 tctggtgtca aaaggatatc tgaccggagc cggcaagtta gtctttcctt gagcggtgca 2220 cacgtttcaa acaatgcaaa cttttagccg taccagagta ccaagaacct aaataaactg 2280 gtgcttcatg aaagttgggg tgggctctag acataaatct tcgcatgcgg agcctccgcc 2340 ccactagttt acatctagga agcctgccag tgccgcagta ctctataatt ctcgagatta 2400 ttctgagtaa tcactcttaa gcaaagagta tactaatgca cctgtgtatg atcgctccaa 2460 ttacagagaa tatgacttcc gaacaaaagc ctcctgaatt cgtggatgca tggctcaatc 2520 cccgttgaac agcttggccc taggaactga ataataatgt aaaacatttg aaactgaagc 2580 agaaagcctg ctccacgata agcagggagc aagaaatacc ggaggtattt tgggtagcct 2640 gtattagagt gcaacacacc tagggaagtg gcaaggaagg ccagaagtat tacatttgtt 2700 gctaatcaac agtttgctcg gagtgtccat aaactgagca tgtcacaagt agtcaatttt 2760 tgaaaggcga aatcactgct gctgacaggc caaggctcat aagccatgag agtcaaacgc 2820 gcgagtagac ataccatact tcgcaaggtt agcaagggcc cgagaatgat ctcaaaagcg 2880 gtgggtgggg acaaatcacg tgacagattt atcttcatcc aatcaaaagg acttaggttt 2940 gtgggtaata tattacgtaa tacacttata gggccagagt ctcgcttaat ggaacttttc 3000 tgtgggattt cgttcacaac ttcttgtctg tcgaaaccgg ggcaagcagc acgagtcgac 3060 ccgaccactc ccaccgaatt gcgttgtgtc aacaactcgt ctgtcttcga ttattgaaag 3120 ataggcccga gtcgcaatta tggctgttgg aaagtacgac atttttaaac ccagattgcg 3180 gccaccgtgc aaacatctga gcctattgct aatggacggc taggaacaag cgcttgtcga 3240 agggcaagaa gggtatcaag aagaggactg ttgatccctt caccaggaag gatgaatact 3300 ctgtgaaggt aggcgcccat agggtaacca gatctggtac cttgctgact agaaataggc 3360 tecetetace ttegegaace gagagtgagt tgaatacega etategtett ggacaactte 3420 gttttttgag aggtggactg actgaaatgt gtgaagcgtc gggaaaaccc tggttaaccg 3480 caccagtggt ttgaagaacg ccaatgattc attgaagggt cgtatctttg aagtctctct 3540 cgcagatcta cagggcgatg aggaccatgc cttccgcaag gtcaagctcc gcgtcgacga 3600 gatccaagga aagaactgtc tcaccaactt ccacggtctg gacttcacca ccgacaagct 3660 gcgttctctt gtacgcaagt ggcagtcgct gatcgaggcc aacgtgaccg tgaagactac 3720 cgatgattat ctcctacgcc tttttgccat cgctttcacg aagagacgcc ccaaccagat 3780 caagaagact acatacgctc gttcttccca gattcgtgcc atcaggaaga agatgaccga 3840 gatcatgcag cgggaggcct ctagctgctc tcttgcccag ctgacgtcaa agctgatccc 3900 ggaggttatc ggccgtgaga ttgaaaaggc cacgcagggg atctaccccc tccagcatgt 3960 gggtatttgt tggaagattt gcggtattgt cactaatcaa tgtatcaggt ccacatccgc 4020 aaggtcaagc teettaaate teegaagttt gateteggtg eeetgeteaa eetgeaegge 4080 gagtcaacga ccgacgacaa gggccagaag gtggagaggg agttcaaaga gcaggttttg 4140 gagagtgttt agagtccaat tgtcgcctag ccctataatt gtggctgact tcaaaatccg 4200 actctaatga gttgtctata ctgttgcggt gtgagataag caaaaaaacg ggatagtgct 4260 gtaaccgcca atgatacttt ctccaagtcc ttgactcgct gtcgtatgac tttcctacct 4320 ggaatgccct tgaggaagtg ctcaatttaa gtgtcagtaa agctcttcaa aggtgtagct 4380 agtctctagc catgagaacc ctctgaacaa tctttaatta aaaagtgcgc atgaccttga 4440 ataccgaggc aatttgtagc atataaagct ggtgttatgt gtattgccag gagcgtccaa 4500 ta

<210> 2639 <211> 2012 <212> DNA

<213> Aspergillus nidulans

<400> 2639

gtattcggtt gaccatttcg ttgaggcaga tctcgccggt gacttccaac ctacggcgat 60 catcttcctc gacacctgag cggttgcggc ggaggacgat taggttaccc tctgcatcac tctccagata tgtgtctggt gcgacggacg tcacgcctgt ggcccagact gtttggaagt 180 240 gccgggccac ctcgaccagt ttatcaggtg caccgttttc tccttcgtgg tattccacaa 300 cgcagacgct cttcatgaga tctgcaatgg ctatcacgtt gcgcgtgact gtaatgtcga caggcgctgt cgaagttctg taactggcga gcctctgaag ttgcagtccg cccgatcttg 360 gtaccacttg gaagactaca acctggaaac tggtcagctt atgcgggacc aatactataa 420 gaaccagcgt accgtcttga caagcgcagc aacaatctta tctcccatca ctgccagggc 480 geggeatget cettteacce tttettgage aacettggeg agetttetae egttgtetae 540 ttcgaaaacg cggatatatc cgagagtaga gtctccatca tcctcgccca ggtatgcact 600 tccaacaacg aaccgatcct ttgcctcccc gtctttgctt tccggagctt cagctcgaat 660 tacacattcc acaatctctt ctccttcaag atcgaaagca tctaggcgtc tgaatagaat 720 780 ttcgtctgcc agtacaaact gactcttgac aatctcttcc ccactgacca acttgcgctc gattgtgccc ataccaaaag ccttttccga gggagagtat gcgacgcgtc tcacagtagc tttgatcgga agagtctgga tctgtgtagt ccgttcctta tcgaccaggc cgatcttcag ctcctgcgct gtagccaccg caattgactc tggataggct tccgagttga aatgacatat tegtgatget cettetgaat tgacageega atatatgatg eggeettegg atecataaat 1020 tagactagga ttttcacatg tggcgaagac attggagagg ccgttgcccc tgggtaactt 1080 tttgaatgtt ggctgttctg agccaaggac aagcttgttc atgcccgata gggaatggtc 1140 ttggtcgtta tagtcatacg ttatgacgct tccatcagcc attgaaatga agagtgtggg 1200 tgcattetce gecagtacae tggccacgag aactgagege gggaatgeet caccageagg 1260
acccagegat gtegagetga tgtgggacag atectgeage tteageactg agaetttgge 1320
caattgaggg aatecaacaa tacaaacate agteggagtt gteggtagtg taacgecaga 1380
aatttggttg teegegeeaa agtetttete egagaegaet egageetetg actgaatate 1440
caacacagte acatgtttge egecegegae aagtactate gtgtegtegt tageagaage 1500
egetgtgatg attaattgat tttttggtgt ecatteaaag atagteatte egeatteaat 1560
atetgeaata agaaetetet geteagtaae etgeagtate egaetgeeg gtagattege 1620
ggeaageaag gtgttetetg agaggettag teecaggaag etttegagtt ettetgeete 1680
eccegteggga etgaaacgaa aaactegegt tteatteaeg aatgtgacaa gaagtgtate 1740
caaaaagtea eetettgaee egaettgeag accecacagg teegtaatat gtteeatate 1800
geceaagaca eccaacteet teaateegae accactaegt acacteetaa gggtteeate 1860
ategaaaget ecagageeag tgaegatteg agettgeeeg atgaaatteg tgeatttggt 1920
tteaetgtae egtteegagt ecattategt gaatetaaac egegeatgtt gataagtetg 1980
ataaettaaa egatgeeaeg ategataeet ge

<210> 2640 <211> 1893 <212> DNA <213> Aspergillus nidulans

2640

<400>

gccctcccac ccacctatct tgtccccagg tatgggatac gcaggatatt ccgtacccca 60 gcgcctggcc gcctacgagg agatgtggcg cagagaagaa agtgagcttt ggcactggct ggaagacagg gtaggtttag atgggattgc agttccaaca gtgaaccgcc agtccgagac 180 ccgcgcacct agtcgccggt ctcagggtga gcgggagctg aaagcctcgc taagcgaaga 240 300 gacgctatca gaccgggaga tggatcacgc cattcgcagc acgcgggaga gactggatac gttggagcgg atattgcata aacgaaggtc gcaatccact aaggacaccg agtcttcccg 360 420 cggggaactc tagcctgccc tcatgcacag aggccatctt ttcaccacat acattcaaac ggcataaget geatgecaea teactetete tattttteaa ttteetttae tgtattttgt 480 cagtecgtet gatggaactg atettecaat egtttttgtt tgttttgtet tttgtecaae

agggatetgt gactatgeac aaatgttgag egagataett teettateta tttetaacaa 600 660 qtqtcctatq acatacttqc tqttccccat ctqttqttat cctacqtttt caggattqcg gagtteetat tegtettata taactaggge teeatgtata tatgtaetet geaaataegg 720 aaqacqqaqq tcaatcaqcc tctctqqatt cttqcacqcc ttgaaaqtga qagctqcccg 780 aatacaccta gtttttcgac tacgtgattg ctaagtctct tatccatcct atattcttga 840 gggtgaagcg agtctcctcc ctttcattaa accgtggtag tttgtcctct tcagcaaaat 900 atactttaqt ccaaacaaqa tcattqqcca atctttaact tttcttaqag aatagtgaag acatgtettt gegegtgaga cagtacaatg egaacacete etegeetace taetgegege 1020 ccgttcccca gcagtcctat ttaatctgca ccaagccata agtcgcgaag gcagcgggtc 1080 cgaggacgtg ctgagcatcg ccttccatga cccaggcgag tatagaacac ttctattatg 1140 teettagete categtgagg ggetgeagte tatgggegaa etttatgetg ggtgateetg 1200 taagtggtgg tggcagactg atgtgcctag gtgcccaagc acgggctctg gggctgagga 1260 ttcggctgga ggatgttgac gagttgatgg cctactgatg gctgatgtct gcccgggtgg 1320 actegetgga caggagaaaa catagaatac etggtataaa ggtgggtggt gaggagattg 1380 gacccetgce taacccetce aatcetggge catetaaccg gtattteccg gaggeceect 1440 ttccgaatgc tttggcgcca catggcgtga ggataaattt taaactccta gtataagaag 1500 teetttgaag ggeaaaaace aaaaacetgg eecaagggaa taatggtttt taaceacaaa 1560 attgcgtcct ttaataaccc tttaatttcc ccttatggcc ctattccccc ccctttgggg 1620 taaccceggg tetegtettg gtgcatetee eeettggega acattatett ateetetttt 1680 tgctggggtt attctaaatt gttctcaact ggcgtttcaa cccctcagtc ccattaatat 1740 ctattctttt ttttatctaa cttatactca tcttccaagt tttttttttgt tactctatct 1800 tccaatatta ttttgttatg tctttttctt catattttat tacatctttt ttccttgttt 1860 ttttcatatt ctattctttt ttcttctcac cta 1893

<210> 2641 <211> 2915 <212> DNA

<213> Aspergillus nidulans

<400> 2641

60 aacacccggc aactgcaaca tttggaactt agttactagt atgtatgatc gagccttgta gcctttgcgt aggaagctag cgattgcata ggctcagatg aaaactgcgc tactgttgcc 120 gccgaatatg gcatcagcct ggagcaattt catgattgat atgtcatttg ctcaatccat 180 ataagaggtg tttaagggag aaacagaaat cccgctgttt cggacgactg cgtgactggg 240 300 ttctaaatgt cggcatcgca aagagatcat taggtatgcg taatgaatac tcaatgagca 360 gggccaagtg gatggctgag cctgcgggtc atcttactag tggtaaaata cgttatatat ccgggctccg ctgtctctaa atgccgctgt ttccttgtga cctttcctga ctctctatcg 420 480 taattttaca tcatgccaga tcttgccgat ttgcctgctg aactcctaga cgagatcctc tttctcgcct ttggcacaac cccaaggtac aacaatcgat atgatgaagg agtccttgat 540 600 atcaaaggcc taagtcgtct ccttctcgtt aaccgaaaac accaccaagc atttctgcca 660 egggtetaet cecaetggae etacattggg aegetaeaca getatagtgg aetetggaag 720 tttctccgca ctataattga aaatccttca ctcgcattaa ttgtcgaggt attaaacatt gggaattggg gtgtctgccc ttcatacctt gataggaacc acgagctcca ggaccaggat 780 840 gagcaggtgc aatttgcact caacgacaag gagaccgtga aaactgcgat tcggcgtgca 900 ggattgcaag gagatattga atcccagatt tataatgcca tctttgctga cggctgtgaa tatcagagec getaceggeg geetttggtg geacttetee tgacetgeet eeetteeata tcaaaggtat atgcgcatat cccaacatca gtcccattct tgggagctgt tttgagaaca 1020 gcaatggcca gcaacaggcc gactctggtg tacagtcgac ctgactaccc agcctggagg 1080 aattcatgtt ctcagtgaag tccctgggta tcatgatagg gaccccaacc cgttggatgg 1140 ctatattgat gaccettege taaaactgga caatatatgg ceegtettet atetegaceg 1200 tetteatata gteegtetgt atgatttega eccagaaggt tteageagge tggteeagea 1260 gaaaatccag agtaatactt atggatacgâ gtgccatatc gaacacctcc acatttccac 1320 ataaaggaca tetaaetgea gagatgaaga egtgattgea etgttgaete teecageage 1380 cctaaaaagt ctttcattcc cttgggacaa tgacaaggcc aaggccaagg aaaatgtctg 1440 gcagacette aacaatgaat tttgggegge tattttgaaa tataagagaa eettggaata 1500 tetggatgte ttecatgaet teeeteeaga aegaegtaaa taeegaetgg eagaetattt 1560 tggccctctt accgaattta cacaattgcg ctatctctca tcctggctga gatgctcatt 1620

ggcggctata ctgaggtcag tagctccact tcggctaaag gaagcactgc tagctagtat 1680 tgaatccctg gtctttgctg cggaggatgc tggaaggaca attactgacc ttccacgcca 1740 ggtcgaggaa gtggtgtctg attttcctca cctgaagacc cttgagctta agatggtggg 1800 ctgtaagtgg ctgtcgacca ccaagaccca cgccagtcaa atatcaggtg cccaaagaag 1860 cgtgctttcg caataacact caattcagta tccaaggcat ctgcaccctc acaatcaatc 1920 tgcaatactg teetttgeet cagggtgege ggtgeetegg tegatggaag gaagcataca 1980 gcatgcgaat tgatgctggc ttcaggcagg agacaatgta tcaacgagct gcgcgcaagg 2040 cagcagggcg gcaggagact tcatcgcccg aaccacctca aaggcagtac cgtccgctca 2100 agacacatgt gctcccattt caggatcacg gcaaaagtcc atcgttcatg gtttctgaga 2160 gcgaggaaca cagcttactt ccccctctgg taaacattaa tatctacatt acccatcctg 2220 atggcccctt acttcagatg gagctggaag atgatctcta agcaatgtac gcccagattg 2280 ccgccgaagg ttttgatgac aaccactggc gactcgatgt gtactttctg tcaaatgcga 2340 caaatgaggg tcgctttgca cactatcaag ctgaaaaggc tgtccgtggg attctaaaga 2400 catgcgtgat gaagcagaaa tcagactgga tacaggtctc ccaccaccga ccaccccacg 2460 actccctggg atgattgaaa tatacgatga tgactaccat cctgaccgca gctggaggga 2520 cggtgcgctg cacatgtgtc atatctgcta cggaccaggt tttgaacttg gacagcctct 2580 tgatgagagt tggtatggca tcgaccctga tccggatcag tctttgagct atttgatctg 2640 ggagcactct cgttgggatg gctggcaagg cactcttggg gtatatcagc gtgctacaga 2700 tagagagtgg atcacttggt gaggetetet tateatgggt etggtateet teaggetgtg 2760 atgacactat ctgttctcga agttggcccg attcacagta cctacctttc aagcaactta 2820 aacacactcc aatggtgttt cttcccctga tatagccatg tattgtttat gcttcttttg 2880 2915 tggtccttat tgcgctgccc gctggttcaa ccata

catatgtgtt tagtaaacac atattattat attaataaag agaaaacact tttaaataat 60

<210> 2642 <211> 1797

<212> DNA

<213> Aspergillus nidulans

<400> 2642

taaaaaaggg gtcaatttac accccttaat caaatttaat tatgaaaggg taaaatttgg aacagtattt cctcaggcaa aaggggttgt taacacgggg taacacacca tgtaagggct 180 ggcagtgtta ttatttcagg tttaaaacag gtcagggccc ctttccacat cgccgagtat 240 tataagttta cccctcgttt ttccaatggc tgcattttta gtataggcca gttccctagg 300 gctccaccgt ttgctattaa gcagtaaggt ttttccgcaa ttaagccact ctgaatgaag 360 gccgccagtc cccacaaggg agtttatttg catggggccg tgggctcggt tggcacacgg ccatcgagac ccaaccgtcc gactggactc gtaagctggg ctgctatgca gcggaagcct 480 gagaccgttt ggcaagcttg ttagtacaag tattgtcctc tgattagtac agtacctcac 540 cagttgaggt tactcgaagt catacctacc gaggcagtgc tacactggat gatctaggac 600 actcttatct tttatcaatc gctctacttt accaagtaca acgccttcca ggagccgatg 660 tcccgtccat gattcttttt cgaaaggact ctcaaaactc tcacaggcac aaggtccaat 720 gcatgcgtca catccggtta cacgcccatc agagtggcac taataccggc acccctggcg 780 ttaagatcgc aaggggaaga ctggtgacac actgcgcggt cagcacccga tatctgaagc 840 ccatctgcac tctgtagtca caaatgtgtt ttgccgtcgg ttgcttccat atctggcatc 900 tgctgagccg agccgagcca acatatttta cgtatctagc ctcttagaat cacccctgga ggataacagc cgattaggca ttttgtccac caataactat tgacaccttc aaatttttta 1020 atcagtcctg ttcacctgcc tgagttttaa ccagctactc tgcgtaccaa acccgataaa 1080 agtcaaccct teegtaggat egtcaattae egggegageg etegtgeaag eegtagggge 1140 catgacgtca tatatgtgag cacacgaatt agcgggagca ggggccattt tccatttagt 1200 gaaccatgga ctgcgacggg cctcatttaa cacctgaact cgccacagct gagcactcgg 1260 caacacactg gttgcggcag ttgtggtctt aagattcaga cttggcttct tatctgcgtc 1320 aaagctacca caacggagta cgggttcagg cacatgagaa gtaactgaga tagcccagat 1380 gtctgctgta ctacgtacga actcggtgac taagtgtttc aaagccctat tccgtttccc 1440 atatgttccc ttagcgatat ggatggagac ctaatagttc atggtctcgt caagtgggct 1500 aaggttgact gtcatttgct ggcgactcct gtgtccacag cgtgtttcaa agcaccgctg 1560 cactgggcag acatcagttc gatcctaatt accataagat tagagtgcat tacttgttta 1620 tcggagcatt aaactacggt aatcgattac ttggtaggcc gatagactag tggggaatag 1680

gtaggtatat aatggctatt ccagctatgt tctgagatca cttacctgga aacagcaacg 1740 tccgtgatga aatggtgcgc tgataagcct gttttatctt gaggttgcag tcaccat 1797

<210> 2643 <211> 1270 <212> DNA <213> Aspergillus nidulans

<400> 2643

agtgcttgtt gtagtcggct ttcaagagac atctcttgtt ccgggcatcg gagcttgaat 60 120 tgtttggctt agctggaaag agtacggtct aaggcctgct atcaattgat atgtatgcaa taattgtcga cgggtgaggt cctcatgaac ggagaaaagg aagagcattt acccgagagg 180 cggagattga aactettgta atgacgetat acagaggeaa aaaggaagat acaagateae 240 aaaacttgaa ggtgtatata aatcgaaatg cgatccgaga tgcaaaagaa gcgctgacac 300 ccttgagtca ggcagtagtg tgcctcaggt aaagtgctca acaatgacac cggagaaaat 360 tttgtttgaa cattattata caaggcttag agcaatctgt gaaagtggct atcccctagc 420 ggctagagtc cgggaatggc tgtgcagcta agctttctgc gacggccgca aaagaatacc 480 aacctcttgg tatcaagtgc ttgtacaaac tgacaaccgc tctcagaagc gaccgggttt 540 ggtctcgttg aatggagatt ggtgccatat ccctccatcc aggcagctcg gcgacttcag 600 caacaggete actatgaace eeggeaaagg tecagateae gaetgeegeg tgatgtaage 660 ccgaaaagga aagaagattg tattttgcct tgtcggtacc ggtgcgaaat ctttcttggc 720 tcaggaggga ccaaatctga cacacgtgtt tgatggcttc aactgcccct gttccttttg 780 cccactcctg aagtgtttgt agcttctttg gttccagagg tttgttgtcc atgaggatgt acgeggeega atgaagatea geaagaggea cacatageet caggtatgag atgtacaaaa ggagtaagct gctcatcaca ctggtcctat cttggccgaa cgattgtgta gtgcgagttg atgtgaagct ttgctcccat ctctgtaggg tctgggtaat gcggcaacgg tcgtttcgaa 1020 gatcattcat tcgacgatag gtacgaccaa gctggtcagt ctgtaacgat gctgagattg 1080 aaagaccgtt cggggaggaa ggtagattct ctttctgggc gacagtatga tccgactggc 1140 cgatgagcgc tgggaacatg cttcggtcgt ggctgaatct ccaaacatac tcttgaaggc 1200 cgaaaatcag gagctcatat ccccttgggt tcatgttaag gagggcctcc ccgcggtcgc 1260 tcgcaactct 1270

<210>	2644
<211>	2091
<212>	DNA
<213>	Aspergillus nidulans

<400> 2644

tcacgctgaa ggaatgaagg gcagaaaggg cgtcgcgttg ccgaaactgt atggagaagg 60 cgctcggagg catgggatcg cagctctgaa ctgaaatagt ggcgtaattg acccgcccca 120 agtetettge gagacateat ggetgeatgg ttgttacaag aaagacaage tactggacet 180 cgaaatcccg ccgttgatat cacgtgatat gaaggtctat tcaagctgcg cgattaacga 300 ccccaaagta ggtgctctta acaaatatcg gcatcatttc cacgtggatc ataaattgtg atgatagcaa taaagttaca tggcaagctc ccatcgaaaa aacaacccga tacgccaggc 360 catgctcacg aacccaactc gccaacgatt ctatcctccg tgccgtcgca taatctccag 420 ggtatctatc attgcgtttg tctcactttc gctcattgcg cgctccattc acagtctcgc 480 540 tgtagcctag tttccaccc gaccgcggcc acgcccacgg ccgcgcccac cacgacctcc ccggtcgccc cgtccaccat cgcgaggccc gcggttgcga ttctgagact ggttttgctg 600 ctgttcctta accatatcga tgatttcttc tggaattcgc agatatttga tctggaaaga 660 gcttcgtggt tagattagat gatattctgc ggcggcgcaa aacgtacgtt gttcccgcgg 720 acatagactt caggcagctt gaaaaaacgg tctccctcgg ggctcgtttg gacgacctct 780 840 ctgagtatta aattcatcca gttgtcacag ttggcaaggt ggccgttcag agtttcgccg ttcttgagct cgacgagcat cgggtggcct tgagcggctg ttagaagacc tagggggagc 900 tatgcagcgc gcagttagtg aggtcctgca cgtacacaga gctggcactt cggattagtg tttaccattc tgactgttga gtgcagagcg ttgtgggttg cgatgaggga agtagtaggt 1020 gtccgaaacg tggaatttcc gttgtgaggt tggaaattga gagaataaca atgtcaacgt 1080 ggttataata acaattggag gctcaaagca attccctcag ctacttcgtt gagtctgaga 1140 tgtagcaagt gatgctgtga catcggcgga attgacggaa aatcagataa tcccttttcc 1200 gatgtatatc tggatgcagc atgagtaaat cgtcttttca aagttcgcaa aatttatcta 1260 ggctctccct gccaggacgc cgaccatgtt actcttaaac aacggtatct gttactgata 1320 ttttcttcta ccaagaagaa tagaaaagta cgaattaacg tttgtcttgt cgagctagaa 1380
taacggcaaa tctcgatatt gttacataac agctcagatt tatttaagga gcttggttcg 1440
cgtgaatagc agcagtctgc taggttctaa gcctttggcc gctttgcagc cgcagactca 1500
tcttcatcat cttcatcctc cacggtgaat ttccgcttcg tacgctggtc tctattgttc 1560
gatgtttcag cttcttcttg ctgggccctc aggcgctcct cgcgttcgtt gaagaatccg 1620
aaaagctgct cgtatccatc ctccacgttc gtgacagtat cctctagcgc tttgtgacg 1680
tcgctcatct ttagctggat cagcacgtct ctagagcgtt tgtagagacg ctgtttggta 1740
agcatgcgcc accagtagta tcggcgatta ttcggacgtt tgtagagacg ctgtttggta 1740
aggagccgtg ccatattggc gccgccttt cgacgattct taagcggaat ctggccgag 1860
aggaacattt cctggatgg cgcgaactga gtcggttcta tcttgtaggc agtgcggac 1920
tcgttcaggg ttttgaacgg aaggaggtag gatgttggaa cacggcttag tctttttat 1980
taaatcactc cgtggatgga cccccatttg gatataaaaa tcccccaact ccgggcgcag 2040
gatatggtag taagaagagt cccgaagcac aaggaggaat tcattcggct c

<210> 2645 <211> 735 <212> DNA

<213> Aspergillus nidulans

<400> 2645

tgactcgctc atggctagat ttccgagcgt ctgacaatca cactggataa tggtgtcatc 60 ccgactttgt ggatgatcgc gtctaaatgg ccagatgatt cggtccgctt acgagccatc 120 cgagaattgc tctcatgggg aagcacttgt aattctaatg tgggagcctc gttggccctg 180 gaaagttcta gggcggattt acagccaaac aattagatct tttcttctct ggctctcact gggcagtcct gtgatgaatt gagccgagca tgttgcaaac tggtcagcag tccgcgcagg 300 gtttctcaat agtcaaccgg ataaaggaac acacttcata aatcagcacg tgcttaagga 360 ctgcctgctt atacttggtt catagttata cggctgcaag gactggcagt ctcgagccct 420 agcttttcgc tcaccctcgg tcgtccatgt ttcacaaagt agcctcaaat agggcagaag 480 ggtgagcact tgactttccc ttatatatat tcacctcact gaatcccgcc ttctccagaa 540 600 gagccaccca ttgttgctgt gttcgctcgt gagaagacat aagctccatc aattgaaagt

. caacaatggc cgcgaatggt aatacatcgg gaccgtcgtg accgtcagaa acgtataatc 6	60
gtgaataata agcaccgagt cttctgccat ggcatcgcga atgcgagaaa gagcatcaat 7	20
gcttgcttgt ctggc 7	35
<210> 2646 <211> 1979 <212> DNA <213> Aspergillus nidulans	
<223> unsure at all n locations <400> 2646	
taagcccgcc ggtggtgttc ctcgtcctcg tcttcactac cgctgttgtc tccttttct	60
tcattctcgc catctaagac ttccggaggg cttttttaat cttcggggtg ttttcgaatt 1	120
ctcaacctct tetteetcat tetececatt etcecatte teeteegget eetgetteat 1	180
cttcccttct ttctctttct tcctatctac ctgaccccct ttcttatcct tacccccgtt 2	240
cetgetecet ttettetete ettecetget tacetetece etettectet tegeetetee	300
agtatteget acaaactget tteetgeett tgaccettee agetttttet gtteegtege	360
ctttttctcc ctttcatcta gctcttccca cgccttcttc ggcaaatacc tcttccgcgt	420
cccgtcatcc tgcttcgctg tgccagagcc ctctttcgtt tgccattctt cgttggtcca	480
tttatcgaga tgtttctgct cagacttctt ctcgtctttg gaggtcgtgt agtccccgcc	540
gcgtgctttg tattcagagg cggtcatttg ggcctgtcaa ctacgattaa attggaataa	600
gaaaagaaag tttgaaatgc gtaacaaagt acctttcgcg cagaccattg acctggtttc	660
ccgcctttgt ctccttgctg gacttcattc ttgacctgtt cgcggagctc agggtctgtg	720

taattttttg cgttctgggg cattttagat tcgttcaatt gattattgcg cacccggaat

cggaacactt aacctctatc acagccctaa ctcaactaaa atttactgct gtaggtagct

gatcttgaac tgtgtgctac atcggactga aattcatgct cctatttctg tcatcatgac 840

gatctaccag atcgattgat ctacccgtca aatgacatca cgagtcctga accggtactc 900

agaccettet caatagatee tgaateatae etceaattet etetgagace aetgaeeece 1020

geggaatate atgecegeet teatgateaa acteeacet gteageacaa aacteegeta 1080

actggatccc tgctggccac cgtggatcct taccgtcgta aacatgcact gtcgggatat 1140

- <210> 2647
- <211> 2756 <212> DNA
- <213> Aspergillus nidulans
- <223> unsure at all n locations
- <400> 2647

tetgaaateg atteaactaa accaetttee gaaeettgta etatgettta tgtgetegeg 60
tatgeteeca gegeagaetg teegeetgtg tggataaaca agacattaac etgtteecea 120
tettgaceee tataagtage gggactaget agtaaatett tetetatete eeetteggea 180
acceaatgea teataceeet egeeaettte geegtataca eaggateaag tatgaettet 240
teetttetg ceateagaga gageatgtea ttggtetttg eatetageae accatatete 300
teteeegega aceggteate eaggaetaca tegteeattg taatateagt etggggatte 360
aateegatea attteeege geetegegea aagegeaaga tgegttette atgatatete 420
tttegeateg teggggaggt aagaateeet ataacaegge getttette teetegtgtt 480
tgetegtgeg gttgtgagtt eteeatette tegagtagtt tgaageeege aateagteeg 540

ccgactgtac tcccactccc acatgcgacg aagatgtaat cgaaacgcgg ctgtttgata ccgtaaccac cactaccacg atcattcggt gatcccagaa tgtccttctc ctgcgccgca 660 720 atttcaaacg cacaccttgc atatcccaac ccccncagcg gatgcaggct cgcaccagac 780 gggatccaat agggaacctt tccctctgct ctgagattat tcagaacctc ctcgacaata tcatcttgtg tctttggggc cacaggcttc tcaaacatcc tcacttctgc accaagcaac 840 ttcacaatct ggacatttcc cgttctcaaa aaagctgctt tgtccttcgc actggctaag 900 ccgccccccg tgcccttgtg caggaggacc acagattcta ggcctatcct cgaagccacg 960 gaggccacct ggaccgtgtg gttactctgg attgcgccct ctgtgacgag agttgtaact 1020 tttcctttcc cgtgtattgg tgtgggtaca tcagccgcaa tgccagcgcc atatcttgga 1080 ctggaagata ggatatctgg cacgatgtac tccaattttc ggtacttgtt ccccgcacat 1140 gcgagcgggg aagaatggtc ctcgcgcttg gcgtagaggg agacgtggat gccctctgtg 1200 cgtgcccctt gagaccgagt gctgcctggt gctgagtgtg ttgttgatgc tgaggctgag 1260 gctgaggctg gggccggggc agaagctaaa ccagacaggc tttgcagggg gtggattggc 1320 gaagagaacg ggtagagcag gcttacccgt ggaattgtgg cgaagggatc aggcagatta 1380 agtctgggtg acatctcgcg tttgcttgct tctatgtata tctgcgaagt tttactacct 1440 tatttactga ctagataggt acaagtccat ctgtagtgtg cgttagtcac tatactccat 1500 ttcaaaggac gaagtatatt ggagacggct aaatttctct ttcatctgag gcaatcaact 1560 tactcaaaag aggccaggcg tggtagggct aagtgccaga tatcatcccg aggtatcaat 1620 agtggggtga attcgaaggc ctgttgttgg agcgggctcg ctccttcccc tttcggtaac 1680 gagcatagta ccatagggcg gtctggaatg cggtgggctc acagggtcca ttttgacaga 1740 totatttcca cotacttcga toccatcatg atatgtgcct gttcccgatg gcaatctggc 1800 gacttgaacc tctgattgat gtatatgatt acagctgcag cactagatac ctagcttgac 1860 tgtccagaaa atcgacatga agagagtaac tactcgaaca agacgcgcaa tgaaaagagc 1920 aggaaagtga caagctcgag tctatcgcta taacatagcc agagggatct agtttagcaa 1980 gtatgcgagg gcccaaatat caatgaggtt ggcttcagac gatcaagaga taagagaaca 2040 ctgagtttga aaacaccgct tcgcaatgag taaaatttcc aacaactccg gccatgtaga 2100 tggtagtagt agaaagtacc cagataccta aatgtccagt ccccaccggc gagatgcaat 2160 gcaaccatga tgcgatagat gaagtagtta gagaagtaga agtccccag cgtaaactga 2220 gttctcgttt atgatgtaat gcaatgtggg gatgcaaaag caaagtccag ggccaatgca 2280 aagatattag aaacattccc attcacaaaa gacacaccac cgcgcgacac ggtccgccag 2340 gactagtcct ctccagggac cccgctcacc gatcttgatg accgtttccc agacgctacc 2400 gtccgcggta cattcgcttg gcgagtcgga ggtctttggg ctgctgatca tgtggtccgc 2460 tttgcgggtg aggcgtagaa tcttgccaga ggtgattgt attgcgagct tggcaggctt 2520 ttcccgacct gaattcgace gggtagagga gatggccgag gtggaggccg agaactcgtt 2580 ggatactgtt gaaacggttg accccctgc agagctcgaa gcatgtcga gcgcactcgc 2640 aggtcggag aagactgacg gagagatgcg cccgctgaag ctatttcat tgctagatgt 2700 ttgagggtgg ggcgatgagg gatgttggcg gacggcgaat acgaatgtgt tgttga 2756

<210> 2648 <211> 2180 <212> DNA

<213> Aspergillus nidulans

<400> 2648

60 cgatggccag caccgtcctc gacgaaacca ttttcgacga tatggagacc ctcaagtccg gcgaagggag gttcttctcc atattcttca gccttgatcg tcttggcttt tccgataatg 120 ttgccgcggc tgtcccagaa ctggcccttg tcgtcaagct tgctgccgag tctggaaagc 180 ttcttggggt cgccttccac caactcacca acgggcttgc cggatgagtc aataatcttg 240 ccagctttat tacaggacag gccttcgagg gaagacagag gtgatagggc gttctcagct 300 tecteggacg tetetttage acetteaget tectettteg eegteteete agegtegtea ctcatttctg cggtttcatt ctcggggttc tctgtagtct tttcggtggt ttccgttttt 420 gcatcttccg gaatctcgtc cttcgccctt tccatagtct ccttcacctc gtcagtgaga 480 tccgcctggc cgactgtctc tccatcatca ttcacaatct tgcccccttc tttcacagtt 540 600 ccgccaacag cttcctctcc accctcgaca accttaccga caacaccacc ctcggggccg 660 gggatctccc ctccttcctg aacagggaga tccttcagca tattaagcgg ttttgaagca 720 atacttggga cacttttgac cgtctgggta acctggtgtc caaggccacc ggcgagcgat 780 cctagtttcc caaacacgcc acttccactg ctacccgccg ggccagatgc ctgtgaccca

tcgtcacgtt gctctagctc gggttctttc tgctgggacg tggggggtctg gggtgtaggc teegetgeea atgtteatte tettgeeect teteetgtae gaggggeteg ggateetget 900 gccgaaggtc attgttgacc tccttaggtt agaagacggt atcttgctct tggtttgggg 960 cagcgctaga gccgatcaac ttgcgctcgg aggggctatt ggatctttga tctgacttgg 1020 caagggggga ccacattctg taaagtttat cgagaatatg ctcgataaat tccaggatac 1080 aggtaggggt cagtataaat tgctcagcgt tgtcaatgta gggtaggtga taatggggta 1140 tcaagtttta gtcaatataa tagagggaag gttatgtttt tctttttgtt aaagcagaaa 1200 cgacgggtct tatataccac gtctatacaa aaaccagtac atcagattca aaacccccaa 1260 gttgtatctt atgtcacaac gacatcacat aacatccagc tagttgatga gagctaaggc 1320 tgctcgtaga cccatcagct ttagatctgg gacatccttg caagccacag acaccaggct 1380 gcagctgcat ggtggcatgg tgcactgcgg gtggagtaag ccgatcgctt gccggtacga 1440 taaagtaaag caccgacggt ccacctctca ggaaggaatg gagatagtac ccgagacctg 1500 gaccagccgt tgtacagttc aatccacggg ttaagtgcga ggtacgtagg catacccaaa 1560 atcggtacca ttgtccgtgg accattttgt aaacttgtaa atgatgtaca taaaccgtgg 1620 atcgagggac aagtctgtat atattgcgtc aatgtgcagg ggttctggaa tatataatac 1680 gacattatat taatctacga aatgctccgc aataatctat atcggccaag cccacgggcg 1740 agccactgca gtcggtagaa aagtgtactc cacagtacat tgcattagtt tcgtcaaaat 1800 cactcagaat ccatgaaatg ggtactctga agtccgtatg ggtccatatg ggtccatttt 1860 tcgatcgata tacataatct gacagactgg agtacagtag tggcactgag accataacgg 1920 ctttccccac tcccacgatt agtgacatat tagccgtcca gtaccacaga aaagttgggg 1980 gcagtgcgtt ttacaccttt ctaatctatg tacccaacaa tgactggaca aggactgtgg 2040 acttgtcact catcgactaa aatgagatca tcccgccact gcacgctcca aattaagata 2100 cagctgataa caaggtagag gctagcttga agtttgtagt atgtgctttg cggaaggtta 2160 2180 ggacgtgtgc attagatagt

<210> 2649 <211> 1098

DNA

<212>

Aspergillus nidulans <213>

<400> 2649

acaaactcaa tggcatctca agccggtctt cgctgctcgc tgcaatgcca agccagtctt 60 caaagacaac tatgatgcgt ttgtcgtcaa gctgtctaag ctgtacgatc ttgttcgaac 120 taaaggaaat cccatcaagt gggattccgc agctggcggc tcgcagcaga actttgtccg 180 ccaaacaact aaatactggg ttcacccgga taacatcaca gagctgaagt tgatcatcct 240 gaaggtatgt tgcagtcttt gctcgtgtaa agcctcatgc tcagacgaca tagcatcttc 300 ccgtcctggt cttcaacccg agcaaagagt ttgaggaaga ggactcggcg atctcgtcca 360 420 tttatttcga taaccccgaa acctgggagc tgtatcaagg acgcctcaag aaaacggaag 480 gagcagaagc tatccgactt agatggtacg gcggcatgaa cagtgatcaa atcttcgttg 540 aacggaaaac tcaccgtgag gactggactg gcgaaaaatc ggtaaaagca cgcttctcca tgaaggagaa gaacgtgaac gactttctag ctggtaaact gacggtggaa aaaatattcg 600 agaagatgcg gaaggagaag aagaagagcg aggctgagat agctgattac gaacaattgg 660 ctcgtgagat ccagtatcgg gtaattacgc gcaagttggt gccggtcacc aggacgttct 720 atcatcgaac cgcgtttcag cttccgggag acgctagagt ccgcatctcg cttgacacag 780 agctgaccat gatacgagag gataatctag atggccgtcg gagagccggc aacaactggc 840 qtaqqatqqa tqttqqaqtt qactggccat tttcccaqtt gcccqccqaq qatqttqaqc 900 gatttccata cgccgttttg qaggtqaagc tccagacgca agctggccag gagccaccaa agtggattcg tgatctaaca gcgagccatt tggtggaggc ggtgccaaaa tacagcaaat 1020 teatteatgg gaetgeaace etgtteeetg ategtateea tetgetgeea ttetggatge 1080 1098 cgcaaatgga tgttgata

<210> 2650 <211> 1098 <212> DNA

<213> Aspergillus nidulans

<400> 2650

cgctcatggg gattcctcct atgcatttac agagtactgg gtcgaagcgc acatcgagct 60 cttgcggcag cacaaggggc ggacgtggcc gaccggcaca cggccatcgc gccgtttccg 120 ctgcgaaacg tccacctggg cccggccatc accgagttca atatgcgcga gttcaaaaga 180

caccatacqa cqtqqqcata ccqqctcqtc cccqqtacca ccaaqatcaq tttcqqqcaq aaqacqaqac agctgttcgc ctcgtccaaa gtcccaaaaa tcggcctccg catcagactc 300 tegetgeece atacattgea agteggeaae gageagaeca teceaaceae tetacatate 360 gaccctgacc tggactcaac gagcctcgcc attcacggta tccaacaaga gatcctcatc 420 acagoggtoc gggtcaaagt caagoogacg acgacogtgc aggccgagog gcacgactto 480 tccaaatcca ccgagagcgt gagtetcgtt ccgccgggca acggcaaccg gccactgcgc 540 atggtagtga ctcctggcgg aaaggccagc gaaccgcttg ccctgggcga gatcctgggg 600 atcaggotgo oggoaggotg cotgtatoca aatotgatoa ogtacaatat ogtoogotog 660 catgaactga aatgggaatt ggacggcgag atcgccggga gtgcattcaa qctgqqqtcc 720 tggcacccag tgagggtctt acctgagcca gacgtggagg gccctccacg gtacgcccct 780 tgaccgggcc ccggtcgcga tagcgggcgt aaactcaatg cccagagcag taattgtagt 840 ggcaacggca gtcatcctgg ttactccgac aaggaggagg cgcttccgag ttacggcgag 900 ttggctggcc agacacgagc gttagtaaca tgtgttagtg acggtgtgga agacaacgcg 960 gacgatgccg atccggagta acggagaaaa cctccgcctt cgttgatgcc tgggtatcca 1020 ggcataaact caggcatcag ctcagtcgac ggctctgtcg acgcattcac gatatttcga 1080 ctgaatggag accagaaa 1098

<210> 2651 <211> 1285 <212> DNA

<213> Aspergillus nidulans

<400> 2651

tgcaacctag agaaggatce atcaactaat gcgaacctge cagactcaat cgtatcagge 60
gagcggtgtt tggataacaa acttcagcat ggacttgacg atgcgaggce gagccaaatc 120
tggaagttat caatgtggaa tccacccgte cagccgcett gcactttaca ggtggatcet 180
ggctatggcg ccatgcgcge ctagagattg gacagcctga tagcctgaca gggattgece 240
tcctacgtee caccaaacge acgccggtae aacgctaate gagactaget gactcgacga 300
cattggccca tagtggcact gatcccggta gttagggett ccagcttcaa gccgtaaaag 360
ccatagccgg taaacccgaa tattgtatte aaaaagccat cggtetecca tgtggcactg 420

gaaactcctc aagccgtagt tcagcgtttc agacaacttt caagatgcgt ctcgccgggg tcctcttctc tttggcgctt cttcaccttg cctccggtgt tccccatggg agccgtacaa 540 cgtgcagtaa tccccctgtg cgcaaagaat ggtaaacctg tgttatagct tctgcgtctg 600 gcagtgctaa cacatccata ggagacaact gagtgccgaa gagaaggcag agtacattgc 660 qqccqtccaa tqcttqacta ctctqqatcc caaqtctqqt ctcqatqqta ccqccaatcq 720 ttttgatgat ttccaagctg ttcactcaaa tcaaacccca agtattcact gggtggtaag 780 gcccctgcag gattatttta ctttttcttg ccaagcacgc tgatcactgt tcactctcag 840 qqccactttq ccctctqqca tcqatacttt gtcgcttctt acgagaagtc actgcgtgag gaatgtggat ataccggtgc ccagccgtga gttcccggtt gctttggagt cagacgtaga aacgttggct gactgtgata ttccctaggt actggaattg gtcgcttgat gcctcgacta 1020 acctetecte aaccgetate ttegagaegg agatetttga tecagatace ggatteggeg 1080 gaaatggagc gtgggttgag atcaccgatc cagcagacaa ccccttcaac ctcactggcc 1140 gtacegegeg tggetgegte aagactggee cetteacgee agacaagtte cagetteace 1200 acagtggcgg cggctgctca agcgcgactt catcccctgg atcatgaaca gcttcgcagc 1260 acagageete gtegaetggg tgeag 1285

<210> 2652 <211> 4075 <212> DNA <213> Aspergillus nidulans

<400> 2652

ttettgeetg aatgeaacet teaceagaga tagteeacga ageggaagee ttgatatetg 60
actggagaet etegatacae acegteacge attegaaaaa cactaceaag acgeagaate 120
ettegatatg gtegeggteg atagageatt eegatatgeg ggettgetge atetteateg 180
tegggtteta ggeaattett eeggetetga tgeggtgtea gaggetttgg atggeetaat 240
geaateagtg geegegatte ggtegggete ggetgtegaa geaggegtae tgttteeeat 300
etttaeggeg ggatgtgaga eeeaggaete tgagegeaga actgagatea aagaaegett 360
agaggtttta gagggaactg gaatgaagea ggtaagteae agagetetta eaetgetaee 420
tettgetaat ttggttetaa gatacacaat geeegtaeae tgatgeagag gtgetgggat 480

accaagttgc cttggatcgc tttcgctcag ggagagttcc ttgggtagtt tgtcaaattg 540 ccgtgtagtt atggctcaaa cgggatatct ggagacaatg ggagattgaa tttacctact ggtagtgtca aattattttt tgccagtgta tgacaagatc aataaagctg gtatgcattt gcagtgatta aaaaacatct ttccagagta cataatatcc ttagacttat ccaccgtata tgtctcttac atttgattgg tcacctttag ttaacctggc ctttgtgttg cctcttcttt 780 gatcttccaa acttagctct gcgatggtca tgcagcaatt cacacttata ttcaccaatc aacatatttt cagaccctta aactacttcg ctctcttttt cgctttctct tctccctatc tetttetate tetetetaaa taeettatet tttgetgetg caggetgegg caeetggteg actccatcat ggccgagggc tccctccagc actttcccaa tggggaagtc tgtaatgtct 1020 cagteettea eggagattae aacgtetaeg etgtetteet etteteette etcacteeat 1080 ttettetgtg getetgeget tttteaatat ttatecaeae teatatteta teeeteaatt 1140 ccccttcacc ttctagacaa caacategtg actgtcttcg tcgcgctaaa ggaaagtcag 1200 acaaggacga aatgacacac aaccctctgg cttactctgc agacctcctc gatggtggac 1260 tagaagacat tcagattaaa tctctatcgc acctctatca gaatgtcgtg cagaatgaga 1320 accaccctat gctggttagt tctctggagg ccccgatgga cgggcttgcg gataacctga 1380 agatttctgc cttggatccc aaggtgcgtt ctcttgcaca acaaaactta taacactgtt 1440 caatatacac tgataatgtg atgctctcat ttcagcgtac ctcgcctatc tttccacagt 1500 gccaccctcc acccgcacca ccctcaagga aaaaggcgaa aactgaaccc atcaaacctg 1560 tcgagtggta tggggaaata tcctggtctc tgaaaggaac cagtgtcttt gacgacgcag 1620 aacaagaget ggacgetttt atgaategea teaacatget tgactacege aageeetaca 1680 acgaactttg ggttttccag tatggtcttc gctacatccc ctccgtttcc gacaaaaatg 1740 tgtaccgcac cattegtata gatgaaatac ctttggataa aactcccagt cagattctcc 1800 ctttcattgt aggtgaggtc tacagcgctc gcctggcgga tacataccgc atcaccggct 1860 acaacaccgc aatgattacc ttcgtcaccg aagaagacgc tgccaacttc ctagctggat 1920 ttgccaacag aacctacgcc ctaccctttg gcagggttat tcctgttcac acaccgacct 1980 accccatccc cgccgataca gagaaattga tcattgaaca gggttgtacc cgcatcctag 2040 gcattttcca ttgcagaccg acactcaaga gggagatcac ccgtgccatg accagcccct 2100 tccagaatta cattctacag ctggaaaata ttgttgatgg cccagggatt ggcgaagtct 2160 cggtgaagat gctttcggtc aaggcagcag cagtagtgtt tgactgcctg aggaaccacc 2220 caaccctcag caaatgccag ttccgattct tgaaacaaga tggcacgcct tccgagggta 2280 ctgcaatcgt atcggatgat ggatatcaga ctgcgccgtg gtagattgat gactctggga 2340 gacttegate gtttteatte atteteece gettacattg teattette ttetetgeag 2400 cgggtatctt actcaaatgc atatattgca attctatcct caggtaatga cctgctaata 2460 acaagtttgg gtgtcgatac gtggatccag ttgccacgtt tgaagaactt aacgattaat 2520 gctaccettg aagttggtte acaaataact actetacgae aaaaacatgt tactgeacet 2580 tgatatccag tgaagtagat aattggcaaa tgggatgaca tctcagagat aaccagactc 2640 catcatcatt ccacaagaaa gtcataaggc agctgataaa taattcgttg ttcagctata 2700 ctttttgttc agaaaatgcg accettcace tggtggatgt tettgacatt tacatettte 2760 cacagcagca ctgacactag agtgacagaa tacaaacaag tcgcggtaat tagcatcagc 2820 cgctgtgtct ggctatacga caagttgata gcatcgcgct cgggagtccc aacagcgtac 2880 ccatactgcg ccgtgatatc accatagatc gttgcaagat tgggtagggc atcggcagga 2940 agattctcct ttaacttagc ggggaagatt ccagtccaca tagctgcagc aattgaagaa 3000 cccacagcgg aaccaatgta gatgaacatg ctctcagctg cgagaattgc ggggatatcc 3060 tgctgtcgtg agacggccat gacagtcatt tgctcgcaaa tgaccaaggt gccgccaccg 3120 aaggcaataa agatatggca catgacgatg tagccaatat tggcgccggc gtggcggaaa 3180 tggatcatga gtgcgacacc gaggatggtg atggggacgc cgaagtatag ggcttgccat 3240 ttcaggcggc cgttatagcg aataactacc cccatgacga tagaccagaa ggaggagccg 3300 acggtgtaga tgttgctgat gtaggaggcc ttggtgacgt cttgattata gacaaccagg 3360 agcatggaat agaaatagtt gtcccagatg taccaagcga tgtagatgct tgcagccatg 3420 gtgtaggtga agatgacggt gcggttttta agcaactccc atggaataaa ggttatgggg 3480 gcaagatacc tttcgtagag aataaagctg atgatgagaa gtccaccaaa gactaggaag 3540 cagattatga gtggagagcg ccattcgtct gcttgcttag tgtataggtt gaaggcgagg 3600 aggaagageg ceatteeaag egegaagatg aagatgeega tgaggtegaa eteteteaeg 3660 tagtggacga tagactgaag ggttgtgcgg ttggattcaa tcatggggag gaggcccatc 3720 ttctcagctt tgcgttggtt gtaatagaag aggaagaaca gtggtgccga aaccaccggg 3780 atgacaatgg cccaaatacc aaatccccag cgaaaaccta tcgtgccgag ggcgctctgt 3840 gccgccggac cataggccca gacggtagca atgtagggag aagcaacgaa tgcaatccag 3900 aacgctcggt tctttagctt tgaagtatcc gcgatgaaaa tggtcattgt gaagtcaagg 3960 cctgtgtacc caacctggta gaagacctga gcggcgcagt acgtcttcac gttgttgcag 4020 cccgccatca tgatcaagcc aatggtcatg ctaccaacca tcagagcaaa acctt 4075

<210> 2653 <211> 2255

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2653

cagatcacat tagggttatc cctaggcaaa tgttgatctc tcggtctgag agtatgagaa 60 120 aattttctat gatagagtag gagctgaaac gccctcgaaa tacatccaat ccagccgcat gtttcaacct cggcacttct ttctttgaac atcctagatc tcttgatatt gcaactgagg 180 tttatgaatt cagattgata acaccagaag agtttccttg gttaataagc tctgtatacg 240 ggagacette cettecagat tttcatgtga tgaaaataga teteatgcat gttattgtgg 300 aatctttctt ttttggagtc tcgggaggtt ggagaaaaag ggcccgctta tcctttcctg 360 420 gaggagacgc agttgacgaa cagccacgga gtggggtcat aattacttga caagttgcga 480 gactggaata tatcaatcta gcccgaatta tctgataggc agaaaccgtc agtcttagcg ttcaaccgaa gctctgatag gcaaccggcc aaatggtggc tcagcgatag gcggcccaca 540 ctgcacgcca gacacggata cggagaagga ctgcgcatag aqctcqtaaa ataaccaaaa 600 660 cccgtcaagc ggccaatttc tgacgggcga agactcaagg ctcggatttc aggtcagaaa agcagggagt atcgtccgac ttcgagacag cgattgatgc ttatgctgtg tctctgcctg 720 780 acaattggac tggngatgca accagtggat gctacattaa cttggggcag tgtggcggag gctcagcccc aagctcgccc agacgatcca gaagtctagt acaagggtcg ccttccatag 840 gaccacacag gaccgtagtg caccacgcgt ccccctgaac gattgcgccg ccgtaagtca gtcgctcgac catgggccgt tgttgctccg ttattgcttt cgccgcccac aaccaacggc

agtgctccag atttcctcct tgagtgcttc aaccaccctt tttgatgtcc ccaagacgtc 1020 qttcqctcct tctttttaac cttctttcaa ttaacctaaa aaataaaccg ctccaatcct 1080 tecetattat ttacteteat tttteeegee ttttteetet teaggeeett eetteeeeaa 1140 ctgctacgtt actacaagaa gatcccttcc ccaatcatcc tctatttttc tcgtccttcc 1200 ttccattcaa gtaattcctc gggttgcgcc taattaatcc cgtgtcggag tatcagctct 1260 gctatattac cattttctcg tccctcaagc taatgagctt gagttttcca ctcctttcaa 1320 gctaatttac tcgaggaaac acggtcaggc ggaactcaaa tcgttggcgg cggactcctt 1380 tecegaegae aaetgeattt teeeetgget ateetegaea attgetette gaettegtee 1440 ccgtagtcga gtacgggttc tactacgacg cccagtgttc tggtgtttgt gagaaacggt 1500 cgtcggtgaa actggtcgtc ctcctacctc ccgtcgctct tcgccgaggc agctttcgct 1560 ctcgagcagc catttgactc gagaacttcc cattgtcacg aattacacga attgaatccg 1620 cattattgtt gttcgctagc atcaacggcc tatttacata atcttgtcga aaaggaggtg 1680 ttqaccttcc atactattca tcatgcggcg cqgtcttttg gtctttctag tcgtcaacct 1740 cctcatcgtt acgttcctca ttcgcagcgt atctacactc ctgtcattgt tgctggagga 1800 tgcttcggcc gatgcaattc accgcgcgga gcttccgtcg ccgaactcga gtttgattga 1860 acagegacce cagaagatte ccaagattat ccaccaaaca tacaagaatg agtetattee 1920 tgaagtctgg caggaagccc agcaaagttg catcgacttg cacccagatt acgagtacat 1980 tgtacgtttt ccctatggtt ttgtgaaaga gcgatgctaa taaccgcagc tttggacaaa 2040 tgagaaatet egegaettea ttgeageega ataceeetgg tteetegaea eetttgataa 2100 ctacaagtat cccattcagc gtgcggattc gatccgctac ttcgttttag ctcactacgg 2160 tggcacctat attgatcttg atgatgtgag aattgcttat ccattgaaaa cgacgaacaa 2220 attgctaaat tgacaagggt tgcaaccgcc gctta 2255

<210> 2654 <211> 2176

<212> DNA

<213> Aspergillus nidulans

<400> 2654

accetttgac atcetegace ceaetteeca atttagaata etceaettea cageteacaa

60

ccccgctcga aacttcagga agtccgtcga gagggctaag cctgatctga agtttcgtag taatgttggc agctgcgcaa ccaaaacttt ccttagtttg tcgacagatg cggtgagatt 180 ttccgtcttc actccgagaa caggtacatc aactacgtct tcgccggtcg gaacctgttg 240 gtagaagetg aactegaaat ettecaggtt etteattgtg agetgettet etgaeceaac 300 ttgggaagag ggagtaaaca gcttttgctg cctttccctg gattcggagg accatttgag 360 gacgacaggg tagccggacg attcgatagc gcgaatttct ttaacacgga agcttgggct 420 480 gagaccagct cctttgaaag tagcgccaaa aacggcagcc tcatcggcgt tgacgtttgt tegtatttte teegaceete egcaaaatet ttetagttee ttetgaacaa atggggtaeg 540 aattgaacca ccatgtagaa tgactgaatc aatgtcgttc aattgtaacc cagcagctgc 600 660 caaggeetee teaagtgget teccaacaeg agegatatge tgetetgeea gtgaetegaa 720 cttagaacgg gtcacgcggt acttgaaatt aacatcttcg tcgaagagac cttcaaaaaga 780 agcgccagtt tcggtgttgg cgctgaggac ctggcggact ttttccgcat ctttccacaa tettgecata gtetteeegt gagagegeaa atetgegaga etaacaegge eettgagttt 840 tttgtcatca aggagttgag aaagcatatc accaacgatt aggtcgttca gagagtcgcc 900 gccaagagtc ctgtccgacc ctgctcccag gacctggacc tcctggatgg ttttgttgaa ctttccaatg tccttgactt tgcggctttg gaageggagg acagtggcag tagtggagcc 1020 agcqcccata tcaaatacaa cgtggtactc aggtttctcc ccatcagaaa cgctgggaaa 1080 ggttcggctc atcgcatagt tgagtccaac agcaaggcca tcgctgataa gcgcgtcgac 1140 tttcaatccg gccagttcag cggctaattg cagacttctt ttttcatccg cagtatagaa 1200 cgccggatat gtgataacgg catctctaac atccgatccc ttgccagcca aattgtcagc 1260 attageetta atetgettga gttgeattge caaaagetet tegaceaaga aageatettt 1320 ccgttccgcc tcgcccagtc tgttgcttcg gaggccaatg gtgcccctct caaaaggagc 1380 atcctccaat ctcaaagcag ggaagcgtgc ccggtatgtc tctatgagct cgttctttcc 1440 atcgttgaag gggactccga gcagtatctt aaggttcacg tagacatcgt ctgggtaccg 1500 cgcagataat gcaagagcat cacctccata gaaccgttcc ggaaacgacg catcactttg 1560 cctggtaggc ttgaatgcaa cagcagctga ttctttgcgc tttgagtcct tagtgagcac 1620 aatttccagc ggaatccctg gcttgacaag cgccgccttc aagtattccg tgccgacgtc 1680 gattccgagg accgctgaac ccacggcgga tgcgggagcg gggaagctta ggaagaatag 1740
aataaacggg agaagtgcga gggagagaag aggagacgag gaaaaaagtg gtagcaggtt 1800
attcgttctt cgtcggccac cgggagccat tgtcctttag ttccgctgct gcaagacgtc 1860
aaaggtgata agcagagtgt ctcaaaatga tgagactggt cctggtagca tacctttgga 1920
gcagtcgggg aaaaaaatga agaaccgaca agacgcaagc aatgagcgaa atggacagcc 1980
gactcttgtg agagagttgt agtagtcagt gctcaagtcg accaatagat tagctgtaaa 2040
tcggagaata gcactgtaaa gttgtaaaaa gtgcggcaat gtaaggatag caaggtcaga 2100
gaaagaaaag agatcaagta gtgagaagtg ccatttggac agaatcctca agaaagatac 2160
tggccaccgg cggag

<210> 2655 <211> 3551

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2655

tcagtcacac cgtcactacc gaccatgtcc ccatcgatgt ggtatccaag cccttggcca 60 gaaggttgcg aagaacgcct gcaaccattt ggggccaaat gcagacctgc tctgctatcc 120 agtegegtee atgactgtge teaacateng cegttteget taegaggaet eggagtttee 180 taatcccgat aggatgacgg tcgaagtgga ccgcagcgag attgcaaagg tgttccaggg tttcagtccg cagattgctg acatctggaa gctttatccc gagaaggttg tcaagtgggg 300 gatetttgat etggaagaea acceceette gacatatgee egeggtegag eetgtgtegt 360 cggcgacgct gcacacgcca gtaccccgta tatgggagtg ggggcttgca ccggcgttga 420 ggacgccctt gttatctgta cactcctgga gtcggtgcag cagaaggccc ttgccggtga 480 aaagttgaag gaggcettgg tagaggcect ccagacatac actggagcaa ggttggagcg 540 aggccggtgg atccaccacc actcgcgtca gatgggccag atgtaccact ggaggtacgg 600 accgacaggt cgtgatccgc agcggatgaa gcagaagctc gaggagaact ggggtaacgt 660 ggtgacttat gatgtgctag cgcctctcca gccggaactg cgtgagttgg cgaggagtca 720 ccaaaaatca ctgtaaatac gtacatactc tgataactta ttgttgaatc gattctgtgt 780 ctctgaatct tgtgtctgtg aacttgaatt attctttcca ccgttctatt gcagtacttc 840

gttgcgagaa ctctacgaag ccattaactc gcccgatcag atcctcctga gaaggacaca 900 gcatctacgc teegatacte trecacteta tgccetgtaa actetegagt gcgaagttte 960 egggttette getggegtga tggtgeaate tacttgtaga teeteetaeg aegeaagaet 1020 ttgctctaca accccctgac tagaagatat tgagacaccg gtaaaaacaa gtcaatattc 1080 tgaagttgtc gagtaccata acaagtgact aatcctatct attcactgct tgggggcttc 1140 atgatggaac gatcgccagt agaccaaatg tgagtcgatc tcatcgtctt cagcttccaa 1200 aggtcgtcta ctttgacagc atcacaggcg tagaacgcgc cagtggtgaa cttggtcgag 1260 tetggetegt agecettgee caegatgeag tgeactgeet gagegttgaa egtgaeeegg 1320 gcagtggttt cggtgtcaat gctaacacgg acgtttggag atataatgga cggtgttaac 1380 gcgctcatca acattaatcc acaccttgtt cctgagctct ttgtaaccgt tgcactcttt 1440 gaaggcgatg teggtgtaga tgtegggegt egeactggat tegagaaget eetegetgge 1500 atggtcgatg gaggcgaaag cgcggtagca ggcgtcggcg atggcctcgc ggtcgctgag 1560 agggggcccc gccagtttag ccgggagggg ggttccgttt cgaaccatgt tggctgtaga 1620 gatgattgtc tatagagaca atagtctgtg tggtgattga cgtcaaggat gaaggcaggt 1680 ttgtgggctg atatcgaagc tacaagacac aacaaccctt cgatatatag acggagtaaa 1740 caaatgcatg aaaaagatcc cctttccgtg tcttagcctg acgtgagatg tcgcttgaag 1800 tttgtcgcgt gtcggacaaa aaatgtaccg ttgatagttt gtaactattt tgagcccgga 1860 cacageteec aageaggtet gtagggetag ggattaggga ttagggattg eeegeaceae 1920 tettaetgta agagagtage tgatgatttt gataggette ggtgaattag ttgtttegta 1980 cgggccggta aaggcgtata taggtatcca tatacacatc tttatcttaa caggatactt 2040 ttgttttcgg attattttgc catacttttg ctgctcactg ctcctaccct acttataaac 2100 taatagtatt caageetega agaccateca etetaettet aeettegaaa tggacaeega 2160 tagcgagtgg gccagtgagc cgattgccat catcggcatg agctgcaagt tttccggcgg 2220 tgccagcaat ccagacaagc tctgggacct tatggcgtca ggcaagaccg gctggagtga 2280 gattccagag gaacgattta accttaaagg agtctatcac gcaaaccatg aaagaaccag 2340 cacagtaacg cccctctctc catgaccaac ctagggtttt tgctgacaag cccagacgca 2400 tgtcaaaggg ggccattttc tggacgagga tgtagcagtc tttgacgcag cgttcttcaa 2460

ctattcggcg gagatggccc aggtggtcga ccctcagttc cggctgcagc tcgaatccgc 2520 ttatgaagcg cttgaaaacg gtctgctctc cgttatctga gtcacattga catcaactaa 2580 ctaattgaca gccggcctgc ccctgtcccg ggtattaggg tctcaaacgt ccgtcttcgc 2640 tggcgttttc gcccatgatt accaggaagg aattatccga gacgaagata gactgccacg 2700 attcaacgta gtcggcacat ggagtcccat gtcatccaat cgcatctcac actttttcga 2760 ctttcqqqqc qccaqcatga ctctagaaac cggctgttcg acgacattgg tggctctcca 2820 ccaaqcqqtc caqaccttgc gtaaccqtga ggccgacatg tccgtggtga ctggcgccaa 2880 cgtgatgctg aatccggaca ccttcaaggc catcgggtca ctgggaatgc tgtcgcctga 2940 cgggcggtca tactcgtttg attcccgtgc caatgggtat ggccgtggag agggtgtggc 3000 taccatcatc attaagegae tgteggatge getggetgee aatgaeecea ttegtgeagt 3060 gatccgtgaa acagcagtga accaggatgg caagacggac accattacaa cgccatccgg 3120 tgcagcgcag gtagatctca tgcgggaatg ctacagccgt gctggccttg accetcgcgg 3180 cactcaatat ttcgaggccc acggcacagg gacgcccact ggtgacccaa ttgaagctca 3240 agccatggcc actatcttca gcgaaggccg ggatgacaag aaccattatc tgcgtattgg 3300 ctccgtaaaa accaacgtgg gccataccga ggccgtttcc ggtcttgctg ccgtgatcaa 3360 aggtgtcttg tgcctcgaga aggggttgat tccgcctact gtcaactatg aaatgcccaa 3420 ccccaaqctc aaqctqaatq aqtqqcqact caaggtggtg aggacgatag agcattggcc 3480 tgacagtcta attgatggac cttgccgcat gtcaatcaac aactttggct acggcggcac 3540 3551 caatgctcat .g

<210>	2656
<211>	1982
<212>	DNA

<212> DNA <213> Aspergillus nidulans

1 0

<400> 2656

gcaaaagcaa cttcacaatc ctccccaaag agaccacacc gactcggaag aattcacaca 60
actttttaat ctccctcatt taaccttttc aagtaggggc ccgcccttcc ctagggccca 120
tagcaaccaa accatgtggc tcccatgccc cgaaaggggg caaagccagg tctccatcca 180
ttgttcaaag agcccaagcc gaccaaaatg gattatttcc caaaccgatt ctccctttgc 240

cagatcatgg tgtccactcg gaccattatc aaagcagtta tgcaggcatg atctctaaat 300 360 aggggatagc ccaccaccat tatcatccca ccagaaaacg tcgctcgcgg tgtggtacca 420 aatttctqag tcqcattttt actgctgatg ctgtgctcta aacatcgtaa tttgacggga 480 aagaaaaata ggaatgctgt cattttgcat gggcctggat tattcatgct tggttggcgg tcgtttggct tatcccttag ttttcacagt acatatcttg cgctatgagt tatgatatac 540 catcaaatca gaatgtttcc atctccattt tccgttcaaa tcgggcttgg gcattgcgaa 600 660 cgacctttta atgacatgct agcaacttaa tgcgacatac acaaggcttt gctcaatggc aatctagctg gcgctcatct gggcacaaaa tattcaaaac ctagagtctt ccaatcggcc qtttcccaqt acacqtcttc ctattttcct tcctgctagt cgcccaaaac actaataatt 780 catgtcttga aattttcggt gacagacact gaggccgtga tatgcaagtg aagatcaata 840 900 aaaggcagct ctcaacctca tacgatccat tgactgcagc ctacagtcta agtgctatat gtacaaagte eggtegaagg tgggggttet actataatae teegtaatat ageceaettt 1020 tettegatga tggcataget etgattteag agteggeaga agaagtgaeg agetttgggt 1080 ggatttaggg gttatgtcat tcatacctaa cgatgaggat gcaaacaaga atattcgacg 1140 gtaggttgcg tagtattgtc tgtttggaat gtaaatatat atgtacttag atgctatcct 1200 acgaatacta aggaccaggt gcatcgggta gaagaccaag ccagtcaatt cagagggaga 1260 atoggggtca gggccagctt accetgcage taacttaaat atatgtaate getatgggcg 1320 gacggtaaga aagaagattg tgaagtgatg cacaaagaga ccggacagga tgagatggca 1440 atgaccggaa ttttgagaat aagaccatgg ttttgcgctt catttccccc accccattga 1500 gttatatgcc accgtgtgat atatttagag ccaaatctgg tcctactggc ccgtcccaaa 1560 aacctgcgtg gttttaatat ttctttgggc tctcaaaggt tccattttta ttgaaaaaac 1620 taagtgtaat atatgactat ccctttttac aacaaaataa tatttcttaa aagctctaac 1680 agccctttct ttcatatcct ttcttccatt tttgcttcaa atcatttgcc taatttgcct 1740 tttacccttg aaaaatctac cctttcccct tcaatcgaat cacgctacct aggttaatca 1800 ctgatcttaa tctctacatt ttacttttac cccaaacctc actttttatt atactatgct 1860

totattttct ccactctatt tttactctct ccctactata tctcacttta tttctctatc 1920 ctatttcctc tctctcttct acctttcatt tccttcatac ttactcactt tcttatcaaa 1980 ac 1982

<210> 2657 <211> 2301 <212> DNA

<213> Aspergillus nidulans

<400> 2657

tcccacgaca tggcggcaac cttgactgct cagtaaaaaa accttgttta ggtgatatta 60 ccaagcagat aagcacaacg agctggcttt tgtatgcatt ggggactgga tgcggagttc 120 tgcagccgga taaggcggta cttgaagact gacatcaaag gctcatcgtg acagagacgg 180 aacttgatag gcgtacagca ttggtgctgg ttcaggattc aggtcgtctt aagcttgcag 240 ctcgagaaaa gggctccggt gcaagtcgcg tcatgtccga gttgccgccg ccatatgata 300 tagaagctcg ctttcgaaga gattcgaagg aggccgcggt tgggttagtg acacccgcgc 360 toggagttgc oggtocatca oggotgottg aaaactgotc aagggootta atgogottgq 420 agattccaga agaaacattg atttttttgg ccactagcac tggccctgtg gaggtttcgg 480 ccggtgagaa cgaactcgaa acggacctgc cagcacctaa tgtgggtgtg ttgggaaact 540 gatgcccagt agcactgggg ttagaaaccg cacgcgaatt tctccatgca tcaggcgcag 600 cttgggaatt ccctccgttt gaataccccg gggagagtgg ggactttccg actgatatgg 660 gctttgcctc ctcgaccgtg gcgcttttca gttcttccat gaaggaatca tcggaaagca 720 tgtcgtcatc ggaataatcg ggagttggga cttgtatagg ctccagggca ggtctgcgtc 780 teteettteg ggttattgeg ttetettggt etaegtetat agetteagae ggtggegeat 840 tctgcagctc gatgtggttg gaattggtca cggctgaaga gtcggtgaca gagtctgact 900 tegactegga ttegagagat gttggtggaa ggattgaetg gggttggatg etttegtttg 960 aattaggggc cacggctacc acgtttttgt ttataacata agacttctcg tcggccggtg 1020 ggggagttgc gataatttct tctgcctccg agtctggggg tttctgagaa ttgttttcag 1080 gtgggacgtc aacaacggcg ctagaagtgc cggtgccgca cttaatttca ttttcagtgg 1140 gccccgttgg atcttcttgg atagaatccg cctcaggttc ggacagagag gggccctctg 1200

ctgtcttttc attgtcaatc aattccgtgt ttgcgggtga gtacgtggta ctcggcagta 1260 tatagtegga etgateettg accepteteta eagetggegt eteetgggtg gageetaacg 1320 gateettgge etgetettga tetecagega gtegaattge gacaggette tetgttteag 1380 gttgcataac ggggccctgg cccttgttgt cattttccga aatgctagat aacctctggc 1440 ggctcctatc atacttctgg tgctcaaagt gtgacccgac atcccctata tcgttcagat 1500 ctgatgttgc attgttgttt tcttccttag ctgcctcagt ctgtttcgct gcttgtgctc 1560 teetttgeat ttgtgaettg egtaactgaa gegettteat aageetetee ttttegttag 1620 aagttgacgc agatagtgcg ctcagcgact tggccccagg agaaagctga ggcctcgaaa 1680 ttgacattgt agacggggc accaatagag ggggtaccgg cggcaccttg gcggatgggg 1740 ttgcaacggg atttccctgg gaacgaggac gagcgaaggc agggttagac ttgcgaaacg 1800 gggatgctcg tacaccagca ggcaaagaag cgacagggcg ttgttcagcg ctacgaacga 1860 gattacctgc tgtgcgcggc cgtccacttt catctagcga aggccgcggt cctagcttca 1920 cettgggett tatteegget gtgegttega ggtetegtat agaaggeete geegaetgeg 1980 tagactgtcg gactccgtcc gtgtcaaaga taaatcatcg ggatggtccc tcgatgaagc 2040 cggccgtgca tccacagggg cagcttgagt gaggccattg acgcgatcgt cattgggact 2100 tgttggtgca gacacatcgt ctttgggccc ttgcggcgca gttgaggcta ccgatggcgg 2160 cacgactgtg gcttctgacg cttggctaaa cgatctctgt cgggcatcct gaggtggtgc 2220 ttgggtctgt atcgtactcc ttgcgggaga ttcctctgca tcttccqcaa tctccatcaq 2280 tctccgacgg cggagcgagc t 2301

<210> 2658 <211> 828

<212> DNA

<213> Aspergillus nidulans

<400> 2658

caaaggcatg gttcgccaaa tccttttgg ttgccaccca tctctgcgtg atatggtcta 60
tggcgtccct tctacagact tttaagagta tctaaaaccg ggctcctagc acttaaaaag 120
ccgttctctt tccagagctg gtgcagtatg cagattgaac actgcaaggc caacaattac 180
cagagccatc tccccttcag cgtcgtacct ccaaactcca cgtactgggg catgaatgat 240

ctgccgaact actacggtga cgtccgaatc aagaagttct cctttggaca aaaggagacg gctctggcgc tggacaaatg ccaccagcgt ctccggaccg aacccctaga cctattcctc 360 420 gcagttatca tgcattcatt ccgacggacg ttcaccgata ggtcattacc tacgttctac aacgagggac acggcaggca gacatgggat tctagtatag acttgtcagg aactgtcggg 480 tggtttactt ccatctgccc tctccaagta caacctgagt ccagtaagta ggcacccagc 540 ctcaaatatg aacaatactg acgaatgaga ttgtacagac gatatacttg agactctgcg 600 gatggtgaaa gacgcccgac gaaagactat caaccatggc acctcttact ttactcaaac 660 gatecteteg cetgagaace ageeggegte tecateaatg ggtetteeeg tggaggttgt 720 cttcaatttc ctcgggaagc tgcagcagct tgaaagagaa gattctccgt tccagcacta 780 828 cggcaagttg tatgacgaaa atgacttcaa gctggccgga gacatggg

<210> 2659 <211> 1759 <212> DNA

<213> Aspergillus nidulans

<400> 2659

ggtttccttt ctagctcttt tttagcttcc tttctggcgt ccatttctag tataggtgga 60 tgtgccggga gagaggtcag tttacggtga atgtgtatgc agaacttctc atatgttcgc 120 tagttgtaca gtagagtagt tgagagatgc ctgctttctc tcctaccaac atgctatgta 180 taggctaggg tcgtttcagt cactatcgaa caaatacaaa tataaaacaa caagggaaag 240 tgaatctaag agatatagac gaggaaaaga ctattctgca gacgcgcggt tcccagattc 300 ttccacgcct tggttcgggc tcagattcgt cgcacttata ggctcaggta gtttcatagg 360 egeateggee ggeaegaeaa gtetgtegag actttegeee eteagaacet tetecattte 420 ctccttggtc aatgtttcat acttaatcag cgcctttgtc agcaactcta gttcatgtct 480 cctttcggtc aaaatgttgg tggcacgctg gcgagcttcc tcgaccaacc gccgaacttc 540 agcttcgatt tcctgctttg tttcggaaga taggctatcg tagttggcgt acaggtcgac 600 gtttccaagt ttcttggagt agccaaaacg cgtgacgagc gtgaaggccg tccgcgtcgc 660 actogogagg tectacatee attagogaet geeetgaget taaagattea agogttgtga 720 acataccgct gagataccac tagtaacctt gtcttcccca tagatcagct cctcagccac 780 cttaccgccc atggagacgt cgatgtcgct tagatactgg acatagtttt tagataccat 840 gtccatttcc ggcaagaaat gcgttgaacc tagagacatt cctcgaggca tgatggtgat tttgtacaaa ggcatagagg acggcgagaa gtaggcaacc agagcatgcc ccgcctcgtg 960 gtaggcggtc aaaagcttgt ctttatcctg gataatcctg ctgcgagcct ctgcacccat 1020 gatgattttg tccttggcat agtcaaaatc tttcggagtg accttagatt gcttattcct 1080 gctggcgaaa atggcggcct ggttgactag attttccaag tcagcaccag agaagccgct 1140 cqtaccacqa qcqatcactq ctacatcaac atcagtgctg atttgcacat tcttcatatg 1200 atgetteagg atgteeatge gteecegaac gtetggtagg teaacaacga cetttetate 1260 aaatcgacca ggacgggtca aggcettgtc aagcagttca ggataattgg ttgcggcaag 1320 gatgataaca ccggtagact gagagaatcc gtcgagttcg gttaggagct gattcagggt 1380 ctgtttcacg taggcagcat ctcgttcatt tctctttgca ccaatggcat caagttcgtc 1440 aatgaaaatg atcgcgggag atttgcttcg ggcttggttg aaaagttcac ggacccgctt 1500 ggcgccaact cctacataca cttcatcgaa ctcagagcct gacatgtaga agaaagggac 1560 accggcttcg cctgcaacgg cacgggctag cagagtcttt ccagttccag gaggcccaac 1620 aagcaaaact cccttgggga gtttgccacc gagtgaagaa aatcgttccg ggttcagcaa 1680 aaactcaact agttcctgga gctcatcctt tgcttaaaca cagccatgaa catcactaaa 1740 1759 gcggacagtt tggtggtcc

<210> 2660 <211> 709

<212> DNA

<213> Aspergillus nidulans

<400> 2660

gteteetget gageteetge aaateaggaa ggtaageett gaeeettgge atatgetgat 60 gegtatgett gatgggetgg agtegeetee accaagtega gtggatteee aggateegge 120 acttaggegt ecacetgtga ecgaeteeee eteeceegtt tegateetee ageageeatg 180 egcaaacage gtaceteega eaggaaggtg geeaegggaa ecgtacagga attggagaet 240 atgtaggtag egtegeageg tegaegegte gaegeggett egeaeegget eagtettag 300 acgatggagt aegttggagg ttateetgte agtgeaeegt agtetgtgea taeggaeatg 360

gttgcatcgg ctatcagtca ccaggccagc gccctgttct acttttccgc gtgcctcagt 420
tagggttcgg gacacgactg gcaaataaac ttgacgcca atccactagt ctactttata 480
tcggtttagt cttacgagat ctccaggcgc gtagccgtga ccgcactgca tcgcgatctg 540
gtacgacgat gcaaatctgc tcgatggcag caatcttcag gaacggacga tccagcgccc 600
tggtacaagc gcgattagcg agcgatcgag atgaataacg tgaagatcga ctcgacctgg 660
aggttaagaa tatacacctt actaagagca aggcccatct gtcatctgc 709

<210> 2661

<211> 1568

<212> DNA

<213> Aspergillus nidulans

<400> 2661

atcactaacg tcccagcagg agcacacctt tcctatcgcc gatcttatcg agcaatatag 60 ttccgatact cctctccatt ctatcatcca actgcccttc ttccttcgtt cttcctattc 120 tccgggtttt gaatagtgtg gcggatagat tgcctctaca gagccagcaa caatggccca 180 240 gggatactcg cttggcggac attcttttct caacggagca cattggctgc ttgacccgca 300 tccttggcca ggattacagc agccacagtc ggctgactgc gattgaactg gctgcaggtc ttattgggaa gctgtgcaca gaggaaagcc acaaggctgt tctggctgaa agtggtgttt 360 tagacgetet ggeggteaaa gtegeategt ttatagttge geagggatte gtttteeceg 420 gcgcagagag ccacctagat gatgtaggcg ctctggggtc actgccacct cctgcgcccc 480 gcggggctaa gcttgcgccc attttacgtg ctgtgacggt catcgttgag cattccaagt 540 ggcgagcgga gcattttctc tcttctccag gtatagttac tgtgtttcca cggcaaatac 600 caggetttte eccateggat atcaagaagg geeettgggg etceaettat tttteagggt 660 720 ccgcggtgcc acggcacctt ggagggacgc ctctagagta tcttcttcca tctattcctt tgtcacagtt gaagccctct gctagctcat ccaactttcc accgctaggt cagtatgggc 780 agcatcgccg acagagccat tcatttccca ccccgctgtc cagtttcgaa ccgcccacgg 840 900 ctgaggacga tgagaatccg gttgtcccct ggctgctata cctcgtccgt gctgagagcg gcatggctcg tctgatggca gcccgctttg tgacqgtatt atqccqcctg gqactaacca aaaagcacag gatctccatg ctctgctatc tgttaatccc gattctgctt cgcatgctcg 1020

ataaggacta cgaggcctct gacgacggtg tecaatacgg tggacttatt tetteetege 1080
aacgcattaa ggaggaaget cegggtgtge tggecacett acttgttgat gatcgagaac 1140
tgcagaaaca tgcggttgag ggggatgcga teaagcgact ateceagett eteaaagaaa 1200
cttataatee aatecatgag ceagetegaa caatgtggea tgetgaagge caacegaagg 1260
ttgaggacea tgactegeag eeggeggagt gtegattagg eeeteetgga taeteaeeee 1320
teegttacea tatettgaga tategggaaa atatattgaa ageettgget geaetggtte 1380
cttteaagga egagtatege aaggeggtat gegageaegg tgttgtgeea tatateattg 1440
attetetaa accetteeea gaccaaatae eageagagte eteegateea ggaaacactg 1500
ctgetgaegg eaacecaaca eegaceette tggeageetg tggtgeaace aacatgetga 1560
ctgttagt 1568

<210> 2662 <211> 1099 <212> DNA

<213> Aspergillus nidulans

<400> 2662

atcaatctgt aagctgtgct atacccataa ccaaatggta ttgaatagtg gggtagtaca 60 gaggggtaca cagatgccgc cgctgcccag acggcccatt gcgtgacggc gtagtcgtat 120 ccattaggaa ctaggaaagc aatacgccgt tcgtccaggt ctccagtgct ggtaagagtc 180 aatteeteea gaateegttt ettgagtget geggeatetg egaggagetg ggeaaaggta 240 aactgctgga ccttggtcgt atcgataacg gccagcttat ctggattggc cagggcatgc 300 ttcttcgctt caaggaaaag aggaagagag ggaagcgcgt ctagcgacat ggtgactcct 360 ttccttqcqt tqqtctqtqa atqtaatqqc aqqaaaaqat qcqatcqtqa tqcqqtaqca 420 atggtgaaag gaccaggggt tggtgcttga gcggcggatc ggcagtccgc tctgagaaga 480 atggcacgcg attattcgac gaaatagacg ataatcgatc aataattatg gagcggttgg 540 agacgtatcg ggtcggcgag gaatcggaga ttcggagagat cgcgagagat aaagcacgta 600 660 tttgtacatt gcaaagatat agatgagctc ataacaagtc aaggattctt agacggtaag tatccatacc gtcctcttgt gttattgttg ttcaccegca aaatgacccc agtggaatgg 720 attagttgat cctcgttaat ggactccgga gtcggcgcac tggtccgcgg tgcgagaaaa

cacccacate actatattgt atatactett gagtacatat aatattgeat aegeattete 840
cattttatee tataatatgt eaggetgeea aeeggeacaa gaetgaateg eetegetete 900
gttgtettgg actattettg gagtattege aeaegtgaca gaageetegg aaateaggee 960
gagaeeggae ettteettga aeegeateaa agteeegtg aaggeaeage teggeteatg 1020
ceattgeeaa taatgetgeg attaeegeeg etgegaeaag getegttegt eetgeagegt 1080
eeeategteg ttegtgeae 1099

<210> 2663 <211> 4173

<212> DNA

<213> Aspergillus nidulans

<400> 2663

cagtitatga cagcattacc atagctaatc tatctttcca acagccatgc tigttcagtt 60 tgttggtctg tcggcaaggc ttgcccaaat cctgggtggc tgcatcaaca tgatgttcat gttcggctcq atcqtqcctt ccttttttct cqaccqcatq qqtcqqcqaa atacaatqat 180 agcaggttgc gcaggactta gcctgtgcat gatgatgatc tcagctctgt tgtcacaaqc 240 taaaacatct aacggacact cttactcatc cgctgctgtg actttcttct ttctctatat 300 gctagttttc ggcatgagcg tgaactgtgt gccctgggtc tatgttccag aaatattgcc 360 tctggccgcc cgcactcgcg gtactgcgat cggtatcagt tcgaactggt tatggaattt 420 cacggtcgtc atgattacac cagtcattat caaccgccta cactggaagg catatttgat 480 cttcatggtc acaaatgcgc tgttcgttcc cgccttttat ttcttctatc ccgaaacaag 540 caacttgcga ctcgaagatg ttgattacat cttttctcgc agtggggatc cggtgaaaaa 600 tgcgcagcag attctcgctg aattgaagct aaatggacat gttgatgccc ttcaaggcag 660 tggcagccag, ataagcccct cacgccattt ctcagaggag aagggtgtcc atgaagcaag 720 aaacgaaacg aaactggctc cagctgaaag caggagcacg tgaatgctct ccaggaagtg 780 aaagagtgat tttttggctg tgatacggat aaaagaagaa agattggatt ggttagccta agagctgctg ctttttaaca tgatacgatt tgaagctata gacgcgtcct aggaactttc 900 aggtcaatgc gagtattata cgtccagcat tcacggttac agtcacccac ggcttcaact ttacggtcgt gtacacttag acgatttacc ttgtcagcgc agacgtggta gtatcagcag 1020 gtgaaggtat tgtatgatgc atgcttgaag acttgcttgg acccatcaag cttgaactag 1080 ctggtaggcg tcagtcgtcg caaaccaagg acacagtaag catatttccc gactattgga 1140 atcagaacag aggtctgaat aatgtgtgcg tgtgtgcaag atcgtagagc gatttcggct 1200 gtctacccca gctctagtgc tcatatttga aggaggcact tcaatatgtc ccctccgcaa 1260 agatgtggct atccattgag tcacacacgc atcaaaccat cgtgctcttt tagaagcgtt 1320 aatgettttt getatetaga acgagteeta actaegetat teteetegee ecatategte 1380 tttcatgcat tacqtqqqqt catqcctqtt qctttaacca gctttcctgc aaattctggt 1440 ctgcttggcg gaactttcag gagcactacg aaccgcagac ttacgcaaac ttgcttaaga 1500 agectggagg eteceteete gtateggtga aggtgeeagt tgaacatttg tteetteagg 1560 tggatgtagc cactaagtgc attgaacctg ttcctatgct ctccacaatt tcttctgaca 1620 gaaaacgata actgatagag catgccttga cacacttgga ttacaatgat atatcgtttg 1680 gggaggatac gaaaaggcca cactgtactg gacagtgatt ggcattagca ggctactctt 1740 agctgggtct cccatgtatc ctgtaagtcc aatagatgtc ttcagggctc tactccagta 1800 agatgatgat agcattetet cagetteggg gtetattata atacaaagea tgtgeeaceg 1860 gtctccgaaa attgacattg tgagaggcaa gatgttcagc tttattccgg ggtgatattt 1920 catageceta cagggteaat ttetgaataa ttageaceca taetgeatga gaegaatagt 1980 ggtccatcaa actcttcgac tataataggt atgaggttga ctgtctcgat ccttcggggc 2040 tettacatea atttacatat gtgaaaaett tggaegattt egatteaatt ttgeeagtgg 2100 acgatggcca ggtgatggtg gggtcctctg atggcagaaa attatatagg gtagatgttc 2160 tgtatcacgt tcgaccgaga agctgatctt aagatggtct tcgacttttg ctgggaattg 2220 aaqatatatt etgetgetgt aggatacaeg ggeattettt aettetagga ggggeageeg 2280 tagtagcaca caaggccacg tagtctctaa tgccgagcat atgactccat gaccgcaggg 2340 gaggagaaga aagagcgaag atcatttaca aacaaatctg gtctctccag tgacgaaaaa 2400 tggcctcctc ggtcatgctc ccgccagtag tgaatgttcg caacctgggc tgcccagtca 2460 cgagggcact ttaccatgtt agtacgctcc tggacacgcg caacaaggtc ggggcgtatg 2520 actcacatgc agttgttcct tcacgtacat actgacacca catggcaccg acacataagt 2580 ctcgaaggtc ttctccgcct cacgttttcc gcatccgaaa gcctcccggt aaaacctcag 2640

gccaggggtc gcgccttgga tccagtgcat catcaccaaa gtaataatat cggtatcgct 2700 gaacgcctca tgcacgtcgc cccagtcatg gagcttctca acaaaccacg caagcagccc 2760 gagtggtgag tececeageg egaaceeaag egtetgegge egggttetet geteetegag 2820 atagecacte tgatettget caaagtteeg gegeacaege aatgeetegt getegaacte 2880 tgagtatgtc agcgccgaca ggcaccagcg caagtacgcg tacggtgcgg accagagagt 2940 cggaggaggc accgggaaca tattcacggt gctgtgctgc cacaagtgcg gggtactgga 3000 tggcaatggc tcgtgtaatg aaagagccga aatcgccgcc ctggtcacaa atttggggta 3060 ccccaaaacg tccgtcataa ggatcttgta cgcgcgcgcg accacattcg ggccgacgcc 3120 agattttgag ggcgcggtg aaaaaccgaa accaggaatt gacggggcaa cgaggtggaa 3180 ggctggatct ttggcatcct cgggctcagt caaaggaagc accacccgaa tagcctccac 3240 aaaggaaccg ggccagccgt gggagaagag caatggtata gcattcggtc tggcagactg 3300 gttgtgggtg aagtgcagca tcagcgggcc gtagccaggg acatcgacct tgactaggaa 3360 atgcctgaag atgtcgttca ggcgtcgctg agggttcgaa tcagcgatag ctctccacga 3420 ggggatactt caacgcacct cttccgcctc ccaatcgtac tggtctttcc agaaatccgc 3480 caactgtttt atacgggaga cettggetee etgagaceaa tetttetete caaaatetgt 3540 ctgctcttcg gggtatcgag ctaaggcgag tttttgcttg gtcacttcga gcagttgctg 3600 gtccacgtgc ggcgtatacg gcacgggaat gttgaatttg aggtcttcca gaagaaatgg 3660 taacttcaag cccatcatag ccgctgctga atgatatact tgagttttat ggaagcaaca 3720 teegttgaaa eetggaagae ggacattgea gaagggeggt taagtateae aeggeaeegg 3780 cgcttggagt tgctttcagc acacggcaat tgtaagcgcc ctgggtgacc ccaccatgca 3840 cgctaatccg gattggtcca gaggtatagc ttccgccact ctagtctacc cttttacaca 3900 gctcggtcag agttaagaga aggttcaggc ggtagacgtc atcatgctac ctaggtcatg 3960 aagatetetg eggtateeeg gaggeeagat ggattgeeag aggetgtaaa ataatgetae 4020 tactctcaga ggcgatattg tcaagcgaag caattctagg tgactaaaga ttgcttcatc 4080 ctgactgctt ttccccagaa acaacacctg ggcccgtaaa gctcacatag ctggctggtg 4140 4173 ggtcatgtgg tcggcgctcc caataactga tgt

<210> 2664 <211> 2936 <212> DNA <213> Aspergillus nidulans

<400> 2664

ggatcgtgta tgagggctct ggatctgtct cgagcaacgc cgtttcaatt gacagaggtg 60 aatqatattq tgttctcctt tttacaagct gaagcaccag tttctgagcc taaacgggta tagcggctct accccgtgat ctggaaccta ggcaattatt ttagttcagg ttgccagctt 180 ccccaacaat taggatatca tagccttact ctacagactg actggacgcc gctcgccatg 240 gaatacttga aggatatctc gtcgtccctt tcgggctggg agttcaactt tgctcctggt 300 tagcagageg tgacageete agtgetgete gtggetggag getggtttgt tgteteeagg 360 qtttggacct tcctcagggt cttgaccagt ctgttcgttc ttcccggaaa atcggtatgt 420 tatcaatgct aatccgtttg tctatacgaa aatagtactg atgatttagc tccgctcatt 480 tggccctaag qgtagctggg caattgttac aggtgcctcg gatggtttgg gcaaagaatt 540 600 cgccctccag atcgctcgcg ctggctacaa catcgtcctc gtttcacgaa ctgcttccaa 660 gctaaccgcc ttgaccgatg agattacgtc taaatacccc tcggtccaga ccaagatgct ggcgatggat tttgctcgca acttggacga ggactacgaa aagctaaagg ccctcattca 720 780 agacctagac gtagctatct tgatcaacaa tgttggaaag agtcacagca tcccggttcc 840 tttcgccctg accccggagg acgagttggc ggacatcatc accatcaact gcatgggtac tttgcgggtt acgcaactgg ttgttccagg catgacccaa cgcaagcgag gattgattct 900 gaccatgggt tettttggtg gtetegttee ateteetete ettgetaeet aeteeggaag 960 caaggettte etteageagt ggteeacage tettggttea gaacteeage egtaeggeat 1020 tactgttgag ctggtgcagg cctatctcat tacctccgcc atgtccaaga ttcgcaagac 1080 cagtgcctta aatcctaacc cgcgtgcgtt tgtcaaggcg acattgtcca agattggcaa 1140 catggcggtt ccccaggcta cgcatacaga atcctccata ctggagtcac ggattggtcg 1200 cataccttgc gacatgcgtg atcaacccga tgagcaaatg gctcgcaaac caaaacaagg 1260 ctatgcacga gtcgatccgc aagcgggctc tgcgcaaggc agaacgtgag aacgcgaaga 1320 agagttettg aaaggacate gteattttte teteaagtet eggeegagtg tittegtgit 1380 tcctggagcc cgaaagcaag acgcgagaca aaacaaggca aacaacatgc aaagaacgta 1440

tgagaaatga taagagatgt tacgtcaggg atgaaactca tgatggaagt ggcctctgag 1500 cattgggcca ggtccaaacc gtgaggcaag agttagagta ttcgttttta cgtctcgaga 1560 catgagacgt aactgcatta gtttaataat tattatgttt attatctcct ggcttggagc 1620 actatgtcag tgagcggacc ggcaacgagt ctcgacgaca aatcatcgcc gccgtgggcg 1680 gcctcttttt ttgcctgctt aatgggtaga tgctacgtag tcatacgacg ttttgcattt 1740 tegttacaeg agteggaete aggaetgtaa tgegaeacaa aacaaaaeeg getageeaat 1800 catggagcag aaagacctag agctgcagat gccgtgcatg acggtgcatc aggccttgag 1860 tetectgtea gteetaaagg agaaagegga eeagaacttg ttgetagegg gaeggtagae 1920 tatggcacgg cttgagccta gatcactctc tgagacattc tgtaagcctc tgattcgggc 1980 cgagtttgcc tcttctagtc tcaaaggtca aggcggaaga caagcgctcg gcatcctttc 2040 cgtataacaa accttcagca tcactacacc tcccctcaag aagaaattag tacttggcgc 2100 eggeattett gtgtgttett ggactaegtg etaetaegta ageetgaaga tteacetage 2160 tgctcgggag ccgtttgatg aatgtatacg attgtcggct gcaagctcca tctaggttct 2220 gggacccagt cgtgccttgc acggctttca ccgagaccta aagcgaccta gaccagtggg 2280 ccttggtacg agateggcag acggttccgg ccaagggcca aggcaggatc atctgcattt 2340 gcaggccctt gtgctctatc cttcgacctc ttgaggtccg cataatagat caggcaactg 2400 ggcgatatet tetacagatt gggcagtttg ggcagetget atactateta taatgeteta 2460 gggcagetca agacaagtet cagetcaaag gatatattae atgatgtaat tacettagtg 2520 ggctggagag gcgatgagaa gaccaagact cgagccaagt ggaacaaggc ccaccattcg 2580 gtgaggattc tgcgacgaaa ggtatgcttc gctgaaaaat ttgcacccga atcggcacac 2640 cgagcccggt tcagaccttt cagcgtggat cccgagtctt cggcgtgccg ataagttcgq 2700 ctcgggacca caccgcaaca ccaaaagccg tgtcgaatgt cggagagctq caatccqtcc 2760 tccagtctgg aatatatata tatccttaag agcagccttt tcgcgcaggt tctgtttctt 2820 acagatecee agettetget cagtecaaat etatgetgee tgeetgggtt tgtgategee 2880 aggaaaaaat tettettgag gteactaggt geggatetge egtgaateeg tgatat 2936

<210> 2665 <211> 1038

<400> 2665	
ctgggcagaa agcctcatcc acaaacacag ttagacagat acagtgtttg ctgcacacca	60
cgagcaggca ggttcagtcg cggccagcag atctttcctt ggatcaaccc atcgatttgt 1	20
ttggcggcga cttcacgatt cccttaagaa tcgctgcgta tcggctcact ccgttcctcc 1	80
gccagctaga tcgattacag tcttgtccta gggcaggagt accatctgag caaattatcc 24	40
gggttacctc tcagactgtc aatattcacc ttcccgtcca tgtctgtgcc cttctcacca 30	00
ccagcatctc acttagagca ggtaaaacaa aacgttctgt ggttccaggt caagcgaaga 30	60
gacataggtg gagggacata ggtggaggat cagagcatga acccaggtct atctggcgac 42	20
gccgcagctg tccaaccaaa ttccaagttg agtatctgct gccaaatatg gtgtagtcct 48	80
cataacgatc tggactactt tgggtaggtg tggaaagcgc tagactggaa gtctgcggcg 54	40
agaaageeta geetgggeee ttgaaatege aacagegagt tggtgtegaa gagegtaetg 60	00
atttggcttg gaatgaggag ccatgactca ccggatcaac ctcaatcaag taatacatga 66	60
tatagettga atatteagae gggtgtteet eaggaeteet gataegtgee tagegaacee 72	20
cgctccccgg catctacaag actcaaccgc tgtactcgat ggagaaattg ggaataaaaa 78	80
tacgcaataa gatctacata caaccccgca ttgatgtctt attcaatcac tttgccatac 84	40
agactacgta cttagtccac ctgccctgaa tggtaattct ccgcttctcc cgaggtctta 90	00
ctccacatcc aagcccgcgt gccctagcta gtcggggata tcggatagaa gagcatgtca 96	50
tgcgatgcat tctgcagaga gatatactaa cagattcagc tttagtagca tccttgctca 102	20
ttctgcaggg gtgatggg 103	88
<210> 2666 <211> 987 <212> DNA <213> Aspergillus nidulans <400> 2666	
cctcctcgcc ctctcggcct gctcatgtac atcctcattc cagagccacg ccagcctctc 6	0
ttgcagtgtc ttctttaact tctcctcgtc gctacccacc ccatctagcc gcagacaaag 12	
caggtacgcg ttctcggcac tgctcgttac tactcgttga ctgcgtggcc gccgcacttg 18	

gtcgtacgcc	ttgaatgcgg	cagccacatc	gtctgcagtc	gctactctgg	catcccccaa	240
aagctcggcc	aggacatgcg	catcctcgat	tgcctggccc	geteeggeee	cctggtgcgg	300
cgtcgaggca	tgggccgcgt	ctcccagaat	ggccactcgg	gccctcgcat	acgtcgagat	360
gtgcgggtgc	tcgtagagcg	cccactgagt	tggatcaggc	atgtacttca	acaccccgcc	420
gtggttagct	catatcctga	tctcgcccag	cttggactgg	catttgccga	cgagacaaac	480
tggggaacgg	ctcacctcga	ttaagctgtt	tatcaagcgc	cccatatgct	taaagtcatt	540
gtgcatgtcc	tctttactcg	ccggccgcac	ccagctctcc	cggtcccatt	ccgagtgtaa	600
ggggtagatg	cccacgttca	ccttctttgc	ccgtttgatc	gggtatgtga	ccgcatacgc	660
tccgtcgcca	acatacatag	ttgagacgcg	cgcgcgatgg	tcgccgacgg	cttccaccat	720
cgtctccatg	tccagcacgg	cacggtaccc	atacattccc	gagtaccgag	gctgagtagc	780
tgcgtactcg	tccgcaccga	gaacaaactg	tttgaccttg	gaatggatcc	catcgcagcc	840
gatgactacg	ctcgcacggg	cagcagtgcc	gtcctcaaac	cgcatctcca	ccccatctcc	900
tgtctcaacc	agcgctgcca	gcctctttcc	aaagtgcgcg	atccctccgg	taccagcctg	960
					5 5	
	cgagaaaatc				J	987
		cgccctt				987
acgagtgcat <210> <211> <212>	cgagaaaatc 2667 2075 DNA	cgccctt				987
<pre><210> <211> <212> <213> <400></pre>	cgagaaaatc 2667 2075 DNA Aspergillus	cgccctt s nidulans	ttgccaatct			987
<pre><210> <211> <212> <213> <400> <attcagaac< pre=""></attcagaac<></pre>	cgagaaaatc 2667 2075 DNA Aspergillus 2667	cgccctt s nidulans ggtgtgctgc		ttattttacc	atccgtagca	
acgagtgcat <210> <211> <212> <213> <400> cattcagaac accgggtgtg	cgagaaaatc 2667 2075 DNA Aspergillus 2667 atcaactata	cgccctt s nidulans ggtgtgctgc tcatctagct	cacctttgct	ttattttacc ccagtttctc	atccgtagca cctcacggtc	60
acgagtgcat <210> <211> <212> <213> <400> cattcagaac accgggtgtg cacttataat	cgagaaaatc 2667 2075 DNA Aspergillus 2667 atcaactata gaccttgtga	cgccctt s nidulans ggtgtgctgc tcatctagct ggggccagtca	cacctttgct	ttattttacc ccagtttctc gagaaaaaaa	atccgtagca cctcacggtc gtggtctttg	60
acgagtgcat <210> <211> <212> <213> <400> cattcagaac accgggtgtg cacttataat aagcggaaaa	cgagaaaatc 2667 2075 DNA Aspergillus 2667 atcaactata gaccttgtga atccgagctc	cgccctt s nidulans ggtgtgctgc tcatctagct gggccagtca ttctgggtgt	cacctttgct cgacaaatgt tttgttgctg	ttattttacc ccagtttctc gagaaaaaaa gatgccccgg	atccgtagca cctcacggtc gtggtctttg ataagtgcag	60 120 180
acgagtgcat <210> <211> <212> <213> <400> cattcagaac accgggtgtg cacttataat aagcggaaaa agcacgtctc	cgagaaaatc 2667 2075 DNA Aspergillus 2667 atcaactata gaccttgtga atccgagctc cgatcgtctt	cgccctt s nidulans ggtgtgctgc tcatctagct gggccagtca ttctgggtgt tctactccac	cacctttgct cgacaaatgt tttgttgctg aaacatcgcg	ttattttacc ccagtttctc gagaaaaaaa gatgccccgg attccactgg	atccgtagca cctcacggtc gtggtctttg ataagtgcag aacatcaagc	60 120 180 240
acgagtgcat <210> <211> <212> <213> <400> cattcagaac accgggtgtg cacttataat aagcggaaaa agcacgtctc acgaactccg	cgagaaaatc 2667 2075 DNA Aspergillus 2667 atcaactata gaccttgtga atccgagctc cgatcgtctt agtttgcccc	cgccctt s nidulans ggtgtgctgc tcatctagct gggccagtca ttctgggtgt tctactccac ggattcgaca	cacctttgct cgacaaatgt tttgttgctg aaacatcgcg ccggcatctc	ttattttacc ccagtttctc gagaaaaaaa gatgcccgg attccactgg ttatccttcc	atccgtagca cctcacggtc gtggtctttg ataagtgcag aacatcaagc actctacggt	60 120 180 240 300

tcccaacgtc ttgttttctt ttttgtttta gcttcaatct ttcgttacga tgaagctctt 540

caacacactc tcgcttctac tcggcgcagc tgccacgact gtctttgccg gtcgccagga cggcaagaac cccgatacat tctacctgaa gacttccgga gctgagaact ctgcacacaa 660 cgatctctat gtttacggat accacgcggg cgctggcatt aacgatgcgg tccctacacc 720 agacattgaa acagcgagca gggcctacct gaacggcacc aaggttctat tcgactacaa 780 cacaacattc ccttggggct tgtcgccctg gggcgttacc aactatgcgg gtgagtactg gccagctcgc atatattgat cgattactga ttaactgccg tcttcagcat ggccattcgt 900 tcagatcaac gccggtaccg gacaagacgg tttctccgtc aacagtaccg gcttgcaatg gtcgcagcag acgggttttg gtggctggct aggtacgata acctgataac ccggcagatt 1020 tctgtatggt cgctaatctg atctttctgt cttcgctagt atgcgactgg tggcacaacg 1080 caccccaatt attctacctc taccggtact acgacgcgga ataccccgcc tcttgcagtg 1140 aggtgaagct tgtgaccgaa cccactgcgt gaaccgtgtt atgacattcc gccacccgtc 1200 agactetege ggtaceagtg gtegagacte gagaggetea tgaegegegt ggegggettg 1260 atgaatcatc cactctgagc tgggtcggtc cgtggagggc atgcatcatt gccatatgcc 1320 cggccgtgtg tgtcctggct ttgggacctg agacgaaatg taacggttcc atgtttcata 1380 attttaaatc tgtaatgcta tcgctgttgg aatattttat ctaatgttgg gaatcaacat 1440 attaccggat ctttccacta attgttctta ttcttccgta ttgagaaatg ggataagcgt 1500 gcatattgat gcagattatc ggcaatagta catatagtat ataaataggg ggtggactgc 1560 tgacaggttc gatctggcta tgctcactgt ggccagaaga tgccagcatg tgagacagga 1620 tgcgcgaggc cttgacccta caagaatatt gggaataata atgattcaat tatggaatga 1680 aggtagttct gattgaacga taatccggtt agacttgtca gcaatttaca agggctgggt 1740 gccctgagtg gttaatgggc ccacaaatgc ccttttttat aacaaggccc gccccatcgg 1800 gtttagccac ctcatctgcc cggccgggcc tctcgattcc tttttttagc catcctcctc 1860 ccctccaatc ttggccttcc gtgtacccca cttatcatcc cccctctttt ttcgctacct 1920 gggctattct ctctttctcc tctcccccta tttgtaatac tcgctcacat ccccctaatc 1980 cttttcctac cattttctcc ctcatgttcc ttgtctcact ctctctctcg acgctttccc 2040 tttctccatc cttctctct attcttgcat tccca 2075

<210>	2668
<211>	1385
<212>	DNA
<213>	Aspergillus nidulans
<223>	unsure at all n locations
<400>	2668
atagtgagac	ccaagetteg gateteacte atec

cttcaa taagcgtgct cttgccggng 60 ctttatcacc aataacacat atctttggag cgtaatatgc gaatcttcaa tacctaaatg gcgtaaattc ttgatcttct tgaccagatt ggtcatgctt tgggtaagat tatccaacga 180 ctttgatgag atcgattcga cagaggcctc ctcttgtttg ggagatgtga tttctgctgt 240 ggcttgagaa cgttaggtat ttgacatatc gtgaagtaat gtggatggct tacgaatgct 300 tcggtccatt tcagtgttcc caactggcgt aagacttcta atcgtaagcg aggagctcgg 360 catcatgaaa tgcttgttag ccacagctgg gtctgaaaaa tttgcggaat tatagttaac 420 agagagatca gagcaaggat cgggtggaca aaacggacgt atgctagacg agatggtgaa 480 ttgaaatatt aaagatgaag aagacggctg gaagggatta ggaggagaaa aggaaagtga 540 gaagcaagaa gaaaggacac atgaagggat gaatgaaagt aagtgttgag caagagaatc 600 gaagagaggc tgttctggtg ttacgtcctc tggagaggga cgtgacttgc tagacgaaag gcagagattg agtgtataca acgaattgac taggcagcaa tcagatatag gactcacttg acaagagaat agagaagatt actttcagat ctgactacaa tggcccaatc attttgtgtt gtatggaatt atacaggagc aatgagaaga gcatatccag aagctcgatt gatttacacg 840 aagggcaatg cttactgtag caaggcattt tcaatctagc tcttagtctc ggcagctggc ccaaggaaat ttatcggtac gcgattgagg tatggtaatc tgaaaaagta tgatcattgt 960 cgaccacggc cgtcgctaag cgggatgtcc aagacaacta tattgcgggt atggaaatcc 1020 atctctgcaa tcttccacgt cattgatgag cacgatatcg gtggactgag tcaacacct 1140 gtcgtctact aaaagcgcca ctgcagtgtt atacacggaa ggaatcacaa gggattacca 1200 tcaggacgat gtctgctcag aataacctat gcgaaaacgc gcaaagcaga ctctttcttt 1260 atggacattt gcgctgagtt taggtcacgg cgagtccgaa tcccggtcgt cngatgccag 1320 tagatactgt tgaagcacga tacacatngt atcgtagacg cgcctatang actccaactc 1380

attcg

<210> 2669 <211> 1163 <212> DNA <213> Aspergillus nidulans <400> 2669 ategeateca gagtecatae tgeettetga tegeageeet eetteateee ttettgetge 60 cetgettetg etegtetteg eetgeegatt eeeettttet teggeetttt tggeteegte ctctcctcgt gttccctcac cttcatccac tctcccatcc caccccctc ttccatcaac 180 cgtcctcccc gaccttcatc tctgaaggcg tttttatcat ttattgtgtc ttttcatcaa 240 tetatetacg actteacete caegaacege aattteeeeg tetecaacag ceaacgeett 300 cacccacgaa ccagtctcgc ttccgccctc agccactgtc gcgccggttc aatgattcag 360 tttcactgat ttcctccaca atgtccacgg ggccgcccgt ttggccggct caggacgaac 420 aagagtcaca accccctgct gaaacccaga cccgtgcccg acggtcgcgt agaaagaagg 480 acgacgccgt tgagaccgat cggaaggaac ctacaaagtc ggcgagatcc agggataagg 540 ataaagacaa agagaaggac agggacaagg gaaaggacca agacaaggag aaagagacga 600 ageggeeeag tegeegeeeg egagaeaagt ettegtetae eteeaaeaae eetaetteea cccagtcgaa tccccgcaaa aagcccaagt tagagggtac qccqccqaaq caaaqccctq acgcggcccc tgccgtttct gcagcagtct cgacagcttc agactcggcc ccagttcttg 780 cgcacacgac cactgtttcg gttcctactc cgcggcctag tcccccaagt gcacctgcat 840 cgcttccggc gaatcactct gagcttccac ctcaaccgca gatgacccaa tctcqtcatc tegatetgae eteteagttg atteaceett eteaateege taeteteeaa getteggete 960 ctacaacgtc gccgccatac ccgatgatgg tatctgcgcc gccttcccgt ccccaatctc 1020 agccattggg accacccct cagcgaagag cggtcaaaat tacgatccta taaggtctgc 1080 atttggcacg agetcgtcgc ctgccgcacc gcctccagct cctgcgtcta cttctttcag 1140 tcctccggcc cgtccaattt cgc 1163 <210> 2670 <211> 3773 <212> DNA

1385

<213> Aspergillus nidulans

<400> 2670

cttaggtgct gttatttctg tgaattgaga ctgtcgcggc gtctgaattg ttgaaaactg 60 agcatagata gttgagagga taatctaaga tcgttttcct cgatagctcg aggtctcatg 120 ataggagttg agcccgaatc agactgctcg aacttcagaa gccacgagtc gtggatcttt 180 agcagcctaa gggccttgac ggaaagagag catggccaga aatctgacgg caagtaccaa 240 tgatcgtaca acagaagggt agaaaggctt tccatttggt attgttctcc aagagcatga 300 cactacaagc cgcagcttta ctatattaga catactcgtt agctgacgcc cagatattgt 360 gactgcggtt tgcttcggta taatccacag attgtgtgca cagtgttata cctaaaataa agtagtggag teteegeege atgegggeeg etteetteee aaatataagg aggggeeeea 480 caaccttact agcactccgc cctgggttgt ataagttgtg gatgtttgcg agatttaggg 540 tagaactgtg aagaaattgg ttatgtcgtc ttcaccaaag cgtcaggctc cgccgaatga 600 tgacttgacc gcaccatgac aaacatcccc ccacgttgcg agtcagtaac tggatgccgc 660 catacccgta cgcccagtta gcacagaaca gcagtccgcg atctgctgca tggtgacatc 720 gttcgctccg tgatgcttag aacatcaacc tctactccaa tgacagttgc tccggacccc 780 cgacatctcg cgatccgcgc acatgcgaca gctggatgcg atccaattgc attttcgggc 840 atcattgtgg aagagaaatg attcagactg cgatgcggct caaaacgtgt ctccagtata 900 tgaaaggaga aatcattgat ttgatcggtg ttgggcagac ttgctggtat ctatagccaa 960 gttcgaatac ctacatctgc tctgcgggca ttctacccat cgctcaacct aatcagactt 1020 tettgeeget accagtgeea etttgeeact etegatttta eagecaegat geaggageag 1080 attatatcag cccgttatct cgataagact aagctgatga agttgttgaa agagcggttc 1140 gcaccacaag aatattctgt cacggtatgt tcactccaag gctcccaggc aaccagttca 1200 tecegeettt tgetteteet eteaaataea geetggttag ttttagaaag ettagggggg 1260 tgattaggcg ggtgatagca ttctgccgcc aggatgacta tccctgttgt aaaggatggg 1320 tegattggae gtttetgeaa ggetgggttt ategetaeca acaeageece caetaattta 1380 gcaatagcgc attaggctaa caagaagcca acagatcagc tgcggacgat tctacctaaa 1440 acttccggag gccttgtcgg aggtgggtca gccttggaat tttttcaaat ttgcgaagcc 1500

agtgttgcct tcgaaccggg tttttttgcc cgaaacattc cattcgttat ctgatgtgat 1560 ataggaggaa attgagtcgt gttcgccata agaaagcaga ggcttggatt ttctttacca 1620 atgcggcgcc ggcctgactt tcacagattg atccctcggt tagagcaggt gaaggcgtct 1680 tattttgccc ccataggcaa gggtgacgat ctctttgtat atagccgctg gactcctcga 1740 gaggcacttt tgcccaattt gccctcgtct tctccagaag atatactcta tctttgatat 1800 ctcaaagcgt ctttggcact acataccgtc aaaatttcgc agtccaattg agaaactaca 1860 tacetteaaa ateacagtea aetetateta geaatggaaa aeggttgtat ttegeeegea 1920 ccgatcccac attgttctca tggaaagtac atggatacaa ggaagctagt tctcctgctg 1980 cgtgagcaat atggcgcatc caattttcgc attgatgtaa gatgccattc tccactctag 2040 ggttgattcc ttaatgacaa gctaaccgtt aggttgttag ttacaacgag accagtatat 2100 ggtatacata aataatagaa catcacgaag ttcctatctt actgatgtac gtttccagaa 2160 tgtctatcga gccttcgctg acacttccat aggcagagat cgaagactgt cgatgtccat 2220 gctgacccat gatgccatca gaaggaggg tgcaggaaga tgctcggcgc ttatttccgg 2280 ctatgtgcta cagcagtgtt agtttccatt attgagctcg tttccaggca ttttttttt 2340 tacgtatttt tcaacaaatc aatgacagga tttccattgt acatgtagga agggtgtatg 2400 gttgtgtaca tggcaatgcg tggccacagc tacagggtag gctgggcagt gttacctcat 2460 gcccttcggt ctgctaagcc cacggatacc ttgctggtga cacggctaat gatgcctgac 2520 ccaccccagt ttttttagtg ctgcagcctg aggggctaag gtgacttggg tcaggcgaaa 2580 aacgcaactg cccttcgtgc ccagtagccc cggtatctgc tgttctgacc aggcttttcc 2640 caactcacqc aaqqctgaat accgcctatt aagctctcct ttaggctagg ttgaaagtag 2700 qacttqaqqc ttaqtqctat atgacqaqcc tttataqccc tgtatactcg atgaaatggc 2760 aaaacaccga aataaatgaa atgccgcttt agaagacgac accaacagca gaacacttat 2820 acatattctg agttcttaga gactactatc tgcagatgga tcaatacttg ctggagagag 2880 cgaatgctcg ttcagacaaa atatttaggg caaagcccac acggacccag ctccagctcc 2940 agaccatcga gaaagtccaa gaagacagtg aagtatggag gttccagttc ggagaacgga 3000 gccaaatcaa tcagattcat gagttggagg aggcatatcc ggtatatata ggccagcatc 3060 aaactgccat ggaaccgcta acatagcgca gcgcagaccg agcgagtgca ttcggatcta 3120 cactattcaa catgtaagat cttggaagac gctagacatt tctcgtgaga tcttcgaccg 3180 gttattggcg atttatcaag tgttcccgga gatctggagg gttctgctca ctttcggatt 3240 gaggtcatgc gagaacgaat atggatttcc gccgccacaa gtgagagaat caagagagaa 3300 ttcaatggaa actcgaggct cgcccgaata taaacccatg aagaagaatt gtgcgctgac 3360 tgcgtataga attgacatat gttatgcggc gagttgaacg gaacggcaag ttggcaccag 3420 gatgtccctg gtcgatccga caaacaggcg tataccagaa attggtacag ccagcggaca 3480 gctcccaaga ggccatctca acattcttcc tggtggcacc gtcctcggca attgagagcg 3540 atctcatgcg aaacttgggt gatattacca acaacgtgaa ggcagcttt ttaattcata 3600 agagtattgt ggcagaggt ttggcggtt ggatggatta tatgtgctgt ttagaggagc 3720 cgagactaac gtggtgcgat agtcaacgg agtgatggcg acgcctaatg aac 3773

<210> 2671 <211> 1151 <212> DNA

<213> Aspergillus nidulans

<400> 2671

60 agectecage qtqqqccgta agtaacccca aacttcatcg tggtattcct cctcgacaga 120 catecactec geogracegg geagatttge caagacagta tetegeageg aagttgegte tgtcgccgac gcagcaggaa ccgtatccag gaatgagcca atatctggga cgagactgaa 180 240 cqaqttaaqc tqtcqcttct gctgtgtgtc agtcgttgac tgcgagtcgg gtggtaactg gcgtcggaac gactcaatca tttgcatctc ctctggggta agctgaagtg gggagagctc 300 360 420 ggttccatcg tggtaaatcg aggatgtaag cccagaccca ggtactgagt ttatagctct 480 gcctttccct tttgtctcgt cgagaggatc gattgtgtcc gacaaattcc cgccataagt 540 gctctggaat tcgtcctccg tgagccgagg tagctcgaat cctcccgaat gagtcgcgcc 600 cggtgatctg aatgtttccg cggggacatg aacgttgtga tcgcgagaag ccgacgaaga 660 720 tggcccggta gtgtctttgt attgctctgc ggctgctaag gctgaggaag atgaagacgg

cgcagcettg ccactgtctg agagtagatg cgcggtatct cccgagggag tagaggagaa 780
gaaagcattt ctcgcgagcc cagaggctga tttttgaatg cgtgaagcta gagactgagt 840
atcctggtca gactgtgcag ggtcgccgtc gttcctgtct ggtcgttgtt tcgtcggagt 900
attgctatcc tcagaactac cccgcttctg gtgatcggac atggtcggtc ggccgagtgg 960
tgcggcaccg ctaagaggga acgggagctg tgagagcggt agggctagaa tcctttaagg 1020
agcttgggct ggcgagggca gtgagtagac agaagtatag ctgtcaggtc ttgccgacag 1080
cttgtggctg ctacggttcg gatccttta gtgagggtta attcgacgct ctatgacaca 1140
catccaatat a

<210> 2672 <211> 4655

<212> DNA

<213> Aspergillus nidulans

<400> 2672

gcagagtagg tgaccgaccc ggaaccttgg gtaaggccgt gataactggc ggcgaaggcg 60 atgacctcaa agttgccggt gtagactttg gcgatcttga tggcggcctc ggtggattca 180 gagccggtgt tgagaaagaa ggacttctca aggggagcgg ggaggaagcg agctaatcgt tcagcgagat cgacgacggg gtgggtgatc atattgctga ggaggtggtc gagctcgccg 240 atatactqct tcacaacttc gacgatatct ggatgcgagt gaccgaggag cgagctcatc tggccagagg tgaagtcgag aattgaacgg ccatcttgat tgtagaggcg ggttcctttt 360 gccttagtga cgacaaaggg agaatatggc actccagtgc tcatgaggta cttgtcagct 420 ttgtcgaaga aggcttcaac gtggtcgacg gagcccattt tggtgacagg aggtgtatat 480 agagaggaag agagagcgaa gaacgaacaa tcgcttcaag ccagactgaa cagaacccat 540 600 cttaacttaa atcttgagag agacagtgga tgtgttaagt tggatctgtc ttcgccaacc 660 gcgggcagtc gtgtatgcaa ttgcccgcgg ctaagttgat actgacggga gattcatggc 720 tgataagatc tctagccaat catggcatgt aattggatcc accacttgac cgcggccaac tttccttcaa tgctatcact atgagatgtt ctatcagccg tctgctaagg tttagtgtcg 780 840 gcctcttgaa tgcatcttga taacaagagt gataggctcg caaccacagg atatttattc acggccatcc tcgcaaaatc accacccca ttgcctggca ttctatgcca ttgttcgcaa 900 gatggaaagc caggtagatg gacgaccata caggtctcac attcacccag cttgcttttc 960 atgcagaaag cgcaagtccc gctgtaaaac caagagccct gcggaaattt gtgtcatgtg 1020 ccaggaatat ggcactgaat gtgtttttcc gcgcgcggac gacccgcgaa tccctcgcca 1080 gagaaaccgg ccgcggagag tggtccctaa tgcaagatca tccaaatcca tagaacacag 1140 gtcatacccc catcctcaga cccagtctca tgcaaactca gctgccaatc gagacgagca 1200 gcgaccaaat ggtccccaac cgcatgtttc tgcggactct gagctccaag agcgatcacg 1260 cgtccgcgaa aatgcttcat gtaccgctgc cccaggggtt aggacaggaa gcttccctca 1320 cttcatggga attggcgcag aatccgaggg cgatggctct cacatcatca gcccagctgt 1380 cgccgatgat aacgagattt tagaaagcta tctctcgacg attcccttcg ctcaaaagag 1440 atgcatgatt ccgacaggct caaattccaa ccgacatttc ggcccagtgt ggttcaatgt 1500 tgtgcccagg cggcccttgg gtgttgtagc aaaccagtca tttgctgcct cgaaatgtga 1560 gctcattgag aagtatatgg accctgatat cgaggagtac ataaatttgt gagttcacct 1620 gcggatgctg agataaccct cgttaaatag cttcaggttc tttctcaaag ccaatccatg 1680 cttccctgta ttcgacgaag tttctttccg gagcagttat tcctctcaca aagagaaaat 1740 ctctcctgcc ctgctctgca atctgtacgc caactctctt atttattggg ggagctctac 1800 caagttgtct tccggtcgca ttccagacat ccgttatatc tggaaccagg ccaatgaggc 1860 tcttcattcc gaattatttc tgtcacccgg gctttcatca ataatggcta tactcatcaa 1920 cgtcaatggc aggcccagta cttcgatgtt cgggaatgga ggcatggttg gaatggcggt 1980 tgcgttgtcc aatgcgttgg gactcaatcg cgaccctacc ggctggagca tatcaccgct 2040 ggaaaaaagc ttgaggataa ggatctggtg gctggtactt atacatgatc gctggtatgg 2100 cggcttctgg attaccgctg cttccactaa cgtgaagcag gtgcagtctg gcctacggta 2160 cgcctttgca cgtgcatcgc gcgcagtacg acgtgccatt tccatctgtc gaagatatct 2220 gccccggctc tgcttcacct agtgataagg ctgctgcatc tgttttcgtg gctttgacaa 2280 ccctgaccga cgtgctggca cgctacttgg agcatgtata cagcgtttcg agagaattcc 2340 tgcagaccac caagatgtct gagatggatc tggagcagat cctccgagac tgggaggaat 2400 ctttgagtga caacatgcgc catcttgtgt tccgagggac ccgtttagac atccctgggg 2460 ctgcgaattt tcgatcggcg tacctctctg tcaagcttct cgttcgccga ctccaactca 2520 atatgaacaa gcgagccctg gactttgaag atgatatcgt aactccaatc tatgtgcatg 2580 cccagagagc ggcagaagag atcgcttatc tcgtgcagga actagacgaa agtcaattcc 2640 gtggattttg gattccagcc cacgccttct ctttgacctc tgcaaccatg ttcctgctcc 2700 gcagtggtct gcggatgagg aattatggcc gtaacgcggc acttcagact gctcgggaca 2760 tgataaacgc cctccagtct catcgccaaa actacaattg ggatcttgca gacaattgtt 2820 tgactcaatg ctctgaatta cttgagagga ttggtgcagc tgagtccaac aggagtatag 2880 aagcaccaga gttctcgagt attccgatga acttagacga tctggacata gatccttctg 2940 tcttggaaga gttctttggc aacactggct tcggtagtgc tggcttcacg gaaggactgg 3000 aactctggta gcacagtgcc ggaggcaaga tcgatggatg actcggtacg agtcgttggg 3060 gacctgagac ggactcgagt tggagatttg acgggcattg gggcttccgg ccaaacccag 3120 ttctttccca gaatacaggt tctaattccg tcattagtcc cttcccgttt tggcctgttt 3180 ctaagactcg agttcggttc cccccgaag gcccaggctt tctaaccgca tcgctcctcc 3240 aagcgcctat catctactta tccaaacact ttattgattt attgcgaaag atactccatg 3300 gtgagtggcg cgcggacttg tgtacgaacc gtgaagtaac aggatagatg cggtcccttt 3360 accacgtagc cggttgtctg ttactgttcg ctggcgacag agcgtggcgg cattcgaaac 3420 ttttcactag ctcacctgcg ttcgttgaac atcccttccc aacgatcagc gtcgaatgtc 3480 ccqaacttgg ccgctcagga acctacattg acagagacca cacttcagag ggcgccggaa 3540 ttgtcccagc tctagcgtgg ccttctgcaa cgtataatac cgtagagtat gtcctaatca 3600 gtgaagaccc agatgcacct attccagagc ctgttgtcca cgggatatac tatcggattt 3660 cgcgggataa gactggagtg caaaaccctg attttcgcat ccacaacgcc agttgggaac 3720 catacatgct tcgaggcggc ttcaagtacg gaaaaaacag gcatgacacc gtctatgctc 3780 cgccgactcc attccttggt gacggaccgc accgcttctt ctttgagctt attgcattga 3840 atgactcgat tgatacggat aagatgagcc ccttggcgac ctatgatgag ctcaaacggg 3900 aggtctttgg gaaggtcgcc ggttggggtg aatgggttgg agtgttcgaa aaccctcgac 3960 atcaatctga ggaacgtcgc tgattgatgt ttgcaacgat tcgaagcctg gcttgtttgt 4020 tgccaggcgt ttatctttat cggaaaagca atatcgcatg gtgtttccat ccaatggtac 4080 gcaaatgaaa cacaatttcg gtagagttat tgctcaatct catgataaaa gctagtgtag 4140 <210> 2673 <211> 2532

<212> DNA

<213> Aspergillus nidulans

<400> 2673

tctacccggg cattgcggct aaaaaagcga agctcgggct cctaactcat acctttgtat 60 cgagtccgat aattcaatgg attctaccag cacgcctgag gagcaagtat cagaatgatg ttgtgtttgt tggcgagcga tgcttgcaaa tcaaggaagc gatatcaggg acacacctag aggaggtcac tacaaagtcg gacttcgatg cttatatcat ggcggctaag gtcattaacg tcagcacgga attaccctgg gaagtccaga tgaaggccgg gtctagcact gcggatgcca 300 gcctagatgc acgggacgag cttcctcctc agataatggt tcttagcctc gcttcaaagg 360 agctagtgtt cctgtgttat tcacgcgctg ccggacaatt tattcattgt catcgtccat 420 480 tgccgagcga tgttagcacc ttcgagagat tcggtcgtaa tattgctgtc gagccgaggt aagccccct acttgatcct ttgagacagt gctctgacct cgtcataggt ctcgagcagt 540 tgccgtgagt gcttctagcg actactttgg cgtgttcgtt ctgaaagctc cttccgtcgt 600 qcaaqctcaa atgttagaag atcagttgga tcccgtggca gaggtgcgaa cagaaccatc 660 gtactatttt gaaggacccc cttaacactt actgtcgact aataggagcg atttttcgc 720 780 cttgatggcg acatcatctt catggacttc ctctatccga aatctgaaga tggcgataag atcattcttc ttctcttggt gtctcacgag cagaccacac acgctgtatg ctacgagtgg 840 aatgcgcatc agagcctacg acaatctcat ccccgtgtca ctagaaagtc gttaccagct 900 qacqacaggt tgcctactat gctaatccca ttgaccaagg cctcatcttt catgctggtc actacaacta cgatgactgt ctaccggaat aagctcgatc tcccaggacc acctatcaag 1020 tatccaatcc ccgttcctga ccgtgagcag cagaagtcgc ctctttggac ccgatgggca 1080 cggcctctgc gtaatgcagt gtacaaccag atgcatgatg acatttacct ctgccgtgag 1140 gatggaagga tagattattt gggtgttgga aacgaaggtg aagtcgagaa ccagattcag 1200 cttggatact tgttttgcga tgtcgacgct gccttcgata tcctagatat cggctacgag 1260 qqcqqtgatc ttcttctagc cgctggtagt actggggatg gtgggctctt tgtccagaaa 1320 qcccqaqacc aaccccgctg cgttcagaga ttcaccaact ggtcaccggt cacggactcc 1380 qtqattgtaa agcaggccc cagccagaat acggcggcag actgtgttgt cggtgatcgt 1440 ttgttcgttt gctctgcatc atctttcgga cgcggggctg tggttgagct gcgacatggg 1500 attgaagece aagttggaet attgatatee etggaggaae ttteaggage eagagaeata 1560 tggatcctac cggacagcat caacggcggc gttctcatgt tgacatctga ccctgtgtct 1620 tcaqcatttt tatatttacc gactgatttc actgaagaga tatccgctat cgacgaagcg 1680 gattgtgggt tggactcaaa ctcgccgact cttgctgcag gatacatcga gccgggtatg 1740 cttgtgcaag ttactgataa agcgatattt atgggcgcaa cgacggatgc acagttccgt 1800 tctcggagtg acctccatat tggtcaaagc gcccgcgcgg ctgctgtgca tggcccaacg 1860 aacaaagtta ttacggccat ccgcactcac caggaattac aaatacgttc taaaagaatt 1920 actcaactgg gcatcgatct tcagttatcc gaaatcattc cgccgttcaa tatcgactac 1980 gaaccgatct gcataacagt tgaggaattg ggcattggta ctttggtctt cattggcagc 2040 ggcgatggca gggtgctcgt ttatcgcatt gatgatagct tcaaactact ctttgacttc 2100 actgtgaaag tcgagagtga tgatgacata tccaaggcga ttgacagtct agcagtcatt 2160 gcccacgcaa aggggacget tagcaaggca gteetgetet geggettgag gagtggttat 2220 ttqqttatqc ttqatatcqc gatqgatqca ataaatatca atqcqccctt aggtaagatc 2280 tgtgttgtga tatcttgctc taatcgagac gggtttacta atgcatagac gtatagatat 2340 qcqqcaaqcc acaatcaaac acctgggata tacttctgta caagtgcaga gcaccgtaag 2400 cactggttta atgacatgcg gtaatagctt ctggcgatta acatgctctc aagagaatga 2460 ggctagtgac tgtgctattc agcggatatg gataacagac cagaataaag aaagtctccg 2520 2532 aaatcattaa cc <210> 2674 2028 <211> <212> DNA Aspergillus nidulans <213> 2674 <400> tgcgacaaca tcgggccaaa tggcgataac agagttgctt cttgaacatg gtgcgaatat 60 cgaatacaga tgccgcgagg gttgtactcc gcttctgctg gcagcacaaa ataaccagat 120 acctgttgct tgccttttga tttcttgagg tgcagatatt ctggccgaga atatatgggg 180 240 caaaagttca atctacgtgt ctttatgtga aggattttac gaagtgcttt acaagaaatg 300 ctccttggat cccctaaaga gtcccattct cgcaagagta cataaagaag ggtatgcaag atgtcttact ggcggcaacc aactattggc agtcatctca gtgggttcag tatgcgatct 360 ccaggggtgc tgataaatta tcaaaaaaag caaatatgac ccaactgcat tgcttgttgc 420 agcacgcggt gcagacccag ccatagtcca actacttcta gagaatggag cagacccaa 480 540 catcaagaag cccagatcca cagtttgccc caaagggtcg gcaatcagta tctgggtact ccaaagacac gaccaggcca ctaaggtcat gactgcctag tgctggccct aatacaaatg 600 gttcacacag atcgcgtgac ttcaaggcgg cagtgctcac ctactagaat gggaagggca 660 atggttttgg cgtccgtaga tttttgatag gtaggtaaac tctttgtgga tccacaggcc 720 actctgggca tagggttact gtaatacaag ccagtagaac agtagtattg gatgtggcaa 780 tacacttcta gtctaaagct tttagtaatc cttccaagtg ccagatgact cctcatcgca 840 gtctctatac ccaataccca ccaagctata gggtcgaaag gtacctgact gtgtaggtag 900 gctaggaaga atagaccctc tctcaagaat atcacgtcat gcatgcactt ggtgaatgat gagcaacaga aaatgcgatc ataccgtgtc atgttgccgg agagtttgag tatcggatca 1020 tetetataga tgagggteeg gtaegggeae ttgetaaaee etageeegge ggeeagetge 1080 atttgcccta taaaacggca tcaaaccagt tcagaactac tcatcaaagt gcaacaaaac 1140 cctcggccta atgtgacttg tgcaatacgc ggctctggat ggaactcact ggccaggtct 1200

gctcaggagt acactaaacc taccgaagca gacaacgaat aagtgttgaa tgtacatagt 1260

tgaacagcga agtgcctacc tactcgccct aatcaattgg aacgccatct tcggatcggc 1320
cgctgtgtcc gcaaaacaca gcccctcctc tgtcgacct aacatatccc agcacaggat 1380
cttcacgtcg aatggcgatg actggacatc atctgatgaa gggcttgata cgatagaatt 1440
ggagtccgtc gtccgctgcc gctgagacac agcaacgatc gtgctcgtcc cggcataccg 1500
ggcgggtgaa ggagaaccat cttcttcacc tgcgcggttc gcgaagacaa tgatgattct 1560
cttgtcggcg tctgtgctac ccacgtctgc atccgcgtca tcggcgttcc tactgtggtt 1620
catctgcttt gtgattagag gcataaatcg ctggatccag tagttgaatg tatctatctc 1680
tggcttctct gcgagggcgt cgagttcctc acgacttagc agcgttagca ggccatggac 1740
agaatgacga gttgggattt agactcgagg acacggtgcg cgaattcgta ggctgttaa 1800
ggagcttcaa aacggtaagg gtttatgtcc atgcatatc caaatgaggt agctattct 1860
ttgtccggtt tgtcctgcga ctgaggtggc ggagggagaa tagcggcttc accttcggct 1920
ctagcgttta aagaaccaga actctcctt gcgttggga atgtaagct gtggaatctg 1980
agttcggcgg aacctcctca gcccatgttt cgtctgtgta gtagagaa 2028

<210> 2675 <211> 1216 <212> DNA

<213> Aspergillus nidulans

<400> 2675

gcggattcca gatcgatgat cagacaaatc cgcttgtcgg ggccgcggcg agagtcgaaa 60 ttctccagaa gctaggtgcg tcattgctgg agaataagaa tatttttgga ccgtcgggaa 120 180 gaccagggga tcttgtcggt atgtcaacac ttgtcacggc ctgcctccta tgatgcgggc gagcagtgct atactaacaa caggcccatg cgaagactac ttaactcgca atggaagcag 240 tagectegae taegeegage tetggagtae eetgeagaea etecteatee egatetggee 300 360 gtcggaccga acgaaggtag ccggaaagcc cgtaggcgac gcctggcctt taatggcact 420 acgcaagcac gagtcaaccg ccggcatgcc ggtcgagaca gcgacaattg ctcccttcca caaactgacc cagtggctgg cctactcact caaagtccct ttcgagcggc tgctgggcac 480 cacatgggcg aacgcgcagc tgggcactgg actgcctgag taccgcaatg gcgggctctt 540 tgtcgacatg ggcgtgcttt cgctgaaacg cgaggcgatg gaacgaggac tccagaattc 600 gggcggctcc ttaccctgct ttggtgccgg ggatgacgag atcgtggagt ggcgagcgat gacggttgcg ctcctggatg tcctgcacca gcggatcctg gagagcggga agtttggcga 720 780 tgtcaggcta tccctgccgc agattctgga ggctgggtcc tggaaggccg ggagggaact tgcggcccag aatcggccgg agacgagatc gagcccgatt ctgaattcag gggatgggac 840 gttgttctga aatctgttag tctcagacag gggtcagttg caaaattgga tatagttctg 900 cttcggggct cgttaaatgt tttgaccaat catcccagac ggaacaaata tcagcatgtg 960 catgtgcatg tgaattgatt tecegeeee ttttteeete tttgteeeet eetttttte 1020 tttacttatt tattttttt tatcaatcaa caatagccgc caagacccac acctggagat 1080 cttgagctcg agtatacccc gcggtgtata tttaccctct acgtttggga gcccgaagca 1140 tgacatcacc gctagatgtc ctttgcaaga taagcaatgg taatgattgg cgttgctctc 1200 1216 actgcggaca gacccg

<210> 2676 <211> 1746 <212> DNA

<213> Aspergillus nidulans

<400> 2676

acctatcgta cggcaatagc ttcggtattg gctgctcccg agtcagaagc caaacagacg 60 cacctgtttt ttctcgacaa ttccatccaa gtctttctca ccatgacgat gcagcggttc 120 ccgatggcgt cgggagtata ctgcggaggg atctcgattg ctatacggta gggtcccctt 180 cttctagaca acccagctaa cgccaactag tggcctcttt cttctccacc ggcatgttct 240 tgcccaaaca aaagacccgt cgggcgatgt cgactatccg aagggggcgt atcccagctc 300 ccgtgccgcg ctggatactg tgaccaagat cgtcagtgac attgcgacag cgcgccagca 360 gctctcgccc gaccggctcg acgcgtatcc accgacctat gcctacctcg ttcgggcggc 420 gctgcagtat atccacgaag agtgccagcc gctgacccct gggtcgtggc tgtgggaggc 480 ggaaaagcgg ctgcagcatt cgcttgaact gctgaagcgc agatggcggt gacgtcatct 540 gtcatcatac ctagtcttca ggcagaaaac tcaggcagga tttcaggcat atcttagaca 600 gtgcttgcat gatcaccagg gccgccagac agccgtgaca ccctggatag atgtatatag 660 720 gtaacaataa taataataat aataataatg tttatatatc actgtgtgct ttttctaggg

atgctctaat tgctgagata ttggctaaag atcagttcac caagcagttg ggcaagtgta cacctagcac tctagatgca ctctaggtat atatccactg attttgcatg tcaaaagtcc catctgacat ctttcagccc cgcgtctgtg gtctacttgg tctactacgg ctgtcagcag 900 ttgtgaagtg ccgttgtgtg tcaggccatt gcggagaatt ccgtcctcaa ggaagaaccc 960 cttggaccat agttcccagt cattttgtac caacacgatt tgatgggcga gatgccgaac 1020 aggaagcgat gcgatgggga cgacatgatt cgtttatcgg gtgcttgcca atcgatcggc 1080 gcccttctgc cccccgcgtc cgcttaaatt ccaaggatcg agatggctct ggccctggaa 1140 gagtagtggc ggcgggtctt ggagagccct tcaactatca atgatacgct aatacgacga 1200 tggcggagga ttgcacgtgc gccacgactc tctcgccccg ctggagaaac attcttggaa 1260 agtettecaa gaaagteaac tteactegee teetgeactg cagggtgeaa gtteattete 1320 aatccatcgg ctctagcttt gtctagcttc ctgaatgcag ctccttgtgg aatccaaccg 1380 tettatecce tgageteata etgageatge aggaatacet eteaceageg etteggeaac 1440 caccattgcc tgactcggag aagaagcgat tgcgcgaact gtccaggttc gtctcttcaa 1500 ctgcgcaata atccctactc gtactagaga gactcatctg ttcttctatt aggtattact 1560 gtgccatccg cccgtcctcc gtacctcaag atcctgacgc atcgttgact cagagtgagc 1620 ccgagaacga atcccgtctc aatgtcgccc aacttccgtc tgatatcacc ttgaccgctc 1680 ttacgcagct cggcgtgcat cgacttgggt gcgagcggtc gtttgcctcg ctcattgacg 1740 1746 gacaca

<210> 2677 <211> 2018 <212> DNA <213> Aspergillus nidulans

<400> 2677

cgtaactgtt tggatcagat acttcaggct ttctgcaagg ataacagaaa cgggaccttg 60
aaaactgttt ctccgacacc ggcaatccgg ccagatgtcc aggactccag aataccctcc 120
ggcgtgggag ttgacgcgac tgacgaagtt ctctgacata ggtcgcggaa cctaatttgc 180
ccgtagagcg ggtaaccacc gagctcttct agcttcgctt tgacctctct ctgtggccat 240
cttggtacat ttggatggac gtaagtccga tccaacttga tcataacgaa ccagttgatg 300

360 gtagtgtcaa agtttgggat aatggtccag aaggcgtgta agtacgaccg ggtgtagatc tctcctggct tcatcgtggc agtcatctct tttgatgggg tggtcatgcc gaaaagacac 420 atgtagtcga ccgtcatttt gctcttgtcc ttgactaggg ccggcgaggc cgggggctct 480 gttagccgct ccatctcttt cagggtgatt ccgtggaccc catctgcgcc gacgactatg 540 600 tctccggtgt aatgctcccc gttttcggtt gtaaccgtta attgtccgtt agattctgtg ctgcggtcga tgccgacaac tttggcccca actttcacct ttgagcgtcc ttctagagta 660 ttgaagagag cgtatagcaa gtttcgacgt gtgagcgcgg agaatgggta accaatcctg 720 gataagttag teetageact ateaagaeaa agaetgtgag gaateaetee gtaagatttt 780 gagcaaacat cgcgtgtcga tgggtatatc cctcaggtag ccctacattg actgcctgta 840 tatcattcat atatttccac aaatgatcga ggacgcccag ctggtcgagg atgcggcatc 900 cagctggctg gagggcaaca gagccaccaa tattcgtcgt gatatctcgg ggcttttcga gaacaacata gtcgatcccg gctttctcca ggcaatgagc gagtgtgagg cccgagacgg 1020 caccgccaat gataatgacc cgcagctgcg agttgtctct atcgaatgtc attgtggata 1080 gatcctcggc gtatgagcag aaagatatga atataacatc aaagacagag agtgaataga 1140 gaatatataa ggtgtcccac cttggtgtcg tttccatcca ccgcgtatgt gcgagcgttg 1200 atccggttgt ggaagtgttg cttttttgtt agatcttgtt ttcacatcga tgtttgttgt 1260 tggagccagg atttgctacg gcgtgatcac cgacacaact gcaaacaaat caattcaaat 1320 taccctgtgc cttgaagcaa tatgttcatc cggactattg tcgtatcggt acccgagatg 1380 cgacatccat ccataagacg gagtttctag gtgccgagcc acttgctgtt gtgggagcag 1440 gatacttagt cttaaccaaa atactcgaga ccggtgacgc ttctagcgtg atgcgagtta 1500 tcggcctcct acttcgctg tcgttgggct ttccttcttt aattggctca ccaagccata 1560 ctccaatctt gacttgggcg tatctgccgg ggtgagcatg cacgagcgat cacagctgac 1620 actaacagtt ttccgctcag catactgtga tgtactttgc attctctgat tgaagaaatc 1680 ccgtcgcatc aagtgaagct tgtaggatct ctgcgcgttg gtttgcaaat gagcgagaaa 1740 ggcagttgag tctgcgcagt tcctttgcac cagatagagc tgcgggggtt tttgatacaa 1800 tccgaattgc tgggcagctt atattaccca aaaatagagt caggaatcct atttgttgga 1860 atggtgctcc ggatatggtt actggagacc cccttgccgg gctaccctta tttgaagact 1920

· catattccct	gccttcttgc	aatataatca	gctctcctaa	atccaaactt	cattactgcg	1980
gaattcgata	atcgtgacaa	tttttaggtg	ttgccccg			2018
<210> <211> <212> <213>	2678 1168 DNA Aspergillus	s nidulans				
<400>	2678					
catcggaggc	atgacgcagg	taccgttata	tttctacggt	attcttcttg	ctctcggctg	60
gaacgagatt	gttgctggta	agagttagct	ttgtcaaacc	ctctttttgt	tgctgaccgt	120
tgatgccagt	tctgcgtaac	ccggcctact	tcttcctgct	cttcgtatgc	gctgtcggcg	180
catacgtcac	ttaccagctc	aacctatggg	gaccgatcct	gaagatgacg	gaagcggcat	240
ccaaccaggc	gatgatcgag	ggtaagcgcc	ggctgcgaga	gtttctcgag	acttcagata	300
ctgggcgcca	ggcgattgcg	atgtcaagct	ctggctcttc	gcgttctggc	aacgaacacg	360
agatgtcccg	gctcaacaag	caggggaaat	cctcgacgga	cgaggacgtg	gatgacctat	420
gagctattga	tgtgtaactc	tacgtaatta	gcatgtctat	gttcgaataa	ataattatat	480
tattgcgtta	gaccttgtca	actgttctgg	ttattctggt	taatgtatgt	acgtctccgc	540
ttgctggcgg	acttgctccg	aaccggacgt	ccccacctg	gctccgattc	tcatgcatta	600
tttagttgcg	ggacatgtgg	acgtgctgct	ggaggctaat	cgtgacagct	ctaccgtgct	660
ccagactgct	: taagattttc	atcaacagca	gacgacccac	aactgaccat	tttgaccagc	720
tcattatgad	c tactttcgac	ctaccagaga	catttgatga	cctccccaac	aagcgccaat	780
actggcctg	c teegaaagge	tegecegaag	agggcctagg	catgctccgt	atcctgaccc	840
cggacatcgt	tgccaatgca	gcccgccaaa	tccaaacggg	cgagcgggta	tgtctgaact	900
gggatattga	a gaacttgaat	cctccaggtg	ggctaccctc	: atgcagatga	gcctgttctc	960
aactcacaaa	a agggcaaggt	ttcaaacgca	agccctttga	ı gcacaggata	aaatgggtcg	1020
cagaaggcgt	t ggcttttgat	gacgaatatc	: acttcaatco	: acagcagtca	tctcaatggg	1080
acggcctcc	g tcaccacaat	gggcccgcac	: caacggccga	agatcccact	gccgactttt	1140
ctacggagg	a acgageggeg	aaggaatt				1168

<210> 2679

<211> <212> <213>	DNA Aspergillus nidulans
<400>	2679
	agatytaget getetetegea egogoaggga oggeterann arrig
ggtatattca	ggtctcagtc acagggaaca tacagtgaag attatcgtgc ggatgttgtc 120
ctcaaagcca	gctgtgcgga cagcttcctg gtgagctttg ggagcacccg cctcctcaga 180
aagaatgaac	cgggtaccaa cccagacacc ggaagctcca agcatgagag cagcggcaag 240
agagttgccg	ttgaacaggc caccagcagc aacaacctgc acaggcttgc cagtgaaaga 300
gctgatcttg	ccctcgcaga gtttggccac ggtggggata agaacagttg taggaacatc 360
accagtgtga	ccgccacctt caccaccctg ggcgcaaatg atatccgcac cgatatcaat 420
agccttctgc	acgtgtttgg ggtggccaat catgttcatg tagagaactc catttttgtg 480
aagtttatcg	acaacggcct tgggaggaac accgacggca gagacgaaga gcttagcacc 540
gctctcaatg	atgatgtcga cgagttcgtt tagcttgccc tttgtgtagt cgtaacttta 600
acggttagca	gacatgcaac gattatgctt cccaacagta agaacgacag ataaacgtac 660
ttcgtcttac	gcgcgctacc accaacttga ggaagcagca gatcaacacc gaaaggagcg 720
ttcttgtcct	tcagataget ettgageteg geaacttget caeggageat gteaggagtg 780
tatccgacgc	caccgataac accgagacca ccagcgttgg tgactgccgc agccagctta 840
ggcccagcag	g ccacgttcat tectgecage aggaeggggt ggttgatetg gageagatea 900
gtgagcgtag	g tettgatett etetggaagg agteageega agttgeeaca ceateacatg 960
tgataagaac	c ctacgagggg aggccatggt tatggaaaac agagaagcaa caaaggttcg 1020
atataagggt	gaaagaacag tagttcagta ggaagaggga agtaggagga ggataactag 1080
gcggatcgag	g actgaaaaga acagatatag a 1111
<210> <211> <212> <213>	2680 909 DNA Aspergillus nidulans
<400>	2680
gacacaagc	g ctatctccgc tgctttcatg gcgactcctg gcgctgcgct

1111

<211>

120 gatggcacat tgctggcgtt gacggcgaca aagacggggt cgccgcgttc accggtctat cctcatacca gttagctacg gcgctctatg tatcgagggc tggattgatc tggatcgctg 180 acgtacacca ggccactgac tatgtagctt cgcctgcggc cagagcggat aatcctggac 240 attegtgaac egetgegaga tgaactetge ggagaacaeg etetegeegt atcegtetge 300 tgggagaact ggggaccgcg cggtcatggt tctatcagcg atgtatacct cgtagccgtg 360 ggaaaggaac caagacgccc agccgcggcc gccatcaggc ttgttgagaa agttctactc 420 caatcgttag catccgtagg tctcgacacc accggagaga tatggttgag agggccgcac 480 540 cgtgccggtc tgagcacccc catgtagaaa cacaatcgga tagagctgtg tggtccccct 600 tgccggcgag agcttctcga cgtacatctg gttatgcatc atccagccat cggtggtgtt gacgtactcc ccgccgacgt agaagtatga gcggcgatga agagcttcgg cttcatggct 660 720 gtcagtcgca gcaggggtaa aagctaagct gccttgaatg agggcgccga gcgcctgcag gaggcacgct gcctgggtga gccgaaacat cgcggcgcgc tgcgacgtga ggcggaaagc 780 ttgacagttg aaaacacgac agggatctga aaaggcgaag ccgagccggt aagtatccct 840 900 gacagggctg tcaagccgcc aatatgtact caaataatct tagccagaca gcccagagca ctagttatg 909

<210> 2681 <211> 1052 <212> DNA

<213> Aspergillus nidulans

<400> 2681

atatattctg taccgagcct tcgctgtggc tttcaccccg taagaatgtg gtatctagat 60 acaaaagaaa tqcqcataga accaqcaaag ctqqcatqtq aaagtqacct ccccattata 120 accaattgat cccatcggca aagagagcga ggttagatta accactcgcg ctggggtcct 180 ccctctccaa aaacgtcgga tcgacattga tcctcctctc aaatttcgtc caccagtcat 240 gaaaagcctt aagcggcacg acttectgcc cccgattcga cggatcactc gacgcgaaqc 300 tegecaggaa attgaaegeg tteeceaega ttetetgtge cageaeette gtagtaatee 360 ctttctgctg cggcgtctgc ttgatcaaat ctgttgatgc ccctccattg cctccattcg 420 cagcctcaag ctgcgcaagc tgcggcgcaa ctacctgcac cggctcaatt gatatcccta 480

gegteaceat gecaecatte eeggegteta ceatetggte teeceetge geacetgtge ggaccgacgg gctgacttta ataacagacg acggcttctc atttgcaagg gcgccaatga 600 aacggaattc cgagccagga tattgaatgt agatagcagc agctgtgtct tgcgggagga 660 cggtgcccgg aaggaagaag acgactaatt cggaaaagga tggtgatagc gggaagttaa 720 aagcaaattt tgtggcttgc ccatttggct gagggtcaac ggcgacgatg tctgttaggc 780 agggccggcc gggaattatg acggagaaca tggtgactgc ggatgatgga ggtatatggt aggtaggtag gtaggcaaac ggcgtttagt gtaagacgtc aacagtccaa ttgtaagcca 900 960 atgtcatgta taggagttgc gcttcaaaag catcgtgttg tgcagagttc gtggagattc taggtgctgg atggaagctc agagaagcag caaagaaact cgaagcacca gtgacgaaac 1020 1052 catgcattgc ccttatcgat aagggcttgc gt

<210> 2682 <211> 4696 <212> DNA

<213> Aspergillus nidulans

<400> 2682

ggctctctaa gtccgtttgc tattgaggtc cgcacagaca tagatgtgga gaatagcgga 60 caatcagttc gctcttataa gtgatcagat acacggtctt ttttatgcct ctctcttttc 120 taggcgcagg cactatagct tttatattct ctggccgcca ctgcacgcgc ggctggtcgc 180 tgagataatg accttgcgcc ccagcaatga tctgatgacc tacccttgta ctgcctgcta 240 taacattccc gctgtgatct cccaccctag cggtcagacg ccccaagctg aggaccggag 300 acacgtccac actccagatg gtggctatct gcaagttagt aggtacgcat atacgaaacc 360 agccggataa cgctggtcgg tccagtcttg ctagtcttca gaaggtcggc ggtcatttcg attaccaggg cagagattta ttatatctgc tacttcattt atttatgatg gctacggagt 480 tcaacgcaat gtattatacc ccattcagtg ttttatgacc taccttgtca cgcagctgtt 540 ggtcgtatac ggagtgacca aataatcact atctttatat actcttttcc atgtttaatg 600 cgcatataca tttcaggaag agaatatagt tacgagtggt catcatgagt cttcattagt 720 ctqtctqcqq catctactta catattagtg ggctgtttgc gcagtggaat tctgaaggta tcaaacaaat gtcagcatga cctcgtttca atccattctg cattgaggct gcagcacgtc 780 aggaggtcaa cgtaccagat ggccctcggc aatgttagtc gcgactcgct ctaccccctc cgaaagacct tgtacaccag catcccactg ccgaatatgt ctccccgtag cagtcgtatt tgactcgaag tagattatac catcaatctg gtcaatactc ccgctcagcc gcccttgttc taccattctg gctgcatacg cttcggcctt ctcaccagcc gtcagatccc cactagcttg 1020 cagacccaga atagcgccta gcgcggtcgg tctttatgtt ctcgtagagc ttgctcgcgg 1080 ccacgagatt gtgctcaaca acagctttat caagtactgt tgttccgtct gcggtttgtg 1140 cgagctggtg cggggctagg cgctgcgcga acgcagatac ctcttctgag tgagaagcgg 1200 tcgaggaaca ttttctccag gatgccgaat tcttcaacgg aggtcgcgcg gtcatctttg 1260 tacagtgttg ctagagtgcg ggagcgttgt ggaccggccg gtgcgaggac agcgcagcgg 1320 atageggeeg caagggettg gagtetgtea eteteateta egeeagegge gaggetaaca 1380 gcgaagtatt cctgactggc gtccagaaaa cgtctgcggg catcttgaat ccgagcttgg 1440 gaaagccgga agtgcagttt cagctcgtgg tcttcgatct tgctcggcag gttttttatt 1500 ctgttgagga atgcctcggc actagttgtg tcgtcttcct caaggtatag ccgcacgatc 1560 cgaatccaaa gtttcacttt ggcggagtca gagactagtc gctgtgaact atcaatgtga 1620 atcccctgga gcgctcttgc agctgcgatg tactcctcct ctgcttcgta tgcgtctgct 1680 aggatctcgc ggatttgggc gtcttgctcc tcgacggatg cggatcggga ctggaggaga 1740 ttcacagcat gttgggctac tttgatttgc gtctcggagg acagttttcg tagagtatag 1800 atgaaggagt cgaggatagg gcgggcggcg acgatgctga ggtcttcgct taggactgag 1860 tcaaggtagt agatgaggtc gtcggcaagc tggggttcgg gagatgccga cacggtttcg 1920 gagagaaggt cgttgtaaag ttgtagtttg ttctggggac tcgctgatga ttcaatctcc 1980 gcaagagcgg agattatctt ttgggatggc atggggaagg tttggtgatg agttgaggct 2040 ggggaatttg gaggtgggga tctaattgct gcgtgaagct caagcctgaa gatcaatcaa 2100 tacgcactta tcgataagac gtatctctac aggagacagg agcagccact gccgcattat 2160 tgtcgcaaga acttacttta agaatttttc tctggtacct attagattca taaatatctt 2220 gaatcacagc agtgcatgca ttgcaagata tagtcattca tatacgataa cttagagaaa 2280 tacaagagtg tgcagattga cagatgacgt tacgtatggt ctgttatata ttattgctag 2340 atatcctgta tttagctcct taacttacgt ctccgattgc tggccaaaga gaataaacat 2400 ttatgtattc aaactcttat ctcactgcag ccttggaatt gcaatgggta tgatttagcc 2460 aactataagc tttgccatgc ccaaaaagct gtctgtctga atggtagtac agcatcttca 2520 ccgcctttgt aggacccgca ttttgcgatt ctttcgactc gggcggtgca tggatgtatt 2580 cctgagccgc ctttgcatca ttcaaccaac aaccacactc acttggcact tttctcagtg 2640 gagggetttg etgetgecae tegetettae ttgtateegg tegeaeggta gagggetttt 2700 acttaacgca tcatgttttc ccatatcaaa caagagcatg atgcctcctc accttacatt 2760 aaaccggatc ccgagaccaa agacactgtt ctcgccgaca tcgacgatga agacgtatat 2820 gaggatgatg gtgacctaga ctttacaaac gccgaccaaa gcttatggct ttcccgaata 2880 ccccggtcgc tctgggagca ttggtccaag ctggatgatg atgatgaaat tcagatcggc 2940 acagtgagaa tagaagggga cataaacaat cctaaaagag tacggaatag ttctgggctt 3000 ttaaaagact ttaacgcagc taaccgagtg aaacccatag gtcagtttac gcctcaccga 3060 aagcgaggag aaccgcgaca ttcccaagga ctatattttg tcgcggcaga cgctgaattc 3120 ggaaaacctg ctacacatga cccagaatac atatctcttc acagaaaagg acattcctgg 3180 ttacgaaaat cggatggtca cttttggcga agcgaggtct gctttatacg agtcgatgaa 3240 gcgcgatgca aggagaaagg agcggaagaa gaagtgggag ccctatattc gcaaaactat 3300 tccgagtatg tgtagtccgg ttaaaatgaa gcctgtgcgc tgactcagtg gcagagcgaa 3360 ctgctttggt cggacaagtg aaagaagagt tcaactgtct tcctgtcgaa aacgaagaat 3420 tcagaatcct ctcagagaag aaggctctgg aagctctgaa gccgagacga gaagttaaat 3480 acgttgataa aatgccggcc aagttgcttc aacaaaggca cgctctgcct ggagagcagg 3540 gcgcgtttgt ggtatgtccg aatttgctta tacaattggt ctatggctaa ctatgtcttc 3600 agcaagctac gaagccggcc aaactcaaag cgcaggaaaa caagaccact cgtatgccgc 3660 agaacgagct gttggatctt atttaccagt gctttcgcga atacagatac tggccattta 3720 agacactcaa agctaggctt cgccaacctg aggcttatct taagcaaaca ttggagatga 3780 ttgcgcacct agtgaaatcc ggcgatttcg ccatgacgtg ggagttgaag cccgaggcaa 3840 gagagagtaa ctactcgaac gctatggacg tcaaacaaga agccgcaccc ggtttggact 3900 ataacttcga tgagggctcg gaaaccgatg cgatggcatc cggcgtggat aacgatgata 3960 cgcaattcga gaacgtggtc tagagaagca tcttcatttt ttccaatgta gcataatgca 4020 cgttcggcgt cttccgggtt tatgggttat ttgattacgt gtttgggttg ttattcttat 4080
aatagccaca tcattatata tttatgcagc tctctgttta acccattcta catcataagc 4140
tacccagttc acgtagagcg atatataagg tttagtgcac gtgattattc aatagaggat 4200
gagcgccact gcggagttgg agttgctttc atcacttctt gaaacaccac gttattggag 4260
ctttaacttc ctcaccgcgc aaggaaaagg tcgaaggatt tacacccagc taactgtgaa 4320
acccagactt gcggtcaaaa tgtccgaaga tcaggactta atggccagga tcagtcagct 4380
tgctggtacg cgatttgtgg gatgcgtctc cctgtttcga tagctaattt tcttaggcca 4440
gatcaacaga ttcaagaatg gaaatacacc cgttcagtcg gcccataatg aaatgcactc 4500
caattcccat gtctcgcgac atacttccta tcgaggacga cctggttggg ctccttatcg 4560
cggacgaccg tacgggcgcg gtcgtggtgc tgcccctcac cgtcaccgca cccttatcct 4620
taacaactat gcgacgccg cttccaaaag ctcgactcct ccggacggta ggcgaagata 4680
ctacgagaac agtgcc

<210> 2683 <211> 690 <212> DNA

<213> Aspergillus nidulans

<400> 2683

acccagggcc tgcctattct ggtgcgacca cagccgaaga aggcggatcg ggcctgatca 60 agggtctcaa gaaagtcaaa actccagagc ccgagaagcc ttacgatccc tttggcggaa 120 180 tggttccaaa taagagagac tattatacat tgcgagatta ctatccatcc tcgtatcttg 240 atcctatccg tcaagataca cggatgctcg cgggcggata tgaccttcaa gaatattact cacgaaccat gctcgaggca tttgcgggct taggttgctt tgttgacgag gaggttccga 300 tgcgagaagc aaactccttc aacattatga agcctattgc cacacaggga gctgttttag 360 420 cggcgggatc tggtgagggt agtgcatgag catttcttcg aagatggaaa ctacctttat ttgacattct gcattgcata gcggtggcgc taagtttttt tttcgttgtt ttctcgcagt 480 tggcttcttg ggttggttat accaaagaac tggtatacaa ggcgtaaaat aggtgcggtc 540 aatacatatt ctaaaatcac acagtaatat tatacaagtg ttgatacact atcagatcgt 600 660 tccaccggtg atttgttccc cagcttcttg attctgcctt ggacaacatc ccaacgctcc

60

<210>	2684
<211>	4677
<212>	DNA
<213>	Aspergillus nidulans

2684 <400>

aggaaaggcc taggactcag acaattttat agaagcttgt aatgcggcca gatcccttta tttcaatctc agcaaggagc ccaacaagga gcgcaaaata aatgctcttt acaccgcgtc 120 180 cccaggtcgt gcaggtgata atcggaaccc cctttttctg gaggtatgct tcccacttcg ctacatcttc ggtactctgg acggcgacac agaagtgctg cttcaggctg tcaatgtcgc 240 categeeete tttggetgeg tagagetgeg egacgatetg egegetgggt eeatggeeag 300 gaatgacgcc gctgggagta gtaatatctg cgtctgtttg gcccagttgg aagaggagga 360 gagttgtatt gcctagggag aagcaggcac tgcggtgcta ggaagggtat cagcctcacc 420 ttaacagttg cccaacattg ttggtgaaaa gggatcgtac cgattgcatg aacggcttaa 480 tgttcagcac atcctcataa aatttccttg aagcatggat atcgcgcacg tagaggcatg 540 600 tctcqaqqac gtgggtgagg ggaggtgggt tgttttcagt ggccatgatc cgatcctgta caggaacgta tctagttcaa tgttcaaaga gagttctata tcctatctcg taaggactaa 660 acaaatatgg attgagcaca gttgtggatc aagatacagt gagccagctt ctacggagcc 720 cgtcgaatcc atttatgtct aattgattga aaattattgg gttttcggct cgcatctctg 840 gcctgaggca ggctctcact tcaggatgac gctcacatag ttgcgcgtga cccataaata 900 cggactgccg gagatctacc ttactaagca cattagcacc tcggccgagt gcttaaccac tgcttaacct ggttgtaact gcccaaataa tttgttaaca tttccttcaa tgaggctctt tttaagagtc tcgaaaagct acaaactgtt tttatatcat ggatagggca tcagatctca 1020 attatattcg tttgtcgcag acgatggtca catgatcaag atcgacgcta gcagctctta 1080 gagtgcgggg tcttagctcg gcgtggctta ctctgaattc cgcgaacatg gctcagagcg 1140 cggaacggat aaacatttta aacatccgaa ataaagttct gactaatata ctggctgtca 1200 catcaacatc ttcgcttcgc ttcagagtct gtcccagatt acgaagcaca ttcatgaaaa 1260 cgcctaacta cgctcctaaa caggtcttag aaagcctaat cgttgagtac gattatcttt 1320 tctattaagt tgtttcaatt ttagttattt tatacgagcc tattcactag taacaatact 1380 tgtaacaata cttgcttctg atgaattctc tctcataagg ctttatccta caattattag 1440 agagagettt etetaetata getteaggtg ettatggget gattteatag teteateaeg 1500 tatactagtg aagaatgtca gaatgcaaga tgccagaatt gtctgaaata tctaccgtta 1560 gttctcgtac ttgttaaaga tggatctaaa ctaggaagtt ggtgaacaca cccgaactta 1620 ccagcettga ttgtagaete eegcaacage tteagageee aaccaaagee acaatataga 1680 agatatgtcg ttacgcgtaa atcactcagg ggaacgcatt tccggatttc tgcacgaacg 1740 atatctatct gctgcgcttg acaagaaaaa ctccagttgc tctgggtggt attactaatt 1800 ccaccactgg ctaatggttg ctgtttagaa taggaggaaa cgacgctaaa cttctgtgtg 1860 gacgctcgcg tcggcgtcaa gttagtggct ttggtggaca agtcgctcgt aaagcctggg 1920 tttagatgcc gtgatgtcta tcatgatatt cattgtaaga aggaggtaaa agagatctat 1980 gatagggaga ggcttgtaaa caaagtctta tagacaggga actcccaggt acagcatcat 2040 ctcaaccgtt cactggggag ttgatacata cgagtacggc gaatgagaga agcctacata 2100 cctaaattgc tatgatttgc taataggcca gttttagtgc aattacaata gtttagactc 2160 cgtcagtgga tagcctgcgg gaaagagatg gacctctagg ccgccagctg tgatgtcggg 2220 agcatcgcac gaaatcaacc aaatacgtgt accaaagggc gctgtgacga tatataccac 2280 cgaagctctc gataaggatc tgtgatgcgt tcggaggagt ctctcgttgt cttctctgac 2340 tgtctgctct aatccagcgc ggaaggttgt cctctcacca ctgccccatt ccaatgactc 2400 ggctcctatt catgttagtg gtacagatgg tatagggggc tcgcccctta tcttggttga 2460 tgtactttgt attagacggt actcccattc acgcttctct ggctccgggc ggcggtgcga 2520 atcttgccgc gtcattgaca gccaggtact gatatagggt atggctgctc ctaaaatgtt 2580 cggtatccat atggtataag cattcctggt cttgagagtg cccggcatgg ccaaggtgaa 2640 acctatgcga aagagccttc cggggaacaa tcccaggaag atgtcactac tgcacaatca 2700 aactttcaca agcaaatata gacccctacg gtttatagct gacgattctg tatctattac 2760 tgtatcatgc tgggggttat ggaagtacag tcctttgtgc tgccattccg tagctcttgt 2820 atggtctata gggttgcttt ctttttaaac agcaatgaaa gttactgagc taatcctcga 2880 ctatgagtga caacaaaagc ccaagtcagc catgaaatat ctttctctgc cttatcaaca 2940 accaatacac tatgctgagc cagtaaaaat gcaggaatag acggcttcct cctaccggtc 3000 attaacccct cgactaccct tgcccctcgt tcgcccacgg ccaccactcc atcattcagc 3060 aagcaaaggt teeettgete acagteeeet ggeaateaat aegeteeatg ttgatgeeat 3120 ctaacatgtc ataattgtct ataattctaa catgtgttct ccaaggcaga acatcccgaa 3180 gaaagtacgt ctggacaaac aaaaacacat ctccgttgca tacccgggga tatacactag 3240 tatcttgtac gcgtctgggg aaaatggtgg ttctaccgtg aaatgatccc agggacacgt 3300 tggtagttca tatttgaaaa tattactacg caaaggctaa tttgcctacg gttctagttt 3360 taaaataata gatcattata tatctactac gtgattatat tttctgtctc gagaggcttc 3420 agtgattact cgtccgtctg gcataacgtt gatgccagtc tttagcgcta atgtcatatt 3480 ggtatttaac gcgtggaagg acttgttgaa ttcaataaga cgacacttcc tcagtgagcc 3540 caccgcttct tcattttatg ttttggtaac gtttactggc ccagggacta attagacgtt 3600 ctaatccagt ctattagtac atatcgagcc ctctctacaa cacacaacac ctttctcttc 3660 ttgattcctg ccagttgttt ggtaaattcg aatgacatgg cagacctaaa aaatacaata 3780 gtcgcggcgg catttccttc gacgggctat aattatttgt ttcagattgt ttcgaagtat 3840 atacatteta agaegetgae eeacaateaa gtaacaagae ggeatgggta geteeacett 3900 tcctttccca agcaccctca cttcagggtg aggagccctg gccgatatgg cagaaggtcg 3960 tagccggggt tgaggctggg atctcggccc tgatagagga gctgcaggtt gcaagggtcg 4020 atgctcattg tctgatccgg ggtactgcgc acaagaatcc catggctgat atcgtccgtc 4080 caggtggcac cgctgattgc tttgccagca aaaggtgcgc tctcagtggc cgcctgcggt 4140 gtccatgagc caccaaggct gtcggcagtg aatgaccgga aatagcgccc ctgtgccccg 4200 atcgcttcga caatcattag gtatgtgtct ttgctttgac ctgagaccgt gtacacctgg 4260 acagcttcga acaagttgtt tctttcatct gacaggataa tctcggactc ggtaccgaaa 4320 tcgccgggga attggtcgat gggcatactg gcgcgataga tgcggccgtt gtctcccgcg 4380 aaaaagaggt acattgttgt actgtcgccg atgactgtct ggtcaatgac cccggtgtct 4440 gagtctgaaa ttgacccgga aaagagcggt tggggtgatg accaaccatt ggcatcggtt 4500 ggatcactcg acgtcaggta ggaaaatgca gtagggcccc attggtacgc gaggatccag 4560 acatectigg getegaagta gaatagegtg ggegegaeae eegeeeeagt eattgegtte 4620 tggetegeeg agaceaaate ggaeeagtte gagaagagge egaaatteat ggageeg 4677

<210> 2685 <211> 2131

<212> DNA

<213> Aspergillus nidulans

<400> 2685

caaatctctg agcgaacctc gcccaaatct tcttcctgct gcttgacccg ctcctgtagc 60 120 tctctgagcg ttttatccaa ctttctctcg tacgtctgga tttcggacga gcttgcccgg ttttcgtcgt aaaaattctc agcctttcga cggtcctcag caaaactcag cactttctca 180 attcgctctt gaggtatctc catcttgcga tctgaaaaca ttatcacacc agtcacgctg 240 tttgtccaaa cgcgtctgtt cttcgacgca ctcgggatag tccaatgtac gttcccacgt 300 gatctggctt acctggagag gactagcgtg gagccaacga tcgcctcact ctcaacctca 360 cetetteace tetteacege gacaacacet cetgacaact ceteceegte ttgaacteet cgcctttgct gctctcgtct cttttcttgt cgacgtgctg atcgcgcctt actggttgat 480 tttctgcatc aaccctacac tctatacgag tatccccgct cttcagagcc ttgttgcgat 540 600 agttgtgttg tacaccagca cataacgaag cgttcgtaat ttagagggga aaagatagat cgagccagca gtccgtccac ttctttgagt ctctttctta ctttgataat tcctcttccc cgcgcattgc actcgtcagc tcccagcacg cccgaccctt gcagtatatc tcctacttgt 720 catcgcccaa cacaagcaca ctccgctttc atcgtacccg atcagattca agtcgtttcc 780 tettgtetca tectatecca acaetgettt geetegeaaa geeteetgee atacaagtet 840 ctcaacgccc gtcattccac agcatttttc tacgtcgatc ctcacttctc ccgcctcact 900 tectacactg tgcacgatta caccaatect tecegtteet caageaceag attecetace caatcgatcg ccgaaccagc acgcttttct gggaatttct ggtgtacata gtcgatcaaa 1020 taaagcaaga caagtcaaga cagatattct tccattgcga ctctttttga gtaagcgaga 1080 caagactgca ccgttgaaat aatgtccgcc tccccgtccg cgttacaatc gaccaaacgt 1140 cctcttgagg acccttcgtc tccgtccgga cccaatgacc agcctgaggc caaacgtcct 1200 gctctggaca aagtagttaa aggagaggag tccgagaaca atgcagaggt gaagaccgag 1260 tctggtgccg cgaatgatgc agatggtcag ggtgatactg ttgtcccaga tgccccgaag 1320 ggaggcgtca gtgaaacaca accgattcag tcgactgctt ctcatggtga agcggcgggc 1380 aaccagagcg agcagcagcg gccccaggac gagtctaact ggatccatat ccgtgctgta 1440 atatccagcc aagaggctgc caccgtcatt ggtaagggcg gggagaatgt atctcaaatc 1500 cgccgtttgt caggtgccaa gtgtactgtt agcgactact cccgcggtgc tgtggagcgt 1560 atcttgactg tgagcggccc gcaagatgcc gtcgctaagg tttgttttaa tccgtggtac 1620 cttcttgagc aatctcactg accatttgat aggcctttgg tctgatcatc cgtacattga 1680 acaacgagcc ccttgatgct gcttccacgg ctcaatcaaa gacctacccc ttgcgcttgt 1740 tgattcctca catcctcatt ggttccatta ttggcaaagg tggtactcgt atccgggaga 1800 tecaggatge etetggagee egteteaatg etteggatge ttgeetteet ettteeactg 1860 agcgatcttt agtcatcctt ggtgtcgctg atgctgttca tatcgcaaca tactatgttg 1920 ctgtgactct tgtggagcag cttacagaac gttttggagg tccagcagcc tctgcttatg 1980 ccacceggag eggeggteet getggageeg teccaggtgg tatgeaggtt gtacettaeg 2040 tgccccagcc agctggtggt cagtatggtc atccggatac aatcaagaaa caccacccgg 2100 2131 gccaggccag agccggtgct ggagcctgtg g

<210> 2686 <211> 627 <212> DNA

<213> Aspergillus nidulans

<400> 2686

gcaaccggcc gcataatacg agattcacta tagggatccg tegectecae ggceaaggtt 60 cegtgetccg ccacctateg cagatgcegg caagtaeget catacggeeg gccaagetce 120 gcccgcgcgt ccacgggegg cgtcaggage tacgcetggg cetecgcae cacctegace 180 cccgaaaget ceggtggacg atgegeegee teggtttggg gtaccacege cgttccaggg 240 tgagcgcaag gtgtcageee ceceggcaee cecaagtege ageceggeag gaceteegee 300 teetecaceg cgtaccgcaa gtcccgctae accaccteaa ctcccgccaa aagttcccgc 360 attetectaa ggeeeteege cgcccace aagaageeeg geeteecaae cgccgeeee 420 tccacctgta cetggtgcat cgcggccagt teetecacet actgcaageg ttccaccace 480

acctccacca	ccagcacgcc	cgacaccaac	tgtaaccgga	cctccaccac	caccgcctcc	540
accaccagca	agttccggac	ctcccatgcc	acctccaccg	cccctccag	cccctggaag	600
ctccgcgtcg	ccgccgccgc	cgccgcc				627
<210> <211> <212> <213>	2687 2973 DNA Aspergillus	s nidulans				
<400>	2687					
gtctcacgca	tggacataga	attaacacac	agtgtcagca	gccaaagaaa	cacataaaaa	60
agcccgaact	ggatataaga	aagaaaggga	aacgacacta	aatttggtaa	taagatcaga	120
gagcaaatac	tggcagggct	agcgccatag	cccacgacca	agccatcgag	cctggagcac	180
ggtggagagg	cgacgcagca	cccgtaaaca	ccggtgctgt	tggcgagggc	gtcacggtct	240
gcgacggcgt	gtttgtggcc	agggttgttg	tccaggggtt	ggcgagggtg	gttgacccag	300
ctcccgagcc	ggagccggaa	tcagagccag	aagtcggcgc	cgcggtaggc	tggggaacta	360
gctcgatagt	agatgtctgc	accgggttga	cgcccgaccc	agcagtctcc	gtgaccgtgg	420
cagtggagaa	tccaacttgc	ggcacggtga	cggtgtacgt	tgagtaagta	attgtcgtgc	480
atggaggggc	cgtgggaacc	ggagactgcg	attcagagcc	agtctgttca	gggctcacat	540
ccgtaggcgt	cgcggcggga	ggcggggtga	gggtgatcgt	cgtaggaaca	ttggtgatga	600
ttccggggtt	ctcagggaca	taagcggcgc	agataccago	catgtaggag	agagcggctt	660
gaacctcgtc	tgcatcagca	ccccatgcct	ggatacaaga	. gataaccttc	tcggtgaact	720
cggatgaggg	gcagaagcag	gtgatatcgc	tgttggactt	gcagtccggg	atgaggttga	780
gccaggtatt	gatacattta	ggaacaacgt	tggggcaaga	ggtcgttggg	acgggggtag	840
aggaggtttc	tgtctccgag	ggggttgaag	gagtttcctc	aggagagaca	gaggttggca	900
cggcgatggt	tgaggtagaa	gtcagggtct	gcgtagagat	cgtggtgtaa	gttgacgtga	960
ttgtggaato	gccgctggtg	attgtggttg	ttgcagggca	ı ggtagtgaca	gtcgtgtatg	1020
					gggaggacca	
					gtgggtaagt	
					tagtgactgt	

ggtgtaggtg atctcggtga caggagtttc agggacagga gtctccgagg tctctggggc 1260 ctctgggtgg tagtagggtt gacgtcggtt gggacatcgg gggtttccga tggaacagca 1320 ggggtctcag aaggcgatgg aacaccggtc aatgtgcagc gattgcagat ggtggtcgtt 1380 gcagtgatgg tcgtcgtgct cagagtgctg gtagtcacgg tagtaaacgt ggactcgtcg 1440 gaggtgatcg tatcggtaac tgggcaccaa gtgacagtcg ggtaggtgat ctccgtagtt 1500 gtcatgtccg gaggaatgac cgaagaccag ccaaggctga cgctggtggg aataaccggg 1560 gtagtggttt caggggcagc aggcgtcgac gtctcagcgg ggattgagac agtggtagtg 1620 gtctccgacg aggaggtctc cgcaggaggg acgtcttcag tatcagttgg agtggacggc 1680 gtctctgtag gagttaccgg gcaccaggta gtggacacga ataccgtcga agttgtcacc 1740 gaggtggaat ccgcagggca attggtcacg gtagacgcac actgcgtgat agtaatctcg 1800 ctggtggtgt agacggttga gatggtgaat ggcacggagc tgctgccggg gatgctcgag 1860 aaggacgtag tagtaggcgg gatgacagga gtggacgagg tgacagggct ggagccagta 1920 ggagtcggga caccgatcac aggagtgctg ctagacgtcg gggcctctgg agtaggcgtc 1980 gcggacggcg tctcggaggg agtctcagca ggaggagtgt acgtcggctt gcctggacca 2040 cagacgaacc cgatgcttcc aataccgaga tcacagtcgt cgtgctcgct gtcatctggc 2100 agctcgaatc caacagatgt agcaccaccg cactggtcat tggtgacttc cgtaccagcg 2160 gaagagcacc gtgcgtgctt cttgcaggtc gaaccgtcgg gcatgccaaa ggagatgacc 2220 acgtcggcgt cgacggaggt gaagaggtgg aacttgtcaa tggagaagcc agccctgtcc 2280 tcaccgcacg agatggacgg gccggaggac tttgtgatac ccttgccaat ctttccggta 2340 atgcatttgc tctaagaaga agaatattaa tggccgtcga cgcttttcgt cagagggcag 2400 ggtccctata ctcacattga aggtccgggt acgcagtcca ccgaaaccat tgctgcagct 2460 gaagccggag aagtccaagc caccgaacga gctgaagtcg ccaatatcga ggtcgtccag 2520 gtgaagccag actgctgctg ctcggtacac tcgttgtcgg tgttatcggg agcagtatag 2580 cattegteac tacceccaca etgecegeeg cecateaggt aeggatetat atetgtagaa 2640 ggaaccttgg ggtaactcac caagccagtg gcccgggcag tggccagaag ggaaaggacc 2700 gagaccaaag aggtggtctt catggtgttg aaaagagcgg atctattgag accaagatat 2760 cgaaaccagc gataacagaa gcaacagaag caaagtgcag agtcgggaaa gactgagaag 2820 aaaggacgag actaacgagt gtctgtctaa cagaatacat cagaatatca agagagaaaa 2880 gagaatgaaa cgatgaagag aatgagtaga cccggaacac ccccagctg gggggtgggc 2940 gcagggtctt tatacgagag ccagcccgta gtc 2973

- <210> 2688 <211> 1341
- <212> DNA <213> Aspergillus nidulans
- <400> 2688

gagttgagga ttggggattg agggctcggt gctggtattg gagcatgatg tgcttgttct 60 120 agggttgctg aatatcgaga tatcccttgt gtctccggtg tctgacgcat caccagactg ggagtgttgc actctcatag tttgtatact cggctgttgt gtgagaccca caccagagtc 180 gtaccctgtt gccgaagccg tctttggtct gggatttgaa attggagcct tcaaggcaag 240 ctgggcttct gttgtaatgc tttccccctg ttcatcttgt gccgcgtcgc ggtccccctg 300 gttgttagcg agagaggga ttccttgttc gatttggtac gcaagtaagg aacaggaaaa 360 tctgattttc gactctagct ctggagatat ctcttgtcga ctaataaatg gcgacggacg 420 tttagggggg gaaggcgtgt cgacaaaatc atagtaccgg gtgggctttt cgtctagggc 480 tgctgcgaac gttggtttct agatctgtaa gagtgggttc gaaagcagtt atatctgaaa 540 cttacctgcg agccgaatat aagagacaaa gaggcgcgcc tctttggagc ggttctagat 600 agaaggacat ccatagtgtg gatggaacca tgtagtttgg cgtataccgc caaagtatat 660 gtagttggac cacacaacta caacgcacag agcaaaaaca ataaggctcc aggcaaccgg 720 tcctgagcag taagcgggta caaaggaaaa agaatgtcaa taaatcaaga tcaggcgaaa 780 cgagagagga cccagcgcaa tggactggaa tgcggggata tcaacaatgc ttcgagtcga gcctcgaccg aatgccgagc ggggtctgaa agcctccagg gctaattcca cgagcagacg 900 atgcagaaac aggaaattcg agatctaaac gtgaacgggc acctaaaccg ctgatctttg ggcgaagagc tgctcgagca atgcaagcgt tgcgttaaga gaagccgaat aaagagcgta 1020 agggctggtt agccgaacag ggaaagagag aatactccca gaaaatacag aaggaatgac 1080 ggtgatggat gagagaggaa gaaaaagatg aagaagaaag aaagcagaaa acagcagccc 1140 aaggtcgcac ggcatcacga ggcccgtgaa acaaagccgg cagtatcctt gaacaagcct 1200 ccagagggcg aatcttgcag caaaagcaat ggctgtcatt tgccaggtgt gggaaacaga 1260 catacactct ctgagactcg acctattggc cgcagccgga tcgccgtcgt catctcgatg 1320 gtgggaagcc gcaggataag g

<210> 2689 <211> 3251

<212> DNA

<213> Aspergillus nidulans

<400> 2689

tgtcggttcc gatgctgcgt ctgctgctgg ctctgctgct ggctcggatt cagctgctgc 60 atctgttgta ggtaccgctg ctgcgtctgc tgtcggttct gctacggcgt ctgctgccgg 120 ctctgctgct ggctcggatt tggccaccgg ctgctcgttt tcagagggct caggtggagg 180 tgactgtgtt gctccgccct tcttcttctt cttcttttcc ttcttcttt tctttcccga 240 cgaagctgtg gattcttcgt ttagctcctc tggagcagct gcaggctctt ccgtcttttg 300 aacgggctca agctcgggct cggcggctgg tgctggtgct gcctccagca ctgtttcagg 360 ctctgtagtt ggcttagctt ccgccgctgc ctctggctct gcttctggcg ccgctggttc 420 aggetgegta getgettegg getttgtage tggtgetgte teegeegeeg eetetgaete 480 tgctgcttct ggcgccgctg gttcaggctg tgtagctgcg tcgggctctg ctccttcttc 540 cggtgtcgct gtcgtttctg gctccgctgg ttctggttcc gctgctggtt caggctccgt 600 cgccggttcg gattttgttg tcggctcagg ctcaggctcc tctactccat tcttctttt 660 720 cttcttattc ttcttcttgt ttttcttgcc agtgggcttg agttcctccg cggatgactc aggtggagta tcagccgcag gttcctcggt cgtctcagtt gcagcctttt tctcctcact 780 gggcgccggg ccttcttcag ttgcggtttc tggggcgggt gcttctgcta ctgcgtccgt ggcagcaggc tgttctgctt ccgcagccgg ctcgggcgcg gcctcttcgg ttggcgcagg 900 cgttgcctcg ggctctgttg tggtttcagt ttcaggagat ttcgcagcag gtgactggtc ttcggccggt tctgcagtcg ctggttccgc tgtctcttcc gcaggcttct cctcagtagg 1020 agectegtee geegegggt eggeaggage ggtatetgtt tgttegeteg gtteagegge 1080 cggctcggcc gcttcctcag ctggcctttc ctcagcagat tgtggagcag cctcttcggc 1140 tggcgtctct gcttcaggtt ctgagccttc gggtttaggc tcttctactg tatcgggagg 1200 tgtcgtcgca cccgatgatg ctatcccgct tagcattata cgcttagctg gatacagttg 1260 ggcggcatac cttccgcctc cggtgaggaa gcgttttcac tgcttgattc atctttctga 1320 ggagcatctg ggactggggc ctggtccttc tcagcttccg gggcatcggg tttgttgtcc 1380 tgattattag ccgtcagata atccgcagag acaggatggt atgagaactg agccgtataa 1440 cggtcgaagg tttgataacg aaattgaaga ttatcatcga aagattgata actgtactga 1500 gggagctgtg catactggat cggggacccc atgttcctcg gattccgccg ggtcggaaac 1560 tggtttggaa acctctgggt tgagaaagtt gttgtcgttt accggagccc ttttggcgct 1620 gttaccette ttettattat tgeegeeett etttttggee ategeaaggg tegggtggte 1680 aggagtggtg tgccagctct aaaaatatga taggttcgtg tgagctgagg cttgaggcgt 1740 gaatataaaa aatcaatcag acatcagatc acggtcgctt gtgtaatcgt cggttcaggg 1800 ggcgtgacag gtgagaaatc aattacaaac aaggaaaaaa aataatgagg cgacgagaca 1860 ggtgagaatt tggatctggg agcagaaaga cactggatag cagggttcag cagctgtcca 1920 agtettattg gategaacae aggaaatege ageggggaat eeegtetate egeaageeee 1980 tgttgaccaa ggcgaggcga cgtatcgcag tacgtccagg atccagttgt ttggaagtct 2040 cgagattttg gccttgagac tgcggatgtc attgacgaac tacccaaacg gcatcttagc 2100 tcattgggcc acgtctcaag gccggtgggc cgactgagga caaggaaaga cgcccctctt 2160 cgggagcatt gctgcaaagt gcaatcggtc tgcatcgtgc aatgatagct gctgcatgga 2220 agccagtagg agcgaagtgc ggcattgggc ctgagtgcgt ggagatagtg gaatagtggg 2280 gtgtaacaat cgtccgtcgg gctctgaatc cagagagagg ctgggccaac agttaggcga 2340 ctcggccagt tagtatgaat caccagtccg actcagaaac agtttacgac ggagtacaga 2400 taggcccgag aaggttctct gtcgcaatcc gcaactgcat gcattttggt ttacattctc 2460 ccaggaagcc gtatgaagcc gtattccctt gcttgggcag gtactgtacc tgacacatct 2520 gaaaaaaacg ggaccaggca tcggactctt aactcttttg tctctcggcg tcgaaaataa 2580 tcaattctgc attcatcagc atagccatac tatggactgt taatctcccc accaagtctc 2640 tgcccaacac cacctgtttc gggcgagata caggaggctg ggaccgcggc gtgggaggtt 2700 ggcaggccgg cacctgggct tcaaagtgcg tggaactacc gggctctagc ggactcattc 2760 tgattgggaa gtgaggatgg agatgatgat gctgcagctt ggaggataat ctggagtcaa 2820 taatgacgtg caagatgatt tgagtatcgt ccactgtttc aagatccaag atgggcgga 2880 gcaggtcggg gcgtggaaac agcaagaaag gcagtggcgc tttttctcca cgaccgccaa 2940 atcaacgctc cacgtcgatc agacacagac cacaagtctc caccaacaca ccgaacgtcg 3000 tccaccgact tttgtcttta cttgagcagg ctgactcaca ttaatgaccc tcttagcact 3060 gtttctaagc ctactgggtt gaattctcga gggcaagaaa agagaaaaga aaggaaacct 3120 gaagatactc tgaattcgcc cgggatcatg atcaacatct aggatggtct caaccactgc 3180 caaactcgac gaaaacgcgc agtggcacct agtacaaagt gaggcagacg ctatatggca 3240 gtcgacaagt g

<210> 2690 <211> 2206 <212> DNA

<213> Aspergillus nidulans

<400> 2690

gcgttacccg cgctccagac gagtggtcgc acagacatca ccaatcatct tcgtctgttc 60 ggtatcatta ttagctaagt cgggctccga aatagatggt tcagcattat ggaactgaac 120 180 aatgtctcag ttattttagg agcgttttgt ttctattcag atataacaat tgccacgctg ctcaggggag agctctggat acttcgattc gaattccaag tgtccaaaca gcatctctgg 240 caaacctacg caaagtcaat acggctcgat gagttagcaa accaagccga ttgggtgccg 300 cttctgacca gctgacttga cgggtggact tcgcaatatg ataacaatta atgacctgtg 360 acgaaaactg gagaatcggt ctttggtggg cgcttgggcc catcctttcc gacagaacgt 420 acgagaacca ttgccgctca gtctggactc tagacgtgac ccaatatagt tcgtccgtct 480 ctatgctagc ctatgctagc cgttgtgggt agccatgtgg tctaagccat gacttgcagc 540 ccgacgcctg ggcaaatacg tggaataccc ttcgatttct agccagcgag tgattaacct 600 teggcaagte tgettaegee gggetgetea ttgttgggga ggtttaetgg teageageae 660 acgageteta ttecacaage agtggetega ttgagecate eggaetttee aacaaccagg 720 cattcgtgga caagtggtaa ttacacaaag cagacacgct cggcattagt ccaaggactc 780 tcaaactccc tgtctcggcg tcccgggagg gtgggatctc gtcaaacaga atccggagca 840 900 tatctactca atgttgacca cagttatagg ttgaattcgt agactctatt acacagccac

aatatttgca tatgcaaggt gatcatgtgc tatgcctgcc catgcgacgg taaatctcgc 960 ttcgaacaga cgaaaagtga gctgccgaat gctctccacg catttatgat ccaactggcg 1020 gacagcataa tggcggctac gactgttccg cgtagggact gcacaatatc tgtaacgtaa 1080 tgtatccaat taactcaacg gtatgcccgc atcggaacag tatgtgatat gacatgtata 1140 tatcactaat gaagagatat gtccgtagag tcacagcacg tcaaggcaag ctcacagata 1200 gaatctgact tggctgagga tcatctcccc gtaggcgagg ttcacaaagt gactacttag 1260 gtacaaggca agagccctag tatactggca tattatgtgg tgcgtacagc atgtacgtgc 1320 cgtaaaaggc agatcaatgt cgattcatga ctacaggtcg aaatcggcgt ataacctttg 1380 tgagttagca ggttgggccg tagccaggtc tgacgggaaa atatatgctg catcaagact 1440 gggcgccaca ccaaggatat catctcgaga cagaactaga accagaacat acatcacttc 1500 atagaaatca tgacaggcaa attagagagg acattaggga cataagagac taggcaaggg 1560 ttaagagttt gctggcagag gtgggacaga acaaataaaa tacagccgaa ttagacaata 1620 ctcaaccctt tagcgacatc catggagtcg catatcccca agacgggtca ttggcgagca 1740 tagggettgt tetegtatee ggagaaacce caegegttet teetgatage ttttegetet 1800 gctttctgct aatattcgag taacgggatt cagtatctgt gtcgctggtg taagaatccg 1860 tgtcagaaga gctcagataa gtcctcggat gagaggaaag ggtcgggctc aaaggccgtt 1920 ttcgtctgga agttgtattg tcggagcttg ggtttttctt tggtttctgg aagcgagagc 1980 atgcattttg gaacgactga cgccttgcgt cggaggagta gacaacagga ccactgcctt 2100 gttttgatca aacaagtggc cccggaggag gccttgccgt tgtacctttt gaaagaatag 2160 ggggcgaaag gtttaccccg gtttaaagga aatttttgca tcgaaa 2206

atttcactga acttgcaatt aacgacctca caatcagaga acgcgacgac caggcaacaa

60

<210> 2691

<211> 1068

<212> DNA

<213> Aspergillus nidulans

<400> 2691

catattegee gagaetgtee tetteaatee aacteeagea teagteaege ttgtatgtet ccccttctat taatccttac taagaaagaa aggtgatgaa actgacatta tgggataagg 180 gcqacqtqac cctctccatc ttgqccqcca accactccat cggcacggcg acgagcagca 240 tcaacaatat caaqtccqqq aacaataccc tqaqcatccq tqcattcctc qatqqtqacq 300 tattggaaga gaacatttct ggaattatta gagagcagat tccgtacctt cggaaggggg 360 atattaagat cacagcaact ggcaagtcag tggtgtataa cgggcagcat ctcgaatact 420 480 gqqaaacagc gctqcaggcc gtcagagtcg aggtgacgag gtcggtgagg gaggtggtga atatggtcct tgatacgctt gacggggatg acattgtagg tgaagatgga gatgattctg 540 600 gctttggaat cttcgggttt gaaattgata ttcccagagt ccaagagggc gtaagatctg 660 ttgttgaggg gettgttgag cagatettgg atactgetaa agggetggat gagaatgagg aagacacatt tacggaggaa ttgactgttc ttgggaggct gatattgcga ttgctgcagg 720 ttcttggggt tctgtagacc tgatagcttg ttcagtaggt ttaactatgt ttattctttg 780 cctatcacac gccagaagta aacgcacttg gacggacagt cqgaagacaa agcttaccgg 840 aaggegegeg acacagtett gatgttaagt tggtttagee teatatteeg ggteatatee 900 960 atcagtggca ctgtccaatt gttctggcca tatcagtctg gaggctgcct cttatatcat 1020 ttactaatca gataatctac caggttcagt cacacagegg ctggtgat 1068

<210> 2692

<211> 1307

<212> DNA

<213> Aspergillus nidulans

<400> 2692

gaagctaaat atctcccacc agattgccga tgctgttgaa cgcgcgtcgc aagaagcata 60
tgcgaaggaa gcccgtcgcg cgaaggcgcg tgcatctgct aatgctggag gcgatactgg 120
tacccaacaa tcatttcttc ttcctgattt accgaacctt tcggatcttg tttctggtgt 180
ttacgaagac ggaatgccgg tataccacaag accacaagg accaggacca cacggtttgt 240
ctcacctcct gccgatgtta cagatgcttc tttcagtcgc gaacatatgc cacttgacac 300
tataccaatt cctgaggacg agaaggcgct ttttgtgtca ttgagactcc tacaagataa 360

agtttcagaa ctcgaaaggg ccaaggccga tgctgagaag aagctggaag atatccggca 420 ggaaaacaac tttttgaagg gaggaaaggc ccgccaaagg gaacgagaga gccatggtaa 480 acgctacgag gttgaacaga acgactataa gaaggaccgt ttgatcaacg agaaccaaag 540 taggctagcc ccgtgtggtt tgagctttcg gtgctaacga ctttctagag ttggaatcaa 600 caaacctagc acttcaaaat aaagtggatc ttcttgagcg caagagcgat attcaagaag 660 cagctttgaa aaagcttagt aaggagcgtg atatggccgt ctctcagctg ggtgtggcat 720 acctcgagtc tcaggacctc aagagtgaaa atgaagtcct acgggaggag atcgctgagc 780 ttaaagctcg gtttgcgcag ctcttgcccg gctcgaagac aagggacaac actgcacaat 840 ctgaacaaaa cactgccagc gatgccagcg cagaagcaga tgatagccaa gtggataccc 900 gacgaagcac caaagacgcc accgctaaaa gcacgcggtc gagatcaaag agtcgcaaag 960 aagataccag gactagagtg tcaagccagg ttgacagaga gatctctcgt cttgagaggg 1020 aacgtgccga cgaagaactc ttctcgatcg aactgccacg agtgagggaa tcctccatgt 1080 ccaagaagca gaaagtaaat cgacctcggt caaccagcgc acaaaccaaa aagcagccaa 1140 atacgggaag acgtgttaag agagttgtgg tcgaagaagt cgagcttaca ggaccggttg 1200 aatttaccac agagttaacc gggcacacca aagagacaac cggacgcacc aaagagacaa 1260 1307 ctggatacac caaagattca accggacaaa cccgcaaatc gtccgcc

<210> 2693

<211> 4787

<212> DNA

<213> Aspergillus nidulans

<400> 2693

ttaggacgga cggagctggc atttgtacga taatgcgtac gggtacggag gccatgccgt 60 cccgattgat aggccgtcgt tctcggctgc gcgaatggat cggatttata cggcataagg 120 gagaggagtg ctgttgtacc tgcaagacta aattgtggag acagagatgg agagtgataa 180 gaggcagtat atgttgtgga tacgcacgca cgctcgaagg ggggagggca taggaaaact 240 gtatcaactg caagaattta gcctaacaag gatcggacgc catttgacga ctgattctct 300 atctcaatga cctagacagc tctgctcagg atacattaca tagaagggtc agatcagggg 360 tcagatcata ggccgcttat atcatgttgc ataagccaca gctgccaact gccagtccgg 420

tggtatccga gttgacctcc atcttaaagc cacgagaaga cacgcccggc tagagggggc 480 tagaggtgaa actcggtcgg aacgtttgct tgtagtaggt gggtggcatg gctcaagtat tcattgcgaa aagtattcaa catcccaaca tcaatgtacg tcctgggtag gccttgcaag 600 tttgaggccc tagcaggggt gacgtagctt cacacattgt cccctcgagc ctctaaacct 660 aacaacgtgt tccaagcggt ctgattatcg gcagccgtca aggttgtaag ctcgcctaac 720 gtctcaatgg gtttattttg tggttgccca gcatagggtg gaccagtatc tactccgcaa 780 gtggcgtctt ctgccaccta tctctcgcca taagggctgc acttgcagca agcccaccac 840 900 cagegetegt acceatgacg ceaatgeagg tattgteeac tecaeagege gagegtaeag ctataagaag gcagcatagt aatcttcttc ggagtaggga atgggtgtcc cggtgcgagt tggtattcaa caacataaat cggtgccccg attgcgccaa tgattcttct cgtgcaaagc 1020 cctatctgcc tcacactacc gtagtccaaa acgcctgtac tcatgtgcaa tatcgcaggc 1080 atcttgccct cttgagctgg tgtacagaaa cgatgagtga aggattcaat ttgatggtca 1140 tcagcagcag tcgcatggta tacaatgcac tccacggccg tgttccgtta gattttccgt 1200 ctcttcagga gctgttcata tgtaaatgcc atgcagcatc tatccagagc accggggtat 1260 acaggcacca gtgcccgcaa tgatactggt taatagcaac caagaagaga tctatcctcg 1320 atgaaataga tagacaacca tactcccaag tgggccaaat ggtcactttg attagaccct 1380 aatgcgtggc ctgcccgggt gggacctata tagctagctc gtcgtgacat gcattgcatc 1440 tcggtaacgg gccatctaag tatctcctga gtgagttggt gctggacgag agcagtcatg 1500 acggatttag tcaagtattc agcatcacgg atcctcttct attaaaatga tacatacaga 1560 atctaatcta atttttgata tgcaagtttg tgtatgttgg gagatgaaag cctgttccag 1620 gcaggatgtt gggatgatta tgtcgtcacg aatatgacca gctgattatg tggtatgtgc 1680 ggttcattaa gtcttcttcc cttcgaaagt gaccggtcac ttatcccgga gaaccttgcc 1740 atatcgcgtg aagagaattg ggaccggtac taaggccaac gcatggaagc caagaaggga 1800 gttaccccac cccaaaccca gcgatcgaaa catggtaggc cctgctagtg gaagaagcgc 1860 accaacaaga gaccgtgtag cagtcatagt ggcgtttgcc gaagctgcgt acttggggta 1920 gcaatcaatg atataggtct gaattggcat ataaacgccg atcatgccaa ctccaaaagg 1980 gaagcattcc gataataggc acaatccagt ggacgtgctt gtctgctgac cacccatacc 2040 agaagaaact gatggggaga atgcttgaga atattatcat caaaggaagc cgcatttcag 2100 gttcgaattt gcccccagcg cgcgcggtta gcttaaccag cattctgtca tttgttacag 2160 ccatgaaaca gataccgact atgaagccta tgccaatccc aaggtaggcc agccccgaca 2220 ggccagtaga aaacccgtag ttactggtaa agacagacga gattgttgtg aagaaaaggt 2280 acagaagtcc gtaaataaaa gcctagaagt aatcagtctg tcagcaacgt tccctatatg 2340 tcaagaaagt cttgggtgat tctcaccatg tagacagaga gaagaaatac gattggtgat 2400 ttgacgagga gaagaactgg acgcttcagg ccgagtttca aagcctgacc cacagacagc 2460 gattcacgct ccagatcgta tgcactccgt aggtcagcgc gccctgtctc ctgcgcgagc 2520 ttggtcgttt tccactttat caggaccggg gcaaaggtct ccttgttcaa aaactcgatg 2580 cccagggcca cagtcccgcc ggctatcaac aaggtccaga atgtccatcg ccaccccacg 2640 ttctccccta taaatcctcc ggcaattggg ccagccaccg gcccaatgag tggaccaagg 2700 ccccagacgg cagtggcctt tcctcgttgc tcaaccggga aaaggtctgc gataacaccc 2760 gcacccaggg taatgcaacc ggacccttca attccagcaa aaaatcgaca aacaatctct 2820 gtttcgatat tttgggccag ggcacaacca acctgccata cgacaaagaa ccagtttgca 2880 ccactaaggg taactcgacg gccgtagatc tcgcttaaag gggcgagaat gcatggacca 2940 aactgtatca atgagattct gtcagcccta tccgcatctg ggtaatgact tggtggtata 3000 gagtcggtct agacctactg tatatcccat caaataaaca ctaacggtga aagataaaat 3060 tgtctcgttt gtttcaccga agtccgccgc catgtaacta atagctggcg aaaacatgct 3120 tgatgcgaga ggtgatatca aagtaaatgc gcttatcaaa gccagtagcc cccatttttt 3180 cctagcagga aaattctggg gattacttgg gtcatcctga ctgtcccatc ctacaatccc 3240 ttggctgagg tcgctttcgg ggaatgtgac ttgggtgggc attgacatct cgcgggaatc 3300 ttgtttctca agatcatgtt gctcttgttg actgttgttt gcgttggagg cttgtttatt 3360 cagctcatct gggccttgtg gaataatcgt gatgctgctg cggtcgctgc ctgttgttct 3420 tgatgagete acetgegegg agtgttttge aggteteatt tttaagegae tgaaagagaa 3480 gataatgggc aaaaacaaaa aaaaaaggga aagagaaaga tcgggggatca gtgaagatca 3540 acaagggagg agaaatcaaa ataacggaca gaacccagaa taggtactga tgagatttaa 3600 atatggatac gtttaatcat ataagaatca ggagagacaa gtagttaagt agtcggggag 3660 aagaagccga taagaatttc cgaaacgttc cactgtcccc gaaaagttgc tatattagta 3720 ttcattagaa atacgtcccc ttccaatctt ctcaacacca tgatggcgag atcccgggtg 3780 catctacggg ttgaacgcgg accgactgag agccttaatg tgaggatgct tctgcattat 3840 acggtatgcc gatgttcgga acgcgctttt tatgcattcc ctgtccgtgc ataatgattg 3900 cctatcatga gcaaggcttg actggtggct gcttggtgag cctttgcaaa tggaggaagg 3960 attcagggtg ccctaatcca cgcaatccac tgattctggc caataataac ttccagcgtc 4020 teegetagga ateggttgaa teatteatea catgeaacae ttgteattat geaceggatt 4080 tetteatagt taeggagtat aacateatat getaagetea tagaetacaa ateteegget 4140 gccggtcaag ggatcaaaaa gataaggaat tatccttctg agtcacatgt ggcaaacata 4200 gcctatcttc acagatgtca tactatatgg cgccatgagg gcttaattca tgcacgactg 4260 agagctacgc ttcccattct taaccttctc acaatagccc gatatcgctc agttggcgac 4320 attcccgcta atatgtctcc gctggatgag ccagctttgg agaactggta gaaaaaagct 4380 gttctagaat tcggatggaa atgttatgag cctagacacg tgacccatgt gtatattatc 4440 tgagtgacaa gtatattagt cagaacttag ctctccaaag gggtttagcc cttttttggc 4500 tgattgggaa gttcgataga ggaaagttga aataagccgc ttttttattc taaaaaattg 4560 acttatgtat atgatcccgg atagtcaaaa aaagcacttc tcttactaaa tgcggctaac 4620 gctattaaat agttttatcg aaagcagagg attcccagat tttcctcgta gaggcggatg 4680 cttgcttaac acagtcccta cttctaccca cacacaacgg ataccgtact ctttttcatg 4740 4787 aaagaacctt cttgtgtata ctgcaggacg tagctcagaa caagcat

gtetggcate ettgagatae ettttttgtt tagegggeta egttttgace tagataetta 60 tacetatete egggetttea aaacetttte eaceagtaaa gateeaacat geaacagget 120 tggaagatea tgtattaeea eegaateagt aaaaatatea aatgaactae agtagateaa 180 eecaeceete eactetgeta etggteeeca gggacagett etgtettttg gaettettea 240

<210> 2694

<211> 2642

<212> DNA

<213> Aspergillus nidulans

<400> 2694

ctctctacca caggggcaac gtccgctata tcccgggcac tcggctctcc gagcaggctg gtetettgta etggeeette teteceaace gecatteece geteteeatt etegataace 360 420 attctcagtt cttccattcg cctcgcaaac tgatccatca tgtcctccaa ccgctgaccg cttqcttcct tqtccctgtc aagtatacca aatggtaggc cagatgttcc ctggatttgg 480 agcatgaggc cgccgttcag cggtttctta gaagaatttt cgaatgtcgg tgccggaagg 540 600 agttgagtgt tcaggatttg ccaggatggt gagaggctat gtgcggacgt gattctgaat 660 tgaccttgcg gaggtagctg ctgttcagtg attagtgggt tggctatatc tggtgtcggg 720 ccttgcggct ggtcttgcgg gtgcgttcca ggagacattc ctgcaggata ttcgttctcc tgtctggacg gtacatgatc gatatcgagg attatataat tatcgcgtac gccgggtatt 780 840 ggatccggaa ggagagattc cttccttgcc ggattatcgt cctcgtatgg ggtctctgac tegtgetete ceaccettga aggatgeegg tgeacegett ttgacttgee ettaataett 900 ggattcggaa gggcatcctg ctcagattca agcgagcgca gcgcagcttc cgttacgatg tctgtgtcgt cgtccgaaaa gatgtagtgg actgttgggt gatagtattc agaggtgtgg 1020 gtgtcttcga tcagggtgaa gaatggctgg gagagcattt gcgatgcaaa tgaaggcgcg 1080 gtctcgtggt aaatttggtc attgtgttct gcgaggtgtg agtcgacggt tgcgccggtg 1140 ttcaagcttg cetgetcata gtgategata gactgeggtt gegtetgegg atgegegget 1200 tqqtcqatqc tqtqtqqacq ggacaacgga cggcgaaggg actggtttga gggtgatgag 1260 gagatagagg gegatataga gggtttaggt agagacatgg ccgatgagct cgctacatgg 1320 tcacgatcgt agtgaggttg acggttgagt ggcaggctga gccactaggc tgttggatga 1380 ggagaagete ttategatae ggtageggtg teaggtgatt eggeeaggee aggeaegagt 1440 ctatttctgt ggggatatgt acatatgggg gcagaagtat gagcatgact ggaaggaaat 1500 ttttattttg gagagtatgt aagatgaata agataaaaga tataggaaaa gggtatcata 1560 acaagtgcaa cctaaacgcc gtttccagtc tgtaaccttt tgcgattttg ttattcgtcg 1620 ttctgtttcc attcaaattc tagccaactg ttagccgacg gtaattggag ttgtagggta 1680 gatatactct gtcggcacat aggacaaagt cctttcgaag actcttgttg tatccaagtc 1740 atgaggcaat gctatcacac aaaacatcag cttgattgaa aggacgaggg gtcggcagtc 1800 ataccatatg gaacgagtgg ccgcacttcc caagcactat agcgcagtta gaacaggagc 1860 actagctttg ctcatcatgg ggacctctta cgcaatgagc aatcgtcgc gggaaatttg 1920 caggttgggc aagtcccgtc aaactggacg cggcagatac cgcagacctc atcctcgggc 1980 atatcccaac gccaggtagc gaccgcattc cattcttga gcgtgacttt catggcgaat 2040 tggtaaagtg acgggtagc agagcttgg tggtggcgcg gtcgctactt tctcgcaacc 2100 acagaggaag gaagcttgtt ggtagctgga gataacagaa gccgcttcca gggtaattc 2160 cacatggcgg agatttgagg tgggcttgcc gaattctaac ttatattggc cactgatga 2220 ggtagtttc aacacaagtt tctaaacctt aaaatcgtat gactggttac gcttggactt 2280 aaactcgggg aatttatctt accattcaa tcgaccggcc cacaatgggg atggaatata 2340 cctgcattcc ccctttattt tccaaaaatt ctttcacg acceattctt tctcacgg 2400 ggatccaagg gttaaggccg agagattctt caaatttgct ccccgaaacc tttgggttg 2520 ttccaacctc ggggccggt gggttgaaac ccgccaaagt ttttctggat taagctggg 2580 tcttgttaa ttacttcaga aatagttgtc cttgggttt tacgcccttc aatttgggg 2640 gg

<210> 2695 <211> 1003 <212> DNA <213> Aspergillus nidulans

<400> 2695

gactattccg aagagcagca ctgtttgctg agcacgcaac tcatgtgatt accctggtga 60 120 ccggttgtat caagatcctc tccttttccc ctttgtaatc cacctcgcag tcccaagcca aaccaatttc tctctgtact cgcactgagt ctgagtcatt tcaatctgac acatttcttt 180 tccgatatcc tcttgctatc cgtattgaga actagagtaa aagaatggca ccaagtactc 240 tcgtcgcgat catcatgttg atctctaaac tgtactcgca ctctagacgt tcctacttct 300 cggatagaaa gggacccgtt tccctcgcct tctttgctgt gtcacacaca agcgaaagga 360 tggggctaag ctggcttcca aggatcagaa gaggaagaac agggaacaga tacctctaga 420 ccaggtctgc tcgaacatct catcctaaag caggtgcgag agattcgtgt cgcgagcaga 480 ggaaggagaa gctgaggaat ccatgtcgta taacgcggcg tgaaatcacg atgagcaaac 540

600 aggteettta gtgtteecat ggtacagagg actgttettg cactetttge egagtttaca aacccaacca agaagtcaag cgcgaggacg ctctggcagg aatgacaccc tagagatatg 660 atatetecaa ecaaceacea aeggaggtea agagteaage caagggaaat gtaegeaatg 720 tgcaatccgg gccccgttgg tcaggcatca ttttgacgaa gatattagga cgaagtacca 780 tggttggtgg tgatcatcgc tccttgatag agtcgtacgt actcaaaacc acccaggaat 840 gcgcccatag cttcttcgtt gatcaccacc ataagcctcg accgtcctat aggatacctg 900 tttccctaca agagaactaa accttcctct actttatctt gacggttatt gtcggagctc 960 1003 tgtgcgctac gctgtgttag acttcacgtg tagctcagtg aag

<210> 2696 <211> 2189 <212> DNA

<213> Aspergillus nidulans

<400> 2696

aaaaqatqcc catqtqctta aqqtcqqtta atcatactaa tcttaqqtaa cqatcqcaqc 60 tccaaaaaaa gacaacttgg gcgcacggtt atcattctgg gtccgcctgg tgatatattc 120 cgccactggt cgcaactcac acgttaccct agtacaaatg ttcactccgc gcactgtgcg 180 aaccttgtga attctagtta cttgagatgc ccatacgcta ccggagagct acagcgcgtt 240 gagtgatatt gtcggcaagc agtttagcta atatggtggc gtctcaaatg cagacattgt 300 360 catequactt atccaaagag accepttige tgtattgegt atcttgeaat aataccatat acqcgacagt tcttgaaact tctatcttgc aaagacccag acaatgaccc tgaatccaca 420 gggctacggc aaccttgcct ccgcaagaca agtgcaaact ggcagctaaa taaaacacga 480 ttctagcgac ctggctagag gggactgata actcttttct acccatcttt agtgatcatc 540 600 catgatgctg cggtctagtt acctgtgccc tgtgctgtat agttcaaaca gcatcccgtc 660 tgattggcgg gatggatata caaaatgcac gtgatctgat ttttccagct caacagcaca 720 acaaactcct ccggccttga taatactttc acatcacagc cgttcccaaa ataccagact ttcggggaag ctcaggtcca cgatgtcact ccacgcccgt ctccggcctc ttccccgccg 780 cttagccacc cagccgccct ccgaatccgc cgctccaacc ccgcacttcg aagacccgcc 840 tgacggtgca aacgctgaag acgacgctga agaccttttc agttcctttc tccctcatct 900

atteccagat gatgeacete aattecatgg egaceetgge eagtacetee tetattegte 960 teegegetat ggagagetae agateatggt ecceteatae eegageeaga geeagagegg 1020 ggcccgtcaa aggagattgc ggagggattg ccgcgctctg acggccaggt aaaccaagta 1080 gaggaggga gaaaattgtt tgcgcatttc ctgtggagtg ctgccatggt tgttgccgag 1140 gqactqqaqc aaqctqatac tgagtcggga ggtagtgagg ctgagttctg gaaggtacaa 1200 cttctagagt gaacatgcat gtgatgtgct aagatgctac aattgcaggc gctggactcc 1320 cctccatagt ctccgcccta gccaacgcct ccatggtaac gataacagac catccttcgt 1380 caccagettt agggecegeg ggegeaattg ceteaaatgt caaacacaat ettteeteta 1440 gcacaagcat agtcgacatc cgtccccatg agtggggcac aacactcacc acagacccat 1500 gggccctctc gaacaaaggc tcctacacgc gcataatagc agcggactgc tactggatgc 1560 ggtcacaaca tgagaacctc gtgcgtacaa tgaaatggtt tcttgcgcca gagggcaaaa 1620 tctqqqtqqt tgctgqcttc catacaggta gagagattgt ggcggggttt ttcgagactg 1680 cggttagcct aggcttgaag atcgagagca tatacgagcg ggacttgaac tcgagtgctg 1740 aagagggagg cgaggttcgg agggcgtggg ttagtttcag agagggcgag ggcccagaga 1800 atagacggag gtggtgcgtt gtggccgtgc tagggcatgc tectgetget gcagggactg 1860 gagetgatge gtagteattg agteaaatgt atgtataett gatatgatta tgatatagat 1920 caaatgaact catcccgatg ttagtttaaa gtttaaatgt tgggcgtaac gttgagttgt 1980 tcaatttgag gaaagcttgg cggaagaagg gagcaacacc ttcctcatct ctaatctaca 2040 ctatgatcaa cetteattte tatacaagaa gteaaagage atagatetat tteeeegeet 2100 caaatataac tttaaacacc ttcattgcat tgaacagatc atacgcttcg gcagcctgcg 2160 acagaggcat acctgttatc cgtcataaa 2189

<210> 2697 <211> 1728

<212> DNA

<213> Aspergillus nidulans

<400> 2697

tagttagttc tcctccatga agatcccatt atacgcatcc atagatataa cttccaggaa

60

catctcctca tctcaagtaa ctctttgaaa atttttcaat ccctgtgggc cttacctcag ggcacctctc attcaagcac cccttgacca cagacgaccc cctgccgcag acatgatatt ttgaataaca atgctgtcca ggaattcccc tcgcgaagtc cattcagctt ctccactgag 240 300 tectgeatee agettgagtg egaggtttea gggtttetta egtettaatt ttggaggege ctgaatgtcg gcataccggc ggctgaacag acactgctat tgatgactta cgacacatac 360 atactgttgt ataattttcg ccttctgcca gacgcatatc atttactctt atattttcac 420 cctgacgatt taaatgcaaa tcttctaccc gtatatttgc tgatatactc atcgcctcag 480 540 tcacagaggg cgaaagccct accgcctgca tcaccgtcac cagcggcgac tgtcgcatga tagacggtta ggctcgaccg gacatcgcta tgtatctgtg acagcagcat ttggacattt 600 atgtgatcat aaagtacatg ttaggtacac cggcactcta ctcaataggc gtcatcccag 660 720 aaacgtccgg aacaccttca ccctcgacca ctctcgcact cacgatttcg tacaccggca 780 gctccgcgag tcttgatatc acatgatgaa gcgtaggcaa ttgctcccaa ttcaacggat cgatctggaa gctagccttg gaggatgtcc acacccggtg cggacgggga accggcatag 840 900 cctctgagaa ggggtcgaag acggcatact cttcggctgc ctgattttta tttgcggcgc cggtcttggg gatatactta taagccaaaa taccctcgtc agcctctccg ctgaagccgc caggggtcga tgctggatcg acctcgataa ggtcctcgag taggaaatgg ccccagaggg 1020 ctccctgcca tcccgtgcgg atacggtagg agctcgctcg ccggtagata tccaccgagg 1080 tgtaaagett gggtgegeee agetettete tteeagatae aatggggtet gteaaggaet 1140 cgaacaggat gggcaggtag gagcctcgga tcacggtgcc gtcctgcttg acgtattcta 1200 ccccatgaac atacaagcct atgtgagagt accctgagcc gccaagccat tccatcttgt 1260 tcaacgtggt tttggaaaaa gaagcatatg ctacagtatc tggcgcgctg aaacgccacc 1320 cacgacggcc gggggggaac agattctgca gaactgtgcg tgacgttttg aacttaatgg 1380 aggetgtegt aaatgtggae ttggtteeat tgegaggeag geeeagatgg ttetggegag 1440 ggccaggcat gggcccaaac gcaataggca tgcgccaata ggggttgggg atgcgattcc 1500 atgaccatte geggagtete tgtgtegagt tgteccatte ateatggeeg aagttgtagt 1560 tggtgaatcc gtacactagc cgtttctgag tacagagctg cttaaaagaa aaaaaaattg 1620 agagaaagag agaatgactt actatctgcg gtggactgac cgtctgttcc gtcctgggcc 1680

<210>	2698
<211>	1435
<212>	DNA
<213>	Aspergillus nidulans
<223>	unsure at all n locations
<400>	2698

60 gattaagcag attcttgagc aggaggagga cgggacagga aagaaaccac atatcatgct ggaccaggat tgtattgagc gtggttacgg atcccatgct gtgtggcttg accgagaact 120 180 tactttggat catgttggct tccagccgga agagctggca acagtgcctt gtcgttaatt gggcatgttc tgcttcacgc atctgtggca gaccagaata tgcggctaag tttatcgtat 240 300 aaagccttgg atcttgcgga gctttacgag gaggtcccat acgtttaaac caagggagag cggaatgtgg ttaagttaca gccaaggacg gtcccattgc gccggggtag gggagaggct 360 420 actaagtcat atagcactaa acctgaagtt agaaagccta gacagcaatg gattaacaac tcaccttttt agcacatgtc tcgcatttgg caccgggttt tcatcattat gttacgcgtt 480 tgttattgat ttgtcttgta agctccatac gatcgcggct ccagcttagg tctagcgtgc 540 600 catgtaagtt gaatttccaa gccctcctca tgtacgtaga gtatgaaaag acaccagctt atacggaata cagaggtggc ccgcttgctt gcatggccca ttcgcttacg ggatacgtta 660 720 tactacatca cgatgagtca acaccacatt ttgccacact tttgcctgga gagcattcag cattattcta gtaaatagac ctctccctga gcctgaacca agcatacttc acaagtacgg 780 cggaaataat agtgcgcatg tcttcgataa ctggtggtcg acggaagctg ggtccccaat cactagecga gegattacge etcacategg ettgagaagg aagattgega caageaaage catcccgcca aataagccag aaagtgctgg acagcccatg ccagggtttg atatccgggt cgtggacgac catggggaag agttaccagc ggggtcgatg gtaatattgt actgggcctt 1020 cctcttgggc cgacggcgtc caacacgcta tggttggatg agaagcggtt ttacagaagc 1080 tatttgaaga gataccagtc caggttcctg gatactagtg atgcaagatg ggttgatcac 1140 gaaggctata ttcatgtgat gagtcggaat gatgatgtgc tgaacgtcac gtatcgactg 1200 tccagtggtc agttctgtcc tcattggaca ctggtttcga taactgattc tcgcaactta 1260 tatgatccat cgaggaagcc ataacctccc atcctcaggt cgtagaagca tgtgtagtgg 1320 ctattccaga tgagctcaag gccagcgccc gttgcatgca tct.cctctac aatgccgatc 1380 gtncgactct gcataccaac aaacttgcgc gcagagtgat tcgctcgcag gagcg 1435

- <210> 2699 <211> 1983 <212> DNA
- <213> Aspergillus nidulans

<400> 2699

ctcaagctgc cattcggtga ctgctgtgga aggatcgtct ttcgtgatgc agcgagcata 60 ctttgtccag cggacagcca tctccagact ctgctgctag tccatgttga acacgatcca 120 teggaageae ggaetegteg ceaegtaeat gtgeagaate geettetteg eeceettgag 180 ggagtctact gtgcggcgga tcaggtcctc acggcaagga gagagcactt ggagccaaac 240 gtcgtcggga gtcagaccgg gtgtctcaac gaggctgcgg gtgaagtcaa agtcgatctg 300 ggaggcagac gggaacgaca cttcgatttc cttgtagcca atctcgacaa gcatcttgaa 360 gaagcggagt ttttgttcgc catcctgccg gatgtcaata tgtcagtatc gcaaaacgtg cagatacctg cgaagaacat accatagggt caggcagact ttggttacca tctcgcagat 540 cagtggccag ccaccgcgga ggtttgtcga taaccttatt gggccattgg cggtccggca ggctcagagg cttgaatggc ctgtatttct tagagggatc tttgagcctt ttctgggtta 600 gctgctcctg atggctcgat agatggacga cgcagtccag cgatgggata catacatagg 660 720 catggcgtgg ttgtgaaccc ggtcggtggg ggataccgca gcgggggaatg aacagagaag 780 aaaggctgta cagagggatg ggagaagaaa ggcctggagt gatgagatgg gctgagagga ggactagttg aactagttaa ggccagcaat tgagatatga tttaaaagag ttgtgagtca 840 ctcgtcaatt gtaataatta tcgaaacaat tttgcagagg gactgatcac cgatggcggg 900 ggactctttt ggctccatga atcacccagt ggggcaatag actgaccata ctctgcgagc catagtagta actatgtaca agtttacatt gcctcagtgg tcaaaaaaaga gccacgggtg 1020 tcaatttagg ctcattgata cctcgccctc tattagtgat atattctgta tagtctctct 1080 gcaggatttg ccgtcgtctt cctcatctag ggctcgctgc gctctactgt gagtcgctca 1140 ctgttcagcc atcttggtcg gggccgataa cggagccaaa gcgaccgcaa aatgccgcag 1200 ataaccgaca aatcacgtgg atcacgtgaa gtggctattg tcagccacaa taaaacgcca 1260

<210> 2700 <211> 1725 <212> DNA <213> Aspergillus nidulans <223> unsure at all n locations <400> 2700

taattccgtg ggaatataca atggccgttc tataaagaag ccacctaagc tgggtgctgt caaatataat gaataggtet tgteteagge tacaagatat gegaegeeaa atgtegagaa 120 aagagcaaga tattagtgtg acctgtacag aaaacgttca gagatcatag ctctggggct 180 aggcacgtca caaaacccca ggtctcggca gccagttttc ttaaggatgc tactgaagac 240 300 cccgcaagtg aattgtctct atttcaaacc agatttcatg gccttcagag tacaggaaca 360 aggaacttga ctctgaataa ggacatatag aggccgcaag acctatcaat atggcataag cgccctttga gattgttatc aacaccacat cgcatttgcg tttactgcag gcctccgaga 480 aagcgcaata ccgctaaaca gtttgttaaa tggnggcctc tacgtgcgct gcctgagagc 540 1.00

ttagaaccgg ggtctcaata cgaggactga taagtagctt gtgacgccat cctgcctcgt 600 gcggataatt ctctgtacct ccttaaaata atccctgagc ggctatgcac tgctgaccag 660 ccatctcaca tctgcagcct tgagagattg acttcactca gattcaaaga gggcagccca 720 tcttcgaagg tactctatag ctaaagaaat attcgacacc ggaaagacca gggcaaggcg 780 tacataacag gggtgaaccg cttggtcgag ggggttaagg caataagctt cgacagctct cttgatagtc attcggtaac gtgtctgttt ggtccttatt gagggattga cgtggaagcc 900 gaggccgtaa tatcttgtcc tgaaataaat ggcgcgcgaa aaagaatttg aactcccaac 960 tcacccaatt gagattctat ttggtggtat ggctgaaaag aacggatatg ctgctcacca 1020 atgtatcaaa ttacaactac cggaagacta tttcttttcg ttacttcctt actttctttc 1080 cttttccttt ttcttttct tttctaagga agggctcacc taaaaccaat gcggcctata 1140 tatcgtgaga cgtgcagtaa ccctaagctc tgcctcacca ggacgtaaca tgatcagcca 1200 ttttactcaa gctccttaac aaccaaagtc agataattca taaatttatc tttgtagtat 1260 actctgtgga cttttggaga ctgtcacact aaacctttgt agataaacag ctcggaccga 1320 aaaggcggcg ggtgggctaa actcgccgga tcgcagaccc caaaatatat atccctggca 1380 agggatgett ettgaccaac teateggget gtteecaggt atetacacaa agetttacae 1440 cagtcctttt ctgcacaacc tcccagagct gttcccagct cgcccggtca tggtagtagt 1500 acggcatacg ttccgctgtt gcgttaagca cgccttggtc acgacaggcg gtaacccggc 1560 atacgatgag tgagccaggc tcggcagcga gaagatccaa cacgtttcct gccacagtta 1620 tctgctgttc gaagtcaaat acgtggagga aaagcgaaat gtagacgatg ttgagctttc 1680 cggtgaggtg ggtgaagaga ggagactgtc tatataggat gtcgt 1725

<210> 2701 <211> 2937

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2701

agtcgagttc gaactcagct gacgaggttt ctgaggaagg agcggcgtct ggctcggcct 60 cgagtgcgtc gatcacgagt gacgagccaa gtccgactcc aacagatgcg ggggagaaac 120 tagccattac agggcgagtt gcagtgcttg gtgctgtagc agcggggcta ctcctactct 180

aggctacaat ctcgagcctc tagtgtgaaa agccatctag accaggaaac agcaacgtga 240 aaggtagaag atagtatgca tggtatcatt gatggtactc gctataaatc aaaccgaaac 300 360 caaaacctag aaccaaaccc aaaccccaaa gaatgagcac aggcttatag cctcaagtca gacagctatt cctccggctg cacctgctct gccatgagca acatgggcaa atgtaccgcc 420 480 tcataggaga ccttcatccc ctccttcagg cgctgtgtgt gctcagtgat cgactggcgg cggaggatga gctcgccacc aaagtcggag gttataaagc caaaaccctg cgcgtcattg 540 taccatttga ccgtgccgaa ttggcgattg ggagaggcag gagcggcgac aggcattttg 600 ggctgttctt tggctgttca tcgttagtct taatcttctt cagcgtattt tagagaaacg 660 tgaactggga aggtgagaat gtaccttgag ccggtgtgga agaagaggaa gtagaggaag 720 atggagattt ggtatgcagc gggagcgaaa cagacgcaga cgtgtccgac atatgacctt 780 gcctaaataa ttgcaattgc tcgtgtgccc ctctgcccat atttatactt ctccctcaga atgatatcat ccggttcttc ccggtcctcg gcaaagattc gggttgggtc tgacgagggc gttacagaag cacggagacc ccacggttgg cgatctctgc aactggtgga gaacaggcca ggacataaca ttggctagca ctggctgcat ttaccgacgt gatgtcatga tcgactgatt 1020 cnattcaata gccattgttc gtcgattgca gactggtgaa cgattgataa gatcctctga 1080 atgtacaacg ccgtccgctg cgcactacgc ggactgtgaa ggagctgaaa ggtaaatgca 1140 agtgtctgct catacgaaaa tgccccgggt tgacagtata gtaggcttga tacagacggt 1200 gtctaccgcg aatgaggcat tccgagttat ctgcaagcgt ctgcaggggc gccaattcgg 1260 cactatggac aaatgcgcac tgaatcgcaa tccatcagaa gaccagaaaa aagcctagac 1320 ctcgagatta agaaattacc caatccactg agattagttg gtgagaggaa ccagtcaggc 1380 tcgtcctcag gccctcgagg cgaggcctga tcctattcgc acgcctggca ggaaccggga 1440 aacgacctcg ctacgaggca aagaagaccg atttccccgc acccagactt tcatccacag 1500 accepttatgc catgggtttg gtctcgcgtg acgaaaattg cttcgtgccg tgtttctaat 1560 ggtcgacgct gccagccccg gcctcccgga gtggtagagg tcgattccaa ggaagttctc 1620 ttttcttccg tggctttatg ggttagaaga caagtcgatc tgatttgctt gcattgtgct 1680 gctgttccat caaccgaaga ttgagcccaa gtggtgctga ggtctattgg ccatgtcatt 1740 ccacatggcc tcatatggct gttccttcct atcgaactgt agctggagac ggttcaccca 1800 attccgtctt cttcaagata tcaattcgag atataagcct gcggttcctt gtctcggtcc 1860 acaagggaga gcccctgtca gcggctctct aggactcccc tagggatcca gtcaagcaac 1920 gagtgcggag acaaaagggt gactaagtct atcccgatca gctggctgct atgatagcca 1980 gatecgecaa taaggggaaa gggggegett tgteaetegg egeaageteg ggtaaegaag 2040 ttagtatgaa ggaattteee tteeetteat cactaceeag egeateaatg cetetaeegg 2100 cagaccccag atgctcgttt gaaatgtgat atacatctgg gtacatctcg agcgagacct 2160 gttgcggtgc tgcggtgctg cttccgagca atcgacgcag aagatatact cattcgacat 2220 actettataa eeegaagaaa aeegeateee eteetaaaca tgtcacagae ttecageagt 2280 ctgattcctc gtgcttcgtg tgacagatct tcatgacgag gcaagatgaa gcgaagcgcc 2340 ggcagctaat caagtgtgca gtagctctcg ctcagccttg cgaagcgttg gcatgagggg 2400 caggttcaag tcaaatgatt acagccctta ttacttaccc aactgtccac ttacaacgac 2460 agctggataa aatgtcaata ggaaggttca aagcggccgt tgtcagtaac atcagcgaag 2520 caaccgccac tetegteaat eteatecteg aetttteget gtteaagate gaagcaecca 2580 aagaattttc cccggtgggg aacgcgtttt catcaattcg tcgagaatcc gcagagagtg 2640 gcgtcgtaca tactactgtg cgtaaactca ttgttcgatc ctctcctccc ggatacgctg 2700 cagctgataa aggcctacgg ctcccgcgcg tcggaaatcg ccatcaaatc aaagaatgag 2760 aatcggaaca caaactatgg ggtctttgag agtcaggttg gcccagatgc aacgagcatc 2820 tgggcatcgg cgacttcggc ggccatcaag gtccatcttc tggcttgcat ccttgctcgg 2880 atttgggagt cgggtgaggc aacggctatc tgggacgaga ttgtgagtac acagaag 2937

<210> 2702 <211> 1873

<212> DNA

<213> Aspergillus nidulans

<400> 2702

gtgatgtgt ataccgaagg atgttccatc cgaagcggca acgacgacat cgccgaggcg 60
aatatcgtag ctaccgttcg gtacgccccc gccgatacca acgaggaggc cgaacttgag 120
gttatgaaag gtgcgccgga cctcagttgc tgtgattgct gcgttgttcg tcccaggccg 180
tgcggcagcg cagagaacca cattgtgacc cgcgacgtca ccatattcgt aatgatttag 240

gtctcctctg tcaattccaa ttggctgtcc gtgtgtatga tcaaacattt gttcaaatgc 360 ggcatattct gcaggaataa ccgtgatgca ggctacacgg tagtcttcta ctcttagtcg 420 ttttgaagac atcatatcgc atgatcttcc tgggaaatga gcttgagata atcacttttc 480 agtgtagctc gcagttccct tcagaagatc agtctcttgc ctcgtcgctc atccgtgatg ttgcttagtg tctggtattt gaggggctcg aggggtctgc aaatgacggc atgagatgca 540 ggttctcaaa agggctgagc cttgcagata atgagccagc gaaggtgtca cgcggggctt 600 660 acaggcgtca tccgtgttcc tatcatttgt ctggagtgtt ggtagggaaa ttgggcaaac acagcctgct gccggggcct cgatcaaggt atgacacgcc ggcggcaatg gcagaggctg 720 gattggaacc cttaaaatac gtcccatggc gcctcatggg aacggcagtc tgtgtcgaat 780 ggttacgcag cccagcgccc tcatcaggct gagcctgaag acaaagggct ctgggtctgc 840 900 aactccatac aaactacctc cgtatcattt agcacgccgg ccttgtttac attgactggc tccacgtctt cccgcatctc ttgcataggc gctctgctga tgagattgtc agctcaatca tagcctcgtc ttaatagaac tttatggatg tagatagaag ggaatagaga ttcggcgatg 1020 cttctcggct tataaggccg ggaactcagc gaattccaca gtagtcccct ggactgtcat 1080 cagacttgcc aggtattttc ttccaacgca gcgagacaat tgctatttat cgaatttacg 1140 ctaccaagtc tgaccttggg ctatccaccc gaatacccta agcgctgcac ttcaccgaat 1200 gctcgggatg gcctcattta ccccgaagga cacttgggcg ctattgagac cattgagcca 1260 gatgacagac tggctaggaa gcaaggacaa tgtactgagg ctttgatcgc cctcacgggc 1320 catatattgc ggtgatgaac gtggatgagc ttccgctagt tcctcctggc tctgggccca 1380 gacgagatag agccaacgtt aggactggca aagcaacggc cccgtcggca atctctctta 1440 tcacgtagga ttggcaggcg gtgcagaggt aattctgaga gatatttatg ctaactggcc 1500 ggcgaaggac tgaggtccag tcttataaag atagatatag attatatatg tttgtgttca 1560 tgaactctgt tcttttcact acgggcagcc tttggctaga actctacatc ttccatctac 1620 ttcacccaac ttgtttggcc agtccaccag agtacacgca gctgtcatat ataccgcgat 1680 agttgtcaca ggtacccact ttcacctgat tttcgtcatt agttctcctt gctcttcagc 1740 gtagaccgat gagtctcagt gatgtttacc taggtcgaga agccgccatc tgaattattg 1800 cgcactcatg tcgtgataag tagatcaatg gggtttcttt tatttagggg tatgccaccc 1860 gccttcatca aaa 1873

<210>	2703
<211>	2105
<212>	DNA
<213>	Aspergillus nidulans
<223>	unsure at all n locations
<400>	2703

60 acgggccgat ctatctattg cctctgtact cgcgtctcgt cgcaaccctt ggacagtata 120 tgccagactt ttctcaggga ttgacgacgt atcttgacga agaatttcgc agtcttcagc gcagaaagtc caaggagttt cttggccagg tgcgaattga gcatcattcc gctaccttgc 180 ggaattgaca aaatttggag taatttcgga gcatattata ttctactgct ttaaagtttt 240 300 cctggatgat ttttcgcgca tgaacattga gattcattgg ccacctgcta gagaattgcg gacgatactt gcttcggaac ccggatacgt ccccacgaat ggcatccttt ctggagacgc 360 tcggaagaaa gaagacagtg cagcatctgg gtccacaaga acgcatgatc atcgagaatg 420 480 ctqtctacta tgtcgaccca ccccagcggc ctgccattca acaaaaggag cggacaccca tggagtctta cattcgaaaa ctcatttatc tggatatgaa caagcggaac tataccaaga 540 ttctaaagtc agtccggaag ctccattggg aggaaccgga ggtggttcat atcctggaac 600 gtgtttttag caaaccggct aaggtcaaat acggcaatat ccatctgctt gcaatccttg 660 ttagtgcgct ctaccgctat caccaaggct tcgtcattgg tattgtggac aatattctgg 720 780 agtatatcac actgggtctt gagcagaatg atttcaagtt caatcagaag cggattgcag aggtcaagta cctgggagag ctgtataact ataaaatgat tgactctcct gtaatattcg 840 atacgttgta tcggattgtc acatatggcc acggtgcgtt tttcggaatc attgaggttg 900 ccttactaac tgttctgcag aaggcggcac tccgatgcca ggaaaaatta atgtgcttga tatgcccgac gatttcttcc ggatacgatt agtctgccag cttctggata cctgcggtca 1020 ttgtttcgac cgaggatctg cgaagaagaa gcttgacttc ttcttgaagt tctttcaagt 1080 aagcttgctt atgcttgatg agtgaagctt aggctaattg tttagtacta catttgtacc 1140 aaagacccac tgccgatgga catcgacttc cttgtccaag acacgtactc tctcacccgc 1200 ccgcaatgga ccctagttac ggaactagac gaagctagcc gtatcttcgg cgaggctgtt 1260 gcccagaatt tcaagccaca agaggagaag cctgaacccg aggaagaatc ggaggatagt 1320 ggatcagatg aggatctgga agaagacgca tttccagagg ccgacgagga aggagagtcg 1380 agtgatgagg ccgatgtaag tgaaccagca tactctgctg atcaatgcta acaaggcagg 1440 tetetecaaa egetgagege aacgaegaca gegagtetga ggaagaacaa atattegtea 1500 cccgtcaaga agaggaacga gaccccgagg ccgaagccga gtttgatcgt gaattcgaga 1560 aaatgatggc ggaaagcgtt gagtccagaa aattcgagcg caaggctgtg tttgatattc 1620 ctttaccgat gagacgcgct gcccgtgatc ccactgcgga agtcacagcc gcgaattcaa 1680 ccccagctcc cgtttcctcg cctgctcagt cgtccggtac aatggcgttc tctttgatga 1740 ccaagaaagg caataagcag cagactcgta ctatcgattt gccatccgac tccacttttg 1800 ccgttgccat gagaagccag cagcaggccg atagggagga gcagcagcgg atcaagaacc 1860 tggtattgaa ctatgaaatg ttcaacgaga cggacagtac cgaaggtggg tttacttcgc 1920 cttatcgcat gaattccaag gagcaggggg aaaagcgaca tgctgacaaa agaataaaac 1980 agaacccgtt gagaaacgct cccctgccag ggtagacaag tanggcacca accgatctgt 2040 tttccgctcg cgcaagcttg agcttaatga cttgaattgg agtgtttgga ttgttatccg 2100 2105 gagcc

<210> 2704 <211> 2979 <212> DNA

<213> Aspergillus nidulans

<400> 2704

60 aaagtgaaga ggaaagaaaa agagataggg agattgggaa taaagaaaaa agagaaggga 120 aggagatagg gaaagaaaag atgtgaaagg agaagaagga aacaacatgg atgtgaagag 180 240 gtaaagaggg cctaaagaaa tgagtaagag ccaagaaaga agaggagaaa gttaaaaaat 300 cgtttataga agagcaggga cccaaaaaaa ccaaaggata tttatgaaaa gaagttttta gaggggaagg taaatatggg gagatgtaaa gacatcgtgc agaatacgcg gaacctcgag 360 420 caatactgca atataacaac tccgacaagg aaaggaccac cattaagctt ttaagggaga 480 aagatagggg cggattcacc tgcccttcag acagaagtcc ggcctgcaaa ggtctggagt

aaatctcgtc accaggcagg gttccatgat cgaggcgttg aagggctggg acagcaagtc ttttgaaaat ttcgagaaca agcagtaccg gttcttgagc cctgtcttcc ggaggggtga 600 660 gcactatgat ttggacgata tgcatgttct tccttttaca aagaaggata cagcctcatc ctcgaaaact gttacggcgg gtggatatgg agaagtcttc caggcacata ttcatccgga 720 ccaccataag ctaggcgata agtctggcga agaggtgagt ctaaacgttt gctgtttggg 780 tagatttata caacaggctg cttacacatt cgtgaataca tcagtcccta gcaatcgcag 840 tcaagcggat gagcaattat gagcacttca tatctgagcg aacggtatat cgcgaccttg 900 960 gtccatcgaa ccatccccac cttatcgacc ttcttttcac ctaccggcat gacggcagat accaactggt gttcccgtgg gccaatagta gtttgaagga atactgggag aacaatcctt 1020 gtcctgcaga tgcacttagc acctccaccc tcaagtggtc tctaagccaa atgatcggac 1080 tggcaagtgg tttgactcat ttccacgaat tcacaaatcg ttttacgggc gagacccgct 1140 tcgggcgtca cggtgatatt aaagctgcaa atattcttta cttccagccg tccgagggtg 1200 acgctattct aaaaatagca gacctagggc tggccagcat tcgcagcagg aattctagat 1260 ctaatgttga ccccagaagc atcaagtttt caccaacata tgcaccccc gacgtcgagc 1320 gcqqatqcca tatctcccgg aaatttgata tctggagtct tggctgcctg ttcttggaat 1380 ttgtcaccta cctggtgctc ggaggcaacg ctatcaatga attttccgaa gagagacaag 1440 agatcactac agagtttcct gagcttgctg ccgatttctt ctactccaag aataagaact 1500 tggtgaaacg atgtgttttt tcatgggttg atcgactgaa gaaaaactca cgctgctctc 1560 atatgttgcc cgacattcta gatctggtca tggctgagat gattatcatc gagcccggaa 1620 atcgaagctc gtcccttgat atttgcaaga aactccgaga actcatgagt caagttgaag 1680 aagacgaagg atatcttctt aagccgccac ccaaccctgg tactaccagt gcacaaactg 1740 cagcagacca gcccaatcgc aatgctttac ccactgaaac catcgtcctg cagacacgca 1800 gagctcgagg ggtttctact cgctcgaaaa gacacagttg ggcccattat atgcaaggcc 1860 gtcgacaaac taactaaccc gccctacctc aaatatcaag gttcaatccc tgtgcttctc 1920 agtatatcac gccatcagga catcgcattc tgttcagagt ttcttttcaa tccgttaatc 1980 aatcacgtcg tcacagcacg ccatcacctt cagctgtttc ctcttattat atataccaac 2040 aaccagatat actagtctct attgtttgac ggcgttcgag agacatgtat attcgaaagt 2100

tgaattctcg cagctgaagg acatagagat tgataacggt gtcgctaaaa tttcagcctt 2160 gacaatgaca aacctgtgac gggtgacagg tcaagatttg tgctcactgg tagcgttaag 2220 ggtcagggct tgtaccaagt acccactaat tgtcgcaggt tcttgggtag cctaccggtt 2280 aactgtcaag aactaatact gtagatgatc tcatggtcag gctattttct ctgcattaaa 2340 tcactggttc atctgagtat tagatatata tagcaagttt gtactgtttt ctaacccgag 2400 gtttacctta ttctgtacag ttaaagtttg gccccttact ccaacctgca ggttgaaaca 2460 gggtatctga acccgactga ttacggctga cccatgacgg gtaacccaca ggctgtatta 2520 gggtccactt cggtcccagc tgctgtactt gggggccatc aaattgtttt taactgacta 2580 cgcccatggt tctccatcct tgcagccaat ctgaagctgc aacgccgacc ccgttgctgt 2640 ctgagaatat gtaagggggc tgtcatcgga gaggcgtgag aagggtgctc gaaacctcag 2700 cactgcaaga agtttggatt ggaacgcgat gacggtcatc cagaattaga tcgctagttt 2760 cgatccggcc gatttttatc atatgagagg aatcccgaag atactggatc gacttaaacg 2820 acttgtgaga gatctatttg gtggctttat cagttcttca gctttggacc caacccacag 2880 cgaaatccac gagttctgga gacccttggc ccactgctag ggagggttct taggaccaaa 2940 2979 tatatgcagc tatggctgaa tattacttca ccatcccct

<210>	2705
<211>	1827
010	T33.T3

<212> DNA

<213> Aspergillus nidulans

<400> 2705

atggacttct ttgctgagac cggcctttgc gccaggcgag cagccgtcga ggagaccatt 60 tgagaacgaa tggcagaggt gatgtttgaa ggttgtacgc ctgaggcggc tggttcccgg 120 ccatgataga acgggccttt gcggttaagc tgtggtggaa taaagctctc tgagctcttt 180 ttaggagaca agggaagccc ttgaggagca tccggagtct cttgcctggt gcaatgcggg 240 gcgagctcat ctccctcggc aggactcgtt tcttttttga gcggcaagtt ttcctcgttt 300 cgaggttcca ccgcggtgt tttagattga ggcactgcag gtttgataaa ttctttcttc 360 tcttctcct gacgagctcg ttgtcttca atctctcgtt tagagggcac atcctcgata 420 aacgggcact tgccgagcgg agcactcctg aactgcggc acacgccgtc ttgtcgttt 480

gcaactttag gatattctcg aaccatgacg ggtcgtgtct tttcatccat gtcatgtacg 540 tatataaaag ggcccttgaa tggtaccaag tctttgagca cagatagatg acttcggtca 600 gaggggccgt tcagttcgtt ctggagaact tgtgagagat catcttttcc tctggacttc 660 gtctgagacc cggcggcatt attccgtgta gaatggccac tcccattagt aagatctatg 720 tcgttgatcg tggcaatcat gcgctgcagc ttctctacgg cccagatctt catacccatt 780 tecegagete gatgeaggae atettggett tgtteaeget taggaeaaac ggetaagtgt 840 aaatgcattt ccaattcagc aggattgact gtttgcagca tagcaccatc cccagcagac 900 tcatttggtg tatcctgggt gtgccccgtt tgtgctcgcc tgtctatctc gggggggtatt 960 ggtcgggatg taacaacatg ggttactaga cgggagaaga acttttcttc acgctataca 1020 tatgatcagt acagagtcaa atacacagtc cagaaaatcg aggggattcg gccaagacca 1080 gaacaaggag tgatgagata aggaaatttt gacgtaccgc tcccaaagca atgacctgtc 1140 gtgagcattt gctgcgaaca tcaattggaa cggcgtcaaa gtagaacaca aagtggggaa 1200 aagcetteeg atagtgeete tgeeactgee tgategagat attttetgeg ggeggettee 1260 ctgctttgtg ccctttgagg gaccggttcc tggcccaagc agccaccagc ttcctttcaa 1320 atgcactggg ctgagcatgg ttcgtctgcg ggtgaacaat tttggatccg tcccttgtag 1380 gcgccgaact tggtctggct cataggctgg ttctccgcgc cggccccgtc cccaacctgt 1440 ttcttcggag aaggcgggcc gtaagggatg tcaatctgtg cactggtcgt ccggggacgt 1500 ttggcaggca caaggcctac tctgtgaggg gaattggttg cattcggcac gtttgcaagc 1560 ggacggcggg tcgacatgtt cacggaggtt tcgcgcgatg ggggtatgaa tactgctgcc 1620 ataaggtaac aatacacaca ggcaccttaa ggaagaagga gctgagcgcg agctcgtcaa 1680 cgaggggaca ccgagcacgc gactaggcga cacgtctcga agagctggga aactgtcgct 1740 cagagaaagg ccattgtaga cgctgagaga aaagcttgtc attaaggacg tcggtgaagg 1800 1827 agacagagcc tcaagaagta gtcaagg

<210> 2706 <211> 3940 <212> DNA <213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2706

gaaacctgtg gagtgttggg gacccaacgg cattcaaccc gctgtagttc cgtcatattg 60 120 ttgacacctt actactaata tccaacaagt gatcagtcca aaggcggaca ggggctgttg 180 atgtatatcc gccacgttat ttggcgggag gacaagctca gggacaaaac aggaaccacg 240 ggtccgaagt tttgcagatc agcggatgcc gtccgcggct caccgcctgc ctgctgagtg ggaccgcagg acaaaaagtg gcggtcagca ttatcagcca atgagaggaa cggtatgggg 300 360 tgtgtgctgc actatacgac ggtctagatt cagggcagca tacgcaagag catgagagtt gcctgaaagc cggtatattg ctatatattt gaccccatat atccactata tattaagtgt 420 ggacgtgggc tcaagctgga tagggggttt atggtgtatc acttgcttgc ctactggatg 480 ctcacctgct cttcaggaag aatcgaatgc agggacacaa agcctgcaag gcactgatga 540 600 tqtqqaatqc qqqqcatcaa aaaggctccg agatacgagt gacaaatttt caaaaggtta aaaacatgta aagtgctgac gatcgaagac ttctctgtta gactgcatca ctagccgcct 660 ggagcaggcg gccctccact cagcattgtg gccactggtc tctagtccct agttccttgg 720 cccctggttg ctcgaagtag tcgccgtacg ctatggtttc tgttggcgcc atagccatag 780 ggcccataaa aaaattagga tataataaga cggtgagggg ccatgtcgct gcaggacgca 840 900 actataaaat tcaagcgctt ttctttatct tcggccctgc tgtcgcctga ccacagtctg ctcctcacgg acaaatatcc gctcattttc tctcttgctt agaacaggat gtattctagc cccgttccca tatctatccc gtatgtcctg gtcgaacgcc tagcctatac tcgccgcacg 1020 gactgaccat agcaaactcc ccctcttaga tccttaacct aatcgtccag acgtcctggt 1080 ggcgctctaa ggagaaattc ctcgaccatt cacgcccttt tctatccgtt tctcccgcca 1140 gaacccttgc tgatcgttcc gaccctccac tcgcggttgc tgggccatgt gaggccgttt 1200 ccgtccagag ttggagactg aatttcgggc actcatgacg catcctatcg accatggcct 1260 ccatcacatg ccatcgtcac cttcctcctg gccctggtgg ctatgaccac tacgtccacc 1320 accataatag tgatgtccct ccactacatc tagctgcatc gacccttgca gcccctagtt 1380 ccgctccact ctgctccgat cccaagcagg acgtatcgtc cattcctacg tcgctggcag 1440 taccagtgcc agtgccagtg ccagtggctt cgcttgatac ctcgtcccat actagtactg 1500 ccgctgctgc ctctgagaaa cctcactctt gccattctct tgaccttgcg gggagcgtat 1560 atatectete tgaggeaagg ttgageaaag gageeaaate caccagaget gegaaeggeg 1620 gtatgcttga ccattcctca ccactgcccg tgtccgataa gctgcggacg ccagagcgga 1680 gacggacagt atccccttcc acaaggtctt ccggtgaaat tcgttcgact tctcgcagta 1740 cccggcgctc tggaggtgga aatggaggtg gtgatggagg tcatagccat agtcgtcgga 1800 gctcgcttca ctctcaccgc cgtacagtta ccaccacctc cctgacacct tctagaccag 1860 actcaccggt ccggcgtgag aatctcatag ccctacatcg agagtcttgt cgccttttcc 1920 aggataacaa ccgtgcctct accaccgccg ctgtcacccg ccagtcatcc ttctcttctt 1980 ccccgccatt tactccccgt caagcaagaa catactccaa cgtcagctca cctcccgtaa 2040 cgccaattct tgaacgccac cattcctcaa ctttccgcca ctcatactct tccagcaact 2100 tacatgccaa ccacggaacc gtcccggtct cgcgcgtgga agttaatctc tccgccgaga 2160 caaaaccgac tataatcgaa tggacatctc cctccacccg gcgccgcgag tacaaggaaa 2220 tcgaccgcgc gagcagcggc gtccgagggc tctggcgccg cgtcgcaccc cggtggtgcc 2280 agttcggcga taagcggatt cccttcttcg aggaggaaag ggacggcaaa gcgaattatg 2340 aggggagcgt ccgcaggttt cggatggatc tccctgatga gctggagtcc ggtgaatatc 2400 ggaatcaggg ccggcgcgga ctcgggatga aactgaagcc gaggttggtt gtgcaagtta 2460 agaggagcaa gacgagtatg agctggttat gatcgtcctt ctaagtaaaa accgtcatta 2520 gcgtttgctt cttttggttg ttgtgtggat ggcatacctg cttcatgagt ttgcatgtga 2580 tacccatata cagatacata tacgcataca tagagtcaaa tttcatatca ttgcacctca 2640 acgccgttgt ttgcttttcc ttgcttgagt ttaaacatcg catgcaatac aaatgcaata 2700 cgtaggaata aatattcact ggaacagggn tatcaatccn nacactcatc ccaaccaaac 2760 atgcatgtag ccagggtatt cgccctcaag cctacattag atcaaaatca tccaggttct 2820 cgcgataccg catgatattc cgcttgatct tgctggaatc cacccacgtc acgaagtcct 2880 ccatgttccg ggtaaccagg tacgccgggt ccgtgacgac ctccgatccg acacgcacat 2940 gcccttgctc gatgaacgtt acgggctatc accacaatta gcctccgaca aatctcatta 3000 gggaggaaga gaaagaactg aagaaataaa agggacacgt accgtcttga tgttttccac 3060 catcccactc ctcgccataa caactagcca gccgaagtca gacaaaatgc gctaaccgtc 3120 acctegeget caattetact caateetgea cettgeteac gaetttgttt gaggatteec 3180 atgcgccaca gtttatccag aacctcggat tcagttttct ggcggatggg gtcggaatcg 3240 gggtcaagtg cggagagett gtgtggage tgccgaagg atccgacaat tgcggaatat 3300 ttcttgtagt cgacgggtt ttggaggtag tatcgttga tgatctgaga ctctcgatgc 3360 gcgtggtcgg atttgtaggt tgttaggttt actttccgga ggagtctgat tgatttcagg 3420 ttagttaggt gatcggatac agggtggaaa caaaacgaat gagacagact tctgctcgtg 3480 atgcttgagt ttgcggacca ttttgacgtc tagattcgag ttgttggctt gattcgttg 3540 tttgatatga gggctacgtt aatggtgat tggataaatt ttcgaagtga taactgggcg 3600 gtgtgcgttt agccggtgca aacgtgtcaa actcgaaaat gtttatctct gatggagtac 3660 agatcacatg ggctaaaagc gctaaaagag acaatacgtc tacagaatca ggtcataaac 3720 tgtagtccat ctagagtaca tcataactcg tcctcaactg gagctgacgg ccgttggctg 3780 tccttcgcca aacaaacccc gttcttcctg cgccatttt cccacagggc gtgaaagtcc 3840 ttctccattc cgctctccat ctggtccggc aaaatgacga tgaactcaac atataaattc 3900 ccggggccca gatcgtcatg atcatgaatg ttgtccgtgcc

<210> 2707 <211> 1758 <212> DNA

<213> Aspergillus nidulans

<400> 2707

taaccctact aaagggatcc tcgctggtga ggcgggatgc ttgattcctc ttgcgctcga 60 caacttagtc cttgacacta accccaagca cacaccggac tctgggagag agagcgcgat 120 agactctgcg cagacgaatg tcagtgatcg tctatgccta tactgcaggc acgggcataa 180 ccctatgcag ggtggggtta ttactcatga atactcctgt aagtgccgcc ctatcccctc gtggattttc agctaatgcg ctcttatagt ggtaatcaag tatgcatgca atcccttgac 300 cgttacttcc tatacaaatg ctgaccacga tgctactgtc gcaggggatt tgccgcaacc 360 gctccggaag aagctatcca gcagatctcg acgcagtcga ctgcttataa gcccaccatc 420 gaacaggacc agacagtttc gatttcgtaa agaatacaat gacgacgtct ggatccttaa 480 aatctcttat catggttctt tgagaccgtg atcagccccg tggttctggg tatattgtta 540 tgaattatga caggcgttgt acggtatgct gatgcatttt attgtgcatt ggctttggta 600 tatagtggtg acaataacgg tttttagtat tgttatggcg ttttgagcaa atggaattat 660 gcttaacqqq tcttqqttqa ttqtctattt ttgcaattct taatgagtga tgcaagatat aacatcqtat ataccctgaa aatatcctgg tactttctat atgtctcatg attgattgag 780 840 gaaqaatcat atctgacctg cagacgttga ctctgcggac aacggtaaac tgccgagcct aaaactacgg agtaagccgc ggaagtcact acttcacgcg tcaattcatc caaaaattca 900 acqatectaa teeetatett eetgetttea ggaegeagte aacteagega ttaettggae atateceege tegacgeeeg aacattettg gtegeetget ttteetteee etegeegeee 1020 ctgcgccgc tcaagatgga gtcggagcgt accgtcagcc attccgaagc gttgctggca 1080 tgggttaaca gcttcgatct cgtgggtgaa ccaaagcaaa tagccgaatt atcagatgga 1140 aggataatet gggatattet acaegacatt gaeecagaac getteeeega egteaeggat 1200 cctaaqaaqt ccaacttgga gaacctggtc acgatacacg gacgactaca atataacatt 1260 ctggatttac gaaagtcgga gggctggccc cgagggctgg atccagaacc aaatctgatt 1320 gagttcgccg aaaacaactc ggctagggac gcggagaagc tgctgaagct tgtcttcttc 1380 gctgccacaa tcaccgccaa gggaaacact gcgagttacg agacatacgg cgatgccatt 1440 cagaaacttg atagtccgat tcaggagagt ctccaggatt ttcttgaaaa tgtggaggaa 1500 ggccagtacg agctggacga cttggcgcgt gaatcacggg aatcgcagct ggtgaagacg 1560 atcqaqqaac ttaagcagga aaataccgtg ctccgtgaga aatacgtaaa gacggagcag 1620 cgcgtgcttg agttagaata tgctgaggaa aactacaagt cggaactgga gttcatgaaa 1680 gagcgcaaaa gaaatttgac atctggcaag ggcgagtttg ggtttagcaa ccgagaccgc 1740 1758 gcccagaaga ccaaggag

<210> 2708

<211> 1312 <212> DNA

<213> Aspergillus nidulans

<400> 2708

gaacgcgccg acgcttgcgt caacggcgca ggtcttgaaa ggcggaagat agtactcgag 60 aagatcgaca gcggacacct ttgcgtcgaa ctcgaaccgg ctgactccgc cccattcttc 120 cagatcatat gccgcgagat gcttgcacgt agcaacgacc ttcggcttct cgggatcgtc 180 gccctgcaag ccgcccacaa actctttgac atagcgcgag cagtgcagcg ggtcttcacc 240 gggtgtttcc tgcccgcgac cccatcttgg atctttaaat ggatttacat tcggcgtcca gtaatcgatc cctgcgtggt cggagttcga aaacgcccgc gcctcagtag agattatctc 360 420 aqcqactctc ctgatgagcg catcgttgaa cgcggcaccg agcacaatgg gtgctgggaa ggatgtcgcg tagctaaaat caccagactc ttcgaaactc acgccgtgtt tttcagcgac 480 tccqtqcaqq gcttcgttcc accagttgta cgcagggaga cctaagcggg agcttccagc tgcttcgtgg cccgtgttgt tgattttctc ttctagtgtc agggcagaga caagggattt 600 660 tgctcgttcg agaggggaca ggctggcatc gcatatggga agttcagaga gagggcctgt tgcgcactct gggtagctgc actgacacag ggcggggatt acgagagagg tcagttcggc 720 atgggtgcag gatttgcata cggtcatatc tataagtttc cgatctctgt gggcggattt 780 cttcagttgc ttgatagatt ggctgtgcgg ggtagccatg catcgcattg ggcctttcag 840 ctccatcagt tgaatgtata tagtgccacc tttcatgcgg ctatgctact acctttgggt 900 ttcaatgtgt gctggttggc agtttccacc cttgtgaagg tagctcttac tatttcactt gaagcatgcc cacggacaga ggggttggcg tagttgagtc ttttgttcat agggattttg 1020 ttgactttgt ttgtctacta ttcttgttca tgtacctttt tacatcctat tttctttgtt 1080 gatttttagt attttttaaa cctctatttt acgttctttc cttgctcttt tctccattta 1140 tctatcctct ctaccttacc ttaatctctt gctcctattc tctattctct ttatctttc 1200 ttcctttctc tttctttct tcatttgttc atctattttc tcttcttctt tctatatttt 1260 1312 tcctctttca tttatggtgt tctctcttaa tcttttctat ttcttctatt tc

<210> 2709

<211> 2123

<212> DNA

<213> Aspergillus nidulans

<400> 2709

ctctaccggg cagttacaac atccatccat caatcaagag caaaacaaca caccaaatag 60 ctcggagtcc aagaccatct atgcaaaatc ctcctcgtct aaaacggcac tatcagggac 120 ataatccgat gccgaactgt ccacttcatc catatatccc tcgaacccgt cctcaccttc 180 agcaagatga tcagtatagc tgaccaagcc gaatgtggtc gtagcccggc gggccctgga 240 ggtgcgcttg actggacttc cgtcaccaac agcatcaagt gaccgctgag cctcctttcc 300

gatccccaag cccaagctaa ctccaacttg aacgtcactg gggcttatga acccagcggt 420 aqcaqcaqca gggcttaagg ctgggggagg cgatgcaatc ttgaacgtag gaaagttgag gagcccctct ccattcttcc tggtaggcgt ttggatggaa atgctgtcga ccttccccgt 480 aacaaaatcg gtatccaatt cgtgctccgc gtccgtagga acaatagtgt cgtcatcatc aagacccata tctcttttgg gttgcgagct ctgggtaggt gcgttcttgc cgtttccgat 660 gatacctgca gccttcttcc gccggccaga cctaggggtt gaattcgggg ttctaggttt 720 qcqtcctctc ttcgatacag gagacaaact gctggatcca gcgcgagggc aaatcatgga gctgccattg ctctttcccg gtttaaccat cgcacggatg cgcacgagac gctcagtgat 780 ggcacgggga gtaggtttat cctggttatc gatggccgct gtatgttggg tttggtagtt 840 aggcctgaac tcggactagg aaatagaaaa cgggcgacga aacttacgcc agacttcagc 900 aaccttttta ggatccagtc tgaagtcatg agtctcgagg atcttcaata agagctgcaa 960 tgtgagaaga ctggttagtt tgatgcaaaa gctagactct caaagggctc tgaactaaca 1020 agctgatctt tctcaggagt ccatttcata ggcatggtga tggtactttg aggagagaaa 1080 tgcaaaagag gcttgataga gaaagccgac agctcgttta gctagtgaat cagtcgaagg 1140 agaaagatgg taaggcgtga ggaatacaaa agagtaaagg aagaaataga ggattaggca 1200 atatttaaga gatctgggag tgagctgtga gcaagattga gggagaagga ttttgtgtta 1260 gtatcctccc ttcctgaatc tactcttctt cacttctcat ttaacatccc tctctcaaaa 1320 tcaacacagg aggagcaata tgcttgtctc tagctacctt aaactcctat ccgctcttct 1380 ttcgcatact cttcagtatc tcttatgctg atacttctct ttcaacatcg atatcttgct 1440 tttacttcca cgcctcttca cctaccttca tctggctggc cttcgacacc ttccaagagc 1500 tggtttgact cttggactgc actcaaccat ctgagctcag aatctccagt aatctttaat 1560 ggttcacgca aagcttattt tattgtgcga tgaagaacca tgatacctct gtacagtctt 1620 ggtcttgcca gttcgctgct aaccacctta tgcaggctgt tatttttccc agtgacaaag 1680 acaaagccag tgtcactatg cccatgaagc atttgtgttt gaactttccc tgcaggagaa 1740 gtttgatacg tttagcgtcc gtgggcgcag tgtcctacct agactcagac agcgacgaat 1800 atatgaaatt gtcaagtgcc tttctcactc ctggaagcag gtggaaatgt ttgcgtacct 1860 gaccttcgtg tgcctccgat ggacgttgtg aacatggatc gtattgatga ggaactgctt 1920 agactaggaa ctgcctcgac atttgtttgg cttgtctgat ttgccgctgg gttaccctgc 1980 accgtcatgt ttgtcgcttg cctccgttat tttcagttac atttcagacc tagttcgcat 2040 ttactgttca aacaaggcga attaccggaa tgcgtagaag catgcgatgg gaatatcatt 2100 attggactga tctgggatga aca 2123

<210> 2710 <211> 1929 <212> DNA

<213> Aspergillus nidulans

<400> 2710

acaagcgaga accactttcg ccgaggttca aggccatgag gaaatcagca tcctgcgtat 60 120 ttttgatgag tagcggggcc cgaccagctg ggcttccacc ttcgcgcggt ctcagaccat 180 ctctgtctct gaaagaagtg tctaggcgaa gttgggggcc tccagcctga ggttggccga 240 cgtcattcgg ttgattagaa ctctggctat ggctacggct ccggttcaat gagatttcaa 300 tggtgggctc ctccgattcg tccccgcctt caccaatgca cacgggagcg ccatcagcaa 360 atttgactct caatcccttg tttttccgaa tctttaacgg tggtaatgtt gaagcagctg agagcttaga gtctgttgga ggtgatgtac tagaaacggg tgatacagtc tgagtttcat 420 gtgcggacgg ccaccgctga gatacatcta ggcgaggagg agcggggatc tctctttcgg 480 tcgtggagac agcgtgccca ccgtgagaca cggatttcga gcgtacaggg gctaagaacg 540 cctcgacctg ttggtcggca gtattcttgg gcttttcccg tgagaacagt ttctccctcc 600 aatgcggtct cttgggcgtc ggtttgggtt cggcgtccac gaatgaagaa ggatcgtcgg 660 720 cagacattgt ggtcgttatc aggcgtaaat tctcaaaact tgtcaaatct actatggcgc attgcagggg tatcaggcga tgataacggt gaggctcgtt gaaggttctt ggccttcttg 780 agaacgtgcc ccgcgtagta acaccaggtg gttacgatcg cggacgaaac tatgaggagc 840 tcggagacaa acgagtatct gtggatgacc ggaatgacgc agtgtaacga tcacaacaaa 900 taggagaggt ggggaagacg acggcgccag cgaaatgtac gtatcgagat atcgacccct ggcgttatct gtgcggtgcg gagaccggtt gcgagtagaa aagaaggggg aggtagacta 1020 gctgagaata aactccgggg ccgacgagcg ttcttaactc ttcccaagag gtgacggtgc 1080 tcctgccacc aagcgtgatt gcttgcgctg tctggtgtgg agtcggggac gagcgatcta 1140 ccgcgaccaa ttattcaatg accattcagg aacaagaaag gagacgggaa gtgtgtaaga 1200
aggggcgatt gcacaacttc gaggggcgaa gaggggtatt agggaggtac ctggacgac 1260
taagcaggag tagttcaaga taaacaacac tccccagatt cgacgatagt gcacagtgtg 1320
gtggggattc tcagaatgat acttgggtgg aaatgcactc aagaacgagg cttgcctggg 1380
ctgagccagc agccgtacct gaatgactgt gaagcagtgc ttgaaggacg acggataacg 1440
gccaaagaaa atagaaaaaa gaaaagtcaa gacgaggag agaaggtgg aagatgcga 1500
gggaagatga acaaagtgga atggagacaa gcccgtgctg ggactgtgca ggtgggaggc 1560
agaggaaggc taccgtagta cgaagcctc ccgaccgcgg ctgcaatact ttttactccg 1620
tagtccaccg ccaaagtatt aacgccacca cgttcctggg taagttatcg gtagaatgga 1680
ataaaaactg agcctggagt gacccgtgaa aagtccctag gccacggtat ttcaatctgt 1740
ggtcaattcg ctggcatctt cctgcaagtc tccatagctg cttcgtcagg gtcacgtgcg 1800
cagagcaagc gtctgagacg acgagcgcct tgtattatta gagctcctat ataatacaac 1860
gagtccgatc cgtcgtcttc atgcttcatg gtagatgcaa tctcgtgcaa 1920
ttcattgaa

<210> 2711 <211> 2018 <212> DNA <213> Aspergillus nidulans

<400> 2711

cctctgcggg ttcgcctatt ttctccaggg cttcgttagc aagcctttcg gcctggtcac 60 gcgttttgct ccaacagctt gtttatgcta gtgcacatag cagtaagatt agtcgtttct 120 cqtctqtcca gatcttcctc tcggagctct tgcggccgga ctgcttgtga tgggtcaatg 180 240 cgctctctag ctcgtcgctg tgctatctgg cgcgtacgct tttgtactga gagcggtcca agcaagaacc ccgaaactgc aggacgagaa ctgtgacgaa aacaagcagc acgtccaagc 300 caqtcccaat tcattgcatc tccatcctca tcgtcgctgt ccatgtctgc ctgggtccta 360 420 cqtqqaqcac qqcaccqttq tqtqctagtg atggatacat tcggatcttc tggaccagcg cgcataaatg aaatgcactt cgacacgaat tcgtcaacgt caattcccac gccgctctca 480 cccaagtcta atgtcgcagc cttcttgtat gacaagtccg ccgcattgac tagaaggcgg 540 gagtcgattg tcgcatccga cgtttgcttg acatcccgga aaatctcatt cgctttgaga aaggtgteet tgataceagt attteetgge tgtagatact catteetaga atetgeaega 660 tcatttatta acaaatgctg aggtagacag cggcaggtta ttattaccat tcaaatctcg 720 tgtgagatcc ctcagtccct tgcgcacccg cctcctttca gctgcatcct ggtctggatc 780 gtagtatttc gtgctggctt tccgctgtgc ttgtgatatt tgggttccag tttcaatatt 840 cgaggctgta tcccctaggc gttgcctttt cgtgcttttc ctcgaagacg acatattttg 900 gccctgaatt ccgcgtttct tgctggaagg attctctaga ttctctttat cggagggcga 960 acctggcggc ggcgaaggag atgttgggcg gactcggggt gtacgcgcca tactcacaag 1020 gctgatttct ctaacaaagg gcgcgcgcga ttgcgagttg tgttatatca cagtttcgag 1080 aaatagaaga gtactcagaa tagtagacac aaagagataa aaagcagaga tgacatcaaa 1140 gcattatetg eeggeaattt ggeecaegaa ttegtettea aattgaaate aatggattgt 1200 ctgaacgcgt ccgaaataca ctgcacgtga tgtctccggc ctcaccgagt catctccaaa 1260 ttggagttgg gctctcttta atggcacagg cgttgtccac acgtcaactt tccctaatca 1320 tgccttaagc agccggacag tgatgccccg ggtcaaggat ggaggccttc acttttgcgg 1380 tttccgccca agtggatttt ccgatatatg tcaagatgta tgcctaaggg aggacataaa 1440 gagcatgtga aagttcgcta ctaatagaaa tcacagtggt tcactagaag ggaaacagaa 1500 gcagatccca ctctcagttc ttctcaagca acctgaattg cgacatatcg gctctgtgca 1560 gaatcccctg tecgatetat tegtgaetge geaattatgg teggagteea ageceetggg 1620 ggttccattg cagacttctt acaaagcctt caagactgtt agagcctgga atgagtggct 1680 acagttaccg atctccatca aagatgcccc tttgagatgt caactcgcta ttacgatctg 1740 ggacctgtcg ccgtttggtg gggaaggagc gaacggccat tacatcccat ttggtgggac 1800 gacgatacgg ctgtttgacg atgatggcaa attaaaaacg gggaagcaaa agtgcaaggt 1860 ataccggcac aaggccgcag atgggttctc ggcgacgacg acgccatcaa ctccatcgaa 1920 aaggcgaagg ggcaacaaac cagatccgct aggtccctct ccggaagagt tggagttgga 1980 2018 gagagtagaa gttttgatca aaagcatgag atggagag

<210> 2712 <211> 3486 <212> DNA

<213> Aspergillus nidulans

<400> 2712

atcactttat tcgtagacat gtcttgcagg gttacggatc agagacccat cgtatctggt 60 atatatgctc gaaaccctac atagcgacgt tctactctga cagcaaaggc agttaatgcg 120 acaaattcgt actcttcttt acatcatcac attataatca gtatcaaaat agcgataacc 180 gagttctgtc agctatgaac cgagaaattc cagggtttta ttatggtagc gctctagaac 240 cgcccatctt agacacatcg ctaactcgct tatagatcca gagaagaaaa agtacttcgc 300 gattcaggca aaccacaaat cagcgccagg ctctcagtat tctcaagacg tcgtcaagcg 360 gaagcgcgct gatgaggagg ttgttccgat cccggtagaa gacttttatt ctctgtgcta 420 aactttctat agaaacgcca acggaaagct cgcctggttc agaggtacga aaaggaaaca 480 attaagagag caacatgcct gcaacatcct ctcatacaag cccagaggga agtaggggct 540 cttcccgtat ccagtcttgt agaacaggaa caaagagggt tggcatatgc gagccagttt 600 cagcgaaaac aattacatca gttcgagccc tggccggacc agtacaccat taagcatgtt 660 gtgcgtaatt cacggtccgg tatcttgatt gccagtgagt gtttggctac ttatccgctt 720 catagactca atcaagctga tatgctctgc aggcggacat cgcggtggcg agtcgtcagt 780 gtcgtaagtt gagccttgcc ttgtcgcgag gacatgacac tgacagcggc cctgcatcag 840 tgtttgcttt ccggattgtg atcaggaaac atggacgtac aatcgaacca tggagcggct 900 gctctttaag gaacagtata gggtaaatct gctcatgacg gcctattctt accccagaaa ttaatgcaac cgcgcagctt tcatcgctct ctttgagcca caccgggtat ctcttgtgag 1020 gatctcttcg tccattaatc tgctcacacg actaataaga ctagggcgac catggacagt 1080 ggtccaaacg gcgactcctt ccttgcaccc agaatgcttc ccgaccctga cgaaggcgga 1140 gactatcgat ggccgccatt ctgtatgcag aattccatca ttttaacttg aaaatataag 1200 ggaaccacta acggaccaac agtctctcat ccgatccgca tccacacaac ctcctcctc 1260 tggtgttccg cgccatctcc aacgggggac attccccggt ttgcagtcgg cacgtctgat 1320 ggtctctaca ccctcgaagg cttcggaagc tactggacat tatccaagaa gccctttccc 1380 aatgacaagt cttcaggcaa ccctaagaag cgccgcaccg actcctcgca cgcccttatc 1440 acagccgttg aatggctctc cccagacgtg attgcggccg gtctcaagga ctccaccatc 1500 tttcttcacg acgcccgctc tggtggaagc gcaactagac ttcagcatcc ccatgcggta 1560 actaaaattc gcaagctcga tccgtatcgg atcgttgtcg ctggtataaa ctcggtatgc 1620 atgcattcat ccctttatcc aattattcgg ccctcttatg gcctatacct ccagtagtcc 1680 atctttgccg tttgattata tccatgccgt ctaacgagac ttgcttcaca gctgcaaatg 1740 tacgacattc gctaccccc aaataaccta caacgtaacc ccaacccaaa caagagccat 1800 cacacttcga ctcgccccta cctgaccttc tccaccaact accccgaagt aaatatcacc 1860 ccggatttcg acataagccc agaactgggg cttctcgcta gcggttagtt tcccacttct 1920 tgaatatgcc ctttcccaca ctgacaaagg atgttgttat atacagcttc gcccaccgac 1980 agggaccgta cggttcagct ctactccctc cgcaccggag agcaggttgc ctccccgctt 2040 accagatatc gataccgaga ttccattaga tcagtgtgtt tcgagtctgg gaatcagtcg 2100 gccgcgcacg ggtcccagac acctagtttg ctggtttgtt cggaggctac ggttgatgag 2160 tggaaatggt gacgttcatc ttgacgaacg aatggaattc aatggtacag cgcttgaaac 2220 ttgaggtatt ctaaggaagt ctgatgagtt atggccatgg ccgtagttat ggtacagggt 2280 aaagaaacgc tattagtatt cacggtaact acattgatag ctaagcgagt catgcccgca 2340 gggtattacg cctacctatt tctaacgcca gatatgcaag ctattgttac atcactccat 2400 aaaaaagtaa ggtgagagaa agacaacaag agtcgtaaca ggtgtcctgc cataaaaaaa 2460 tettaateaa geecaceage taaceaetee eegaceteaa tteetattee ttttgeeate 2520 teteegatee agtegeegga gaeatttaea caceattttt eteeeaegte egeegtegtg 2580 ttcccgctgt tgacacctgc ggaacccaga cccaagcggc tcccgcttgc acgtccagcc 2640 geggggacaa ctagtegtag acgaegtage gtggcaagtt etgagtagae egagteaget 2700 atagcggtga gccgtagcgg atttgcaggg ggattggggt ttatagcatg gtagattgca 2760 atgagtettt ccaaggggaa aggacgageg gttaggatgg tegatgggee ggtgataeeg 2820 ggaccaccgc ctgcagcaga tgtcgtggcg gaagtggtag caaaggcatt ctcaagaatg 2880 gatttggtga tacgagtctt tgtccgcttg cccaatcccc ttcttcgttt ggcgggtgct 2940 tgcgcttcct tgtcttctgc tgcttgcgcc tgcgagagaa ccttcaagcg gcgtcggtgg 3000 tgagcacgtt tgttccgcgc agacaatgat gaggaggaga actttgagaa aaagattgtg 3060 tccagtcttt gcggagtgtg agaggctaga tatgcggatg tcaggacaag agtagcgaag 3120 taaggtaagc ttggaagagg tgaaggtgct gagatggatg ttaataagga tgatggttta 3180 gcgagtgcgc cattctgggt agtagaaggg gcgtcctccg taactatacg atggactaaa 3240 gcggcctcgc cttgccgtct aaacaaggaa cggtttttga ctaggagccg agagaaatcc 3300 cactcgtcat taccgccagg cgcgggtttc accgctggtg atcggggcaa cgaactgcgg 3360 ccacagcttc tcgcatatag acttgaatac cggtatagaa cttgcggttg ggccaccagt 3420 gaatcgtaca cagcggagac aaagtaggga tagagttgta atgaagtttc cgcggcagac 3480 caggta

<210> 2713 <211> 1500 <212> DNA <213> Aspergillus nidulans

<400> 2713

tatttcccga gctctgagcg gcgtggagac caagaggcgg tcgaacagag atgaaaagcg 60 gtgttgtaga tcacagcagt aatcaaaaaa accagacggg aataatgcaa gtggataacg 120 180 gaggggttet ettattatgt gaggtetgga caaacaagag gaggeeetae getgttgetg 240 ggataaatca ccaggtatag gaccagggcc cgaagagagc gacacagagt gaggaactgg 300 360 ctgcgagagc aatggatgat tctgattctg aaggagcgac aaggacgcgc gagagtggtc 420 agagggacaa cgcgaaaggg aagaatcaaa cagcgccagt ccgggcagtt gttcgttcgt 480 gtcttcagac tctggactgt tcgaacgtct agcctgccag gagaactaac gccgactagt 540 cttttagagg cagacgttat tcgacttcat tcgacggccc tgacttagcg ctgccaccgt 600 tggtcccgta aatgtaattc attaaatttc cccgaaattg gccggaacag cctccaaaca 660 ggatacgctc aatgaattta acatggagaa taaacaatat taggatcaga caacccctcg 720 ataggetega aggatagtaa tatacegteg aggggcaata ategeataga ateetaaaga 780 ccqtacttca tqqqqtqccq cqctaaaaat actcqtacct tcqtcaqcqq ccaqcctqq 840 tgggtgatga agggagatcc accqccqccc atqqaaaaqq aqtttqtcaq qcttqaqcct 900 ataatagtta ccgcggttat gaagagcttg ataaatcctt ccctccggat atccaatacg 960 tegeaaaaac aaatgeaceg etttagtata acaegggaac eaceteacet catagateat 1020 caegatgatt eetgeecaat tategaaggt actttggate aceettgact aegtagtegg 1080 aggatttgga tteeagetet gagacegaga etggtattt egaggatgat gtetgataca 1140 gegegtgtt taetagtatg gettggaget taggeecatt acategacet taegtaetge 1200 gtegteetgt eaatactgat etageegtte tteettgtegt eetggagete tggtacagta 1260 aagetetegg agageetteg gategaetge ggeegeegee egggtaeaeg gtaetettat 1320 gtacaeegae aaaattgagg ggaageagee agaeactaae ttaateagae ggaetatete 1380 gtgegeggaa etteeaggtg ateggatee atteetegtaa agaegtgggt tegagggete 1440 caageetaag etgtttagtg aggteaetee egetggegt tgaetgatea gaaaggttat 1500

<210> 2714 <211> 1620

<212> DNA

<213> Aspergillus nidulans

<400> 2714

ctgggtggcg ccgcgtacgt ctctccggga cggctcaaca ccagggcttc cacggtgaag 60 gacccttttt gctcatgcgc gggtagacaa cgctgccgtc tttcgtcatt ttgcagtttc 120 cagccgggaa aaagacaacg aaaaagatta gattctgaag cgggtttcaa aaaaacggtc 180 agagttggcg agaaatcaaa ataacacttg cqtaacqtac aqqtqqcaqc tcaqctatqq 240 300 cgttcccagg ttcaggagca gaaactgacg gaagctgcga cggggagagt tgaggaaatg cggggagacg gacgcagacg gttcttaagg agagccgcgg ggaaaggaac ggctaaggaa 360 ctagcacgta ggcctaagga aggtttaatg aagccgtgtc tcgtggggag aggtgagagg 420 taaaaggtca gaggtggctg gactggccgc gggcaatgaa gtcactccgg tcgctttgca 480 tagccgcacc aaagtgcttc cggtaagttg caacgggctc cttccttgga aagctgtcgg 540 ttcaattacg gttcgattat ttgattcggt gctatgcaac cagaggtaca agcgctaatt 600 tcatttcaat acacaatagc cagcttccgc tattcatcct gtactgccat tcatattgtc 660 tegetaetea gigititiggi etigitegaa etgigiecaa eagegiaeag ageaeagaea 720 cagcaggcac aggacaatga atgcatgtct ctggctacac cacggcaccg cccagaaagc 780 ccagaaactc tgtcatttaa attgagatgc caggtgccgc ggtacactca gacacatacc

caggetettga gettetgatt etegetegta tecaggece tgaggegate teattegeae 900 caggettetg tegggatttt agececaacg cegtetegaa cegtetagg eggatgateg 960 teggagetet geteagaaatt gaaatgaett tgatggegee tettategee agaacaegga 1020 ataaatteta atgaacgeeg atgeaetttt tettggttte agaactetet tataatetga 1080 eecegttaag eetgetgeea eaacaeeegg tgeeagatgg egaegegatg etgeteegtte 1140 gtagggteae gtgataaaeg agettecate tteeceaeae tagaacaage eaateaeaga 1200 atetegettt teeaaeeeg ggaggaaaaa gttteaettt gaeetaatet atgeegaag 1260 agaggeteata geeggetaeteg teeaetagaageteata geeggaagga teeaetagaageteata geeggaagaaga teeaeeaag tegaaeeggagg taeegteae tegaaeeggagg eteetgaga 1380 gtegaagaeg eegaeggagg taeegteaeag tggaeetegg eteetgaeea etateeeaa 1440 aaaeeggtag tgateaataa atggaaetet agaateett teeetette eeaagaeete 1500 eeeteeteaa aeeteggett tegtgaeteg aaagegteaa eegteeagat eaeetgeegg 1620 gagggegagt acaetgteea eeaateeggee acattaeete egtegteteg tgetggeggg 1620

<210> 2715 <211> 1102 <212> DNA

<213> Aspergillus nidulans

<400> 2715

ttcttacaat caccgagtca caaatgcagg attgcctgta gggcgttggg attagttata 60 tcgcctcaag tatagttgga gctccatctc cagctatcgg cgtcacctgc gtaattcagt 120 gteccegcat geetegeate aatteegatt ceateattge eegtaceata acettgeget 180 attattctct ccatcgactg tttcagaggt gttccaatcc cgtaatctct tgcgggatgc 240 300 agctactggc agtagcagcc tgtatataac cttgtcgcta caacaaccgg atttcagccg gcacagacgc agaacaggcg aatctcaaca gtaagatcag atgagacctg gcgaccgtca 360 gacgacaatg atgaaagtca atattatgcg cgacggtacc tacatccatc aacgttggag 420 aggatggcac atgttttgac aaagtcagtc aacgatcctg cggacgagag cccggctgag 480 gtactggatt cgtaatctaa cgtataactg gccaattcat tataagcatt caactgcgaa 540 aatcaccagc aagtatgctc ttgtcaagcg gaagctggag gacagaatgg aaggttacct 600

660
700
720
780
840
900
960
1020
1080
1102

<210>	2716
<211>	1977
<212>	DNA

Aspergillus nidulans <213>

2716 <400>

gagctggtag acgcttcggc gtcagttgga attttactag tttggtttgt agtgtcggcg 60 acggccgatg aaggggatgc agtttcgtca ttattgctat tgctatggtg ggcggaaaag gcgcgtgagg attcgacgag ggttgagcgg atggaggcga gcccgtcgtc gaggatttcg ttgcgctgtt ggaggtggcg aactgtaagt tccatcgagt cgagtctggc attttgggct 240 tcgaagtacg ggcctattga gataagagga caactctgct cgtgagttcc tagttctgca 300 cgcttcattc tgatggaaca accgtatttg gatgcggcgc aagggtgaac cgcttcaggg 360 caggaatcga tatgttctcg gagcgctttt cgaaagacgg ttacctgaca atccgggcag gttgttttga ggctagggca tagttctttt acgtgctcct tgagtagagt ggttagcctt 480 cgatatatgc agatctgacc gggatatatt ctgtacctca taatcctgct ccatgatatc cgcgtcgcag cgcagacatt tgtggagttc atgcatacat ttattctccg gactaaggtc 600 cttcttgcga gttttctcat cgcaggaagg actcgggcag tccatcaact tatatctgca gtacttgtct gcatgggact ggatatggcc cctcggaaca acctccttgc atccttcagg 720 cgaaaacgga caccgcaccg gaagatcatc gcacatgttg ttcaagagtc ggggaacgtt gagatagaca tcccgtgtag gagtgcggca tgtggggacag gtgaagtcgt ctcggccggg

agcaaaagtt ctgatagcaa agttcaagca cgtctggcag aacacatggt cgcatcccag gcgcactggc cggatgaaag ggcagtggca tattggacac atgagatggt catcatagtc agagatgtac tcaagtccgc gcaggtcgat gagtccgtcc tggtcgctgc ccacctccat 1020 ggcgaggaac tggtcgagct tcatgatgaa ggcaaggaaa ccgcgcttcc tcccgtattt 1080 ctatagtata ctggtaatga ctcccctgcg acggggagat gtgtctcaag gaatcgtccg 1140 ctggaatgtc gtgttggttg gggtttgaaa caatagcttc gagtgacagc acatgagtgt 1200 cacacggtgg ctggaatggg ggggagacgt cgtgacccag cagatcagcg ttcgttcagc 1260 agcgttaata gaaggcgaac cagcgggaat gatagcgagt ggaatttgat cggcgtggtc 1320 gaggaagtcg gaggtggact ggacagaagc gggagttgaa gcgggattgc ggggaggcga 1380 gaaccgtcat cttctcttgg atgggtattc cagggttaga ccttgaaagt gcctgctatt 1440 tggcgcaata gatcatccaa atttcaatca agatagatat attcattaat gacactattt 1500 cggctcttct tgttctgttc gtcaacattc tcgactctcg ggccatctgc cggtcgcaac 1560 ttagcgctga aactctcctc cgcagttgcc tatcgtcact caatcagcaa ctttcatcca 1620 tetetgetae etegacatee teecetgeat cagegaceat cattgtetga cateteagaa 1680 tgccaaatcc ttcacagctc ttcctccttg ctgatcacat caagctctca ctcctagaac 1740 gcgagcgggc catctcgctg agtctagaac ctaacagcca ggatggtgag atatcccgtt 1800 ccctcgagtc cctgcgagaa ggcatcgagg gtgtcgaagc ggaacgttaa gcgacttgaa 1860 gaatcaaatg atgaaaaggc tgccgattaa aaagaccagt tatgcattcc cgtcgaagcc 1920 agcgattatc gtcgaaatcc gcggcccacc gttcatccgc cggggcgaag catgatc 1977

cttagcttaa gcgctcttgt gttatcccca ggtccaccac ggggtcgtgt tttcagccca 60 cagtacttag cagcatgccg tatcttctat caaggtcata tccccattca gtatggatcc 120 tgcctctggc atagctcaac aatgtccatt ttcgttgggc caggatgaga cgccaactcc 180 tgcggcttcg gcccagttac cggtgttttt agggtacgtc gttgcagttc tcagaggagg 240

<210> 2717

<211> 803

<212> DNA

<213> Aspergillus nidulans

<400> 2717

aggatatgcg	acaacgaggg	ctcattgaat	acttgggaat	ctgtgcggcc	gtgtttctca	300
tgttctatgg	cgaagccagt	ggcatatata	ggctatttcc	tgatttggag	gacagcttct	360
ttcaactcgt	acaagagagt	gttaggcggg	ttattcttac	acagtccatc	cgtagttgca	420
gctcgagttt	cgctaatcgg	gtgatttgag	tcatagaagt	ttgcctgatg	ctcagggaac	480
ccagagaagt	tgacagtgtg	cggaacgcga	ggatgataag	acagcggagg	ggtaagtgtt	540
gatgctttgt	gagcaagctc	tgtaatttca	gtggctggag	cccacccaga	aagcttgtaa	600
ttgcaggctg	tattggagag	ggttgggact	gtggagcgag	taagtgggcc	aagtcataga	660
gacttgtatg	aactacacca	tcgacaagta	cctagggctg	ccatatcgct	tgaagtgaga	720
acgcttgatt	gtcaccggac	ctgaacgcct	agaatgtcat	cgcttgtact	cctgtaagct	780
gtaatagtct	tgtttactct	att				803
0.4.0	0710					
<210>	2718					
<211>	1088					
<212>	DNA	a nidulana				
<213>	Aspergillus	5 IIIuuIaiis				
<400>	2718					
		tgtccaggtt	atactacatt	tctggctctg	aggtcgagcg	60
ctaatcacgt	gtacagactg			tctggctctg tacaacgagc		60 120
ctaatcacgt	gtacagactg cagatgccgc	tattgacccg	attgcatacc		ctacgaagag	
ctaatcacgt atacccagtc acgacacaag	gtacagactg cagatgccgc ctacaacatc	tattgacccg	attgcatacc	tacaacgagc	ctacgaagag ggtaaccgcc	120
ctaatcacgt atacccagtc acgacacaag ctcttgcaca	gtacagactg cagatgccgc ctacaacatc aaacgttaga	tattgacccg tccgagcgaa tggcagcggc	attgcatacc tggttcggca accgagaagc	tacaacgagc cgacgacgtc cattactata	ctacgaagag ggtaaccgcc	120 180
ctaatcacgt atacccagtc acgacacaag ctcttgcaca ataggggact	gtacagactg cagatgccgc ctacaacatc aaacgttaga gcaaggtctt	tattgacccg tccgagcgaa tggcagcggc ggttatccgg	attgcatacc tggttcggca accgagaagc	tacaacgagc cgacgacgtc cattactata agaaggtcat	ctacgaagag ggtaaccgcc cgtgacgaat	120 180 240
ctaatcacgt atacccagtc acgacacaag ctcttgcaca ataggggact gaggaacaat	gtacagactg cagatgccgc ctacaacatc aaacgttaga gcaaggtctt ggcactggtt	tattgacccg tccgagcgaa tggcagcggc ggttatccgg	attgcatacc tggttcggca accgagaagc cctagcgaga atgcagctgg	tacaacgagc cgacgacgtc cattactata agaaggtcat ggacaaatag	ctacgaagag ggtaaccgcc cgtgacgaat tttccgaaca	120 180 240 300
ctaatcacgt atacccagtc acgacacaag ctcttgcaca ataggggact gaggaacaat ccacaaaaag	gtacagactg cagatgccgc ctacaacatc aaacgttaga gcaaggtctt ggcactggtt acgcagtgct	tattgacccg tccgagcgaa tggcagcggc ggttatccgg tgactgtccg	attgcatacc tggttcggca accgagaagc cctagcgaga atgcagctgg gacctggagg	tacaacgagc cgacgacgtc cattactata agaaggtcat ggacaaatag	ctacgaagag ggtaaccgcc cgtgacgaat tttccgaaca catggacacg	120 180 240 300 360
ctaatcacgt atacccagtc acgacacaag ctcttgcaca ataggggact gaggaacaat ccacaaaaag gtctctgacg	gtacagactg cagatgccgc ctacaacatc aaacgttaga gcaaggtctt ggcactggtt acgcagtgct gagtgctaga	tattgacccg tccgagcgaa tggcagcggc ggttatccgg tgactgtccg gtcgctagtc	attgcatacc tggttcggca accgagaagc cctagcgaga atgcagctgg gacctggagg	tacaacgagc cgacgacgtc cattactata agaaggtcat ggacaaatag agggcgatat tcctatcaat	ctacgaagag ggtaaccgcc cgtgacgaat tttccgaaca catggacacg agttctcgcg	120 180 240 300 360 420
ctaatcacgt atacccagtc acgacacaag ctcttgcaca ataggggact gaggaacaat ccacaaaaag gtctctgacg	gtacagactg cagatgccgc ctacaacatc aaacgttaga gcaaggtctt ggcactggtt acgcagtgct gagtgctaga aatgggaaca	tattgacccg tccgagcgaa tggcagcggc ggttatccgg tgactgtccg gtcgctagtc taatctttgg	attgcatacc tggttcggca accgagaagc cctagcgaga atgcagctgg gacctggagg gagcatgagg aatgacaagg	tacaacgagc cgacgacgtc cattactata agaaggtcat ggacaaatag agggcgatat tcctatcaat agctcgagtg	ctacgaagag ggtaaccgcc cgtgacgaat tttccgaaca catggacacg agttctcgcg cacgctggag	120 180 240 300 360 420 480
ctaatcacgt atacccagtc acgacacaag ctcttgcaca ataggggact gaggaacaat ccacaaaaag gtctctgacg ggtctcgata gcagtgctgg	gtacagactg cagatgccgc ctacaacatc aaacgttaga gcaaggtctt ggcactggtt acgcagtgct gagtgctaga aatgggaaca cggaagagca	tattgacccg tccgagcgaa tggcagcggc ggttatccgg tgactgtccg gtcgctagtc taatctttgg	attgcatacc tggttcggca accgagaagc cctagcgaga atgcagctgg gacctggagg gagcatgagg aatgacaagg cctggcgaggg	tacaacgagc cgacgacgtc cattactata agaaggtcat ggacaaatag agggcgatat tcctatcaat agctcgagtg	ctacgaagag ggtaaccgcc cgtgacgaat tttccgaaca catggacacg agttctcgcg cacgctggag ggcaccaccg	120 180 240 300 360 420 480 540

tattttcgat aggaaagatg gacgatatca gtgtggttat tggaatgtgc aggaggcgta 780

teggegaage agaaacgage catacgaggt tggctgagaa teageegget ggttgaettt 840
tgtteaattt aacgtgatae gaattegaag acattgeatt tgttggtata tggaggaegg 900
caacaataat egagtgttge atttgeatgg tetggeggte tggacatatt tgteggtaet 960
egggagtttt ataacatatt aatgatttae eagageeteg gggeateate aataaataag 1020
teaateette aattegtaea getetetaga tagtgegeae ggageagett acateaggta 1080
tgtteege 1088

<210> 2719 <211> 593

<212> DNA

<213> Aspergillus nidulans

<400> 2719

cacgtaacaa gtcagatagc ctgcaagttc tatggacaga attatgtgta tcagtgaatg 60 gattagaatt cttcttctct tcttatcttt cacctgcttg tggttaatga aaaaataaat 120 aagaatcaga aaaaatattt ttgttagcgg cagagatttg ggctcttcga gtcttctctg 180 240 ccaagcactt tgcctgagat gtcatgtgac ctgtatagat ctgccgggag cgtgactgcc taattgtggt gettagetee ttattgeaac taactaatge ttgaactgag teteaaceag 300 tcgaccagga atgccagtcc atatgcaacg cggaacgcgg ttgggggtagt ttagcggcgc 360 420 agtatettaa eeetettage tteatgtgeg egegeeeegg gegggggetg tgteaaggge 480 cctagagccg ttctaccagc gaccttggac catataagga cgcacatcgc ccctgatctg gcatccagca acccaccaag atgccaggga cactcgctct cgcaacggcg cacgtcgcaa 540 593 ttattttaga ccggccgctg gacgcagaac cgcaccggcc cggcgataca atc

<210> 2720 <211> 3155 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2720

acccagtgaa tagggaaagg acgccgaaga acagcgcgag gatctcgaac ggccatgaga 60 accgtgaagt taggaagtag tggttagtgc tgcagacggg gtgttagcca aagcggatta 120

gatctttcag tacgattttg cgactcaccc gatgaaggca gaaggaatgt tgacctcagt 180 accgaagtta cgatggctgg gagggtcaaa tgggaagtcg gggtgtgagc ttccacactg actcttgcca tcttcaacag cgcacaggtt ccaccaggtc catcgtgaga gagtcggtgc 360 accagggata ttgctcgtgt ccacttgaag gaagtagatg ttgtcaagcg gggtggtgtt ccttacaccg gccaggaaga cgagccacat caggagaagg gctccggcag taaagaagag 420 gcccaaaagg cccaaaacag ctcctaagaa gatgatcagt tagctcttgc acacatcagg 480 taggaactgc gggaggatta ctggaagctg gcattatgtt ctccttgctt ctgtatctgg 540 ctggggacgc ttgatgaaga aagctctgat gagagacgag tagacaaaat ttggattatc 600 acggcctcaa aaggcagtca agattggtat gcaggaccgg gggctgggaa agttgtggaa 660 ggctgaaagg aatggaatgt cgaaaaatgc ggtctggaaa tcctattaaa gaatccggag 720 actccggtcg cagatttaga gcccacaggc cgatcgagag atgaatgata taatgctggg 780 caatgcatca ttattattgc tacctgaagc ttgaacgatg aagccgaaga ctgagtgatg atctcaacgt catcccggtg gtctgcggct agccgtataa ggtatagcgt ctgacactat geettateag acgetegtea gtegatatee atgacgteea accteagtee aactegateg gcaaacccag tcactgacgt tgcaccaccc acgaccaatt ttcgagggcc cagtcaatac 1020 gctagaagga tctacgtgga ggtgcaataa ctctgttgtc aaaattttgt ttctgcctgc 1080 ctggttcagc cgatcttatc aggagccacg atctgggcct actctgtaga cagaggagtc 1140 ggttctgaga gctgacgttg aatctcgttt tcgtctacgg tataggcgga gatattttgc 1200 getggaccet tgcagettee egtggteegg agaagatgge caettgggea tacceaectg 1260 cttccccaga gcgtctgaaa caggaagccg attctgcttt ggtatgtttg cgctacaccg 1320 ctctgcacca aatctacgct tgtgtgcaat actaaaggta tattgtagaa acaagagctg 1380 gaatggctac tgcgctcgtt gcaggattct ctcgcttcct tgagggaggg tctccatgaa 1440 tgcgcagcgt tgctggcccc gaaagagcct ggttctacct tggtattatc gtcaatgcga 1500 tccgagaatg taaagggctt tgtgacaagg gttggcacca aggttgtaaa gggggtatgt 1560 gtcgagtgat aaccgacctc cctcacggga atgattctaa tcgtagtcct ttgataggat 1620 attcagcttc gtcttagttc cctcagcaca agaggcgctc ccacaacgcg cctatgtcta 1680 tcacagtctc ctgaagcgcc agaactggca cttagccaac tggtgtcggt cagggactca 1740

gtccgncaat gtctagacat tgtggatgtg agcacttgga ccggcgaccc gcttgacgcg 1800 cgcttcatat acagccaact tcatctcctc ggagagacta ttgctgaagg gcggcaaatg 1860 ttgaagggtg agaacgatat cgttcgaggc aagtggtggg agacaagtgc gcctgacaat 1920 gtaagatacg gcggatactc gttgcttgcg atgactgact ggagtaatag gtgttcgacc 1980 cacctttacc accacatctt tetttecace tgtcaattge agacteegeg etggtgetgt 2040 atctcaggac tcttgagtct acaacacagg cccacacgcc tactgcattt gcgacagaca 2100 tctcgttgac cggattctct atacgtgatc gactattcgg ctctcgtgga ccttctcatg 2160 acgaggctgg agatgttc tcgtggaagg gagatgaagt caaagtcagg gagaaagtac 2220 gcgtagagag ccaagatccc agtctcatgg cagtaatggc caagttgagc gcacttcacc 2280 acgaggtgat caaatgcaag actgctctca aagtcctcat gggtagtgag gacgacacgg 2340 atatctagct aagcatgata ggaacctttg ccttccctga actactggag tcgctgaata 2400 tacaagtata agetttttge tatetaaete ttgettgeeg gteettgett aageteteta 2460 tgcggattta tgaagcgcac ggaccgttta tgtcaatact tatgtaacta gcgtaaacct 2520 agtggccaat aggacgaact tagttacttt aggttagcat tgattttctc aaagctctta 2580 cagtggcaac cagcttttta tttagtccgg cttcttgctc ttcccagggc agcagaaggg 2640 cgaaaatgct gtcgcgatct cctgctttaa gggctacccg ggctaagccc aagaatatca 2700 ttattcccgg atatggctcg ctacacgctg gctcgcgacg gctccgatgc agagcgccaa 2760 ctctcacgaa tccccagttc agcaccaaaa gtacagcaaa tgcagccgat tctctcaaat 2820 caatacgcca ctccggtcgc actccgaata cctacaaatc aggacacttt gtgacgggac 2880 aacggtactt ctcttcagct aaagaagcag actcgaaaac ggagcccgat gatgcgctct 2940 acgcactgat tgataaaatc aacaccacag aggctgaaat actggaatta ctcgatgagc 3000 tcgacctaac agatgagtac tctgggtcag gttcttccac ccaagaagtt cttgatgaag 3060 cctcaaacaa agctgcctac cacgtcgagg agcagacagc ggaagaacga gttcaccagg 3120 ctagacaagc cttcggcgac acctaaccgg atgga 3155

<210> 2721 <211> 2380

<212> DNA

<213> Aspergillus nidulans

ggaatataga agagatgaga ggataatgag agtgaaagag acaaagtgag atagaaagca 60 aaggggaata agcagtataa ggagcataag atgaaggaga ttgatattgg aaaagcaaat 120 agagaagagg agagagaaga agaagggaag gagaatagag tgaatagtgc gagaggagtg 180 agagaagggt aagaagtaag agagaaggaa agcagaagag aggtaaagag gagtgcataa 300 gaggaaaagg taaagagcaa ataaagagaa gtatggggga gaagatagga agatagagga 360 gaatgagata aggcatatga tagaaatgag acgagacggt tccatcaata ctcagaggcg 420 gggagaccag cttattcgcc atcgtcacca ttacaagctc cgccccagac atcactgtgc 480 acgccaattt cgtccttcaa ggccctgaag ctgaacgtgt ccttgagatc ataacttccc 540 aagatgtcat ceteteette accattacea tegteggeae tggegteeat gataceettq 600 ctcttagact tacggatccg atcaatctcc gcttctaatt tctcgcgcac tgacccgqqc 660 ggcagcgcgg tgaaaagatc ctgcttgtta gctgcaataa gcacagggat ttcagctgca 720 gccctggccg acgacttgcc ccgctgaagg gcacgttttt gaagtatcaa aagcacatca 780 tagaggtacg aagcggcatc tcgcagggcc tcagtttcag agatggccgc ggtgtcgacc 840 atgaaaagaa caccacgcag cctcgatttg gtatcttttg ttgtggacat cgatacgagc 900 tcggagagac cttgcgaacc tctcaatttt ccatggccgg gcgtatcctt aacgcggtat ttggtcgggt tccgttgagc ctctttcaag gatgtgtcat tgactgaccg gtacttgttg 1020 gatccaattg ggacggagac aggaaggcga atcgtagcaa gggttgaggt ttgagaagta 1080 tgtgtaggtt gtgatttcgg ctttgcggca aatgatgact ttgattcaag ctgtccaaaa 1140 caagtggtca gccaaaaata gcattcactc tcgacgtccg cgggcagata cataccaaag 1200 tcaacagage agttttacct gctccactgg gtcctagaag gaggaaattg cttgacggcg 1260 gcgaggctac cgtccggtag aagatcagat gaagtagtat agggacgccg atagtaatga 1320 tcacggcgac tgcaatgctg aaaaggctac cctcaagcag ctttgtagct actgcttcaa 1380 gtagttcgta ggcagccatc gtgtgactgg cacagctgaa aatgtaaatg ccggtgcagg 1440 taaaagaagg atgcaaggag aatcaaattg aatcgatttt attcattacg tgggcatcgt 1500 tttaaagaag gcctctagac tcctcaccat tcgaggttca agccaggagt ctactccaag 1560

tgaacaagct tactgatgcc tcagtattga ggaccttcag tggtagagat cacgccacct 1620
tgaacaagct tactgatgcc tcagtattga ggcaaaaatc ccgatgctta tctgccttat 1680
tttggaggca ataaatgctt tgattcaagg gtctgcatac ctggagcttc gaagggggat 1740
gccaggacga tcgaagacag aaaatgaaaa taatggagct ttctattcat tgctctcctg 1800
cttgcgctcc ctgattctcc tgattcgatt ctgtcatcct tctttttgaa tcaacctgtt 1860
gtcgagtttc aaccgtctaa actatatcta gccgtacatt atgcgtctca actacatata 1920
cacagccact ctaactctcg ctctggcatt aagtgtccta gcaagtaccg gcgggtttc 1980
cagcaccaac acagcgatcg aaactcgcaa tattggaaca gcagagtgga tggagtatga 2040
ttcgttatcg ccagatctaa actccggggt agaccacgga gcaggtgatc atctgcgccc 2160
acacagcaca acaccgttg cagacccata taaagttcc tatctttgc agactggccc 2220
gcctcagttt ccagctagc cgtacaaaat tgccaccaaa tacctgaacc ctggaactgt 2280
tcagactaca cttagcgcta ctgagacgct gtctgtcacg atgatggaga acacagtacg 2340
tgaatgcgct atatgttctg cagaccccc ctgatgctct

<210> 2722 <211> 1188 <212> DNA

<213> Aspergillus nidulans

<400> 2722

atcaaatata agcggctcaa tgtcaaggca agttggtagc ttggtcgatg ctcggtcgag 60 gacaaaagcg acctctatgc atgtgacagc cagctgggct gggcaatctc ctcttgtcct 120 gctgggttat cttcatattc cgccgctcgc tttcgcaatg acatgcatcg cctctttggc 180 tgtcgtcaac tatatcaata gctcttttat tgggccagac tcgaattacc cctattccca 240 tagtacataa agctgtctgg caatcatacc atacctctgg catcagtaat caatcaagtg 300 gccggcttat tcttcttatc cgtctgagtc tctagaagcc agtttcaaca tcttatttat 360 ctttatttgg cagcgtaaga aggtctatgg actcaggaaa tgatgcctca tctgcggcag 420 cctctgaggc tggaccacaa gtcaaggtaa gtagctctcg gccaggttgc tcatgtacag 480 ttgcggaaat ggaactggag gggctcgggt ctacctgatg ggctcatgcc aacgctcgct 540

cactagttca tcgctggtga tatatgtcga ctcaagtcca acccttctat gatagggcgg 600 gtctgcgtaa gtagagtgga tacgttctca cattctggac tgatgctgcg agtagagaaq 660 ccctcatgat gtatgttgcc tggttttcgt atccaaccca tcaacaatac cacgtattga 720 cattatcgaa gctagaagag ccggaactgc tgggcgagct tttgaccggc acatatgacg 780 gcgtgccaga agaggacgtt gatattttta ttactacatc aacggtaggt taaaqatatt 840 cttcgatctg gcagattcta ataaatcata agcccccgga aggttacgtt ttcgtgatct 900 atattcagcc ctcgcatggt agctctctta ttcatgaaaa tgacctcgaa ctcgttgacc 960 gtgtctacga gcttggtgag acggtgaaac acaatctcag tgaaaatgac acaatqaqtq 1020 gcacgattat tggtgtgtcc aggagatgta ctcttgagcc aattatctat cagccacgcg 1080 accetataac aggagactat ettecagtga ggttcacega gaaaccetac aagggatacg 1140 aggcatcttc tgcatctgag gaagcaggcc ctttcttgct ctacgatg 1188

<210> 2723 <211> 1513 <212> DNA

<213> Aspergillus nidulans

<400> 2723

ctcggctgcc cattctgatt gggcaaaact gtacacgtaa gtttcaccgg tcacttttaa 60 gcctggatag gagactgaaa gacttacggg gtctgagacc aggcataccc tctcqtattq 120 cctggatatg ggggcgtcaa gataacttta ttggaaagct gtaaacatta gtcgctgagc 180 atagtattca atccaaactc tttctaacat acaatctgag ggaaatgtcc ctctcctct 240 atgtcccaac ccggaatgcc ttctcgattg ggcgccaccc tatatagctg gtcagctatg 300 ccaagcacat ttgatagaag aacggattcg gagttttaca tggcaccatg accaaagctc 360 gaggactcaa ttaccgtttg agccgtggca acggcggaga aaaagaaaaa caatgctgga 420 accttcatcg cgtctatata gtccggcggt aattaccggt actcgctacg ccttgcttgg 480 gagaagaaaa agaagaattg tgcaaccagg cgttagtgag aaaggggtat ccaataaggc 540 aacgaaaaga tgtaagctga actgcgaact gaagaatgta cagtagaaag gtcagattat 600 atggccagga cccagggaag ctctgtggta caccgtggag acaatgatag taaatcactg 660 cagtccaagg gcgatcacaa aaacattggg gtctttgcga ggaaagaagg ggcaataaaa 720

ggtcaattga gggtgaagat cgagcttgag atcaagcctg tcgaaccatg agagcttctc cacgatatgc tttggagaca gacacggccc aggtggcctt tagtgacttc cgtcagagcc togagotyto acytytogty tocycyttoc coggatyyat cytogytocy ctotcaaago 900 aatccactca acatcaacat tcagtattgg aagaccgcaa tagcttcgaa aggtctccag atgtgtcgcg ctcgttgatt gaccacccgt gatgctcatt catagctgca atggctgagt 1020 tgtacccatc tettacccaa tgcgccatcg tegcaacgge gttcaaaaatc etectettee 1080 ccgcctagta agtgctcttc tggattgacc agttacaatt cgagtatggc ttgatttttg 1140 tacggattat gctgatatgt ggtcttgaaa cagcaagtcg accgacttcg aggttcatcg 1200 caattggcta gctatcaccc attcgttacc agtacaggaa tggtactacg aggtactaaa 1260 cttttgtcct caataaaatc tggttgccgg aaaataacaa ttttgttttt agaaaacctc 1320 ggagtggacg cttgactatc ctcctttctt cgcggtcttt gaatgggcac tttcgcagct 1380 ggcgcaatat gtggacccgg cgatgctaga tgtccagaac ctcaactacg attcctggca 1440 gactgtatat tttcagcgag cgacagtcat tctgagcgag cttgtcctgt tctatgctct 1500 1513 gaaccggtta gtg

<210> 2724 <211> 1124 <212> DNA

<213> Aspergillus nidulans

<400> 2724

gatcagactt ggtcggaact gacgctgcga agggcaaggg ttaggccgtt gctgtacctc 60 atagataget teagtaaaga eeteggaaet gteaeattte tgtgeteeeg atttettace 120 teggagteaa gecaeegaat ttecaettee egaeeaaett eecaeeettt ataataaeee 180 ctacggcacg tcgcctccaa ttctatggta agttccccga attcgcctcg cccagcttcc 240 geogtecaat tgaceteate gaaagggete tgcategetg geteggttet eeceetegat 300 gegeeeggga acaageacce ttgtgeaegg aataegtaet caageteeat tgaeeeggee 360 actgctgccc accgcctgtc cgatactcgc cctcactcgc tgctcgcccg cgactcgtcg 420 cacatcagtg acagtggete eccecactag acaageeeet teeeceeete ectettette 480 tecetetttt cettettett eetecateee geetaetatt teageatete gaattgateg 540 ttcgattgca tccgtaacaa accgtgccgc tctagtttca agacattttg ctacaacagc 600 taccccgcca tcttccacaa tgtcctacac cgtccgcaag atcggccagc cttacaccct 660 ggagcaccgg gtgttcattg aaaaggatgg ccagcctgtt tttcccttcc cagacattcc 780 tttctaagca catgctgaaa agaccggcct caaaatgatc ggtgagatcc cccgcttgaa 840 caatcccatc cagaaggttt gcccttgaaa cccctccata acggaacttg tcgccgtggc 900 aatatcqcaq ccactqattq qaattqtata aatttccagg gggattttct aaccttttag 960 gcggaaacct ataaggcaag cttcgtttct acaaaacttt atttctttaa aagggttcct ctgtgactca gggccttttt taagtacgtg caaactctat ttaaagttta ttttacattt 1020 taccctatat ctgtcataac atcgaagtgc cccatttatt catccattcc taaccaagtt 1080 1124 tcacttcccc ctctaatttt ttatactata agtatccaat cctc

<210> 2725 <211> 884

<212> DNA

<213> Aspergillus nidulans

<400> 2725

gcctcgtatt ttggagagtt cggggtggta tagcccgtca agaatgggtt tatggaattt 60 120 gtctgttgcc tcgcgtcgca gaaagcagtt cccggggcaa ctttgcatat ctgaggttga qacqqcctaq ccatcqtctt atctacttcg gctacaacgc gcaattggac gctcacggtc 180 tatctgctga cacgaaccga tcagcttggt catcaataca gtgtatatgg cgaatagcag 240 300 agtegagact gegageagtt gaeggttaga tgtgtattae egtaegtega tgaacteaeg ccaaqqacaa aqacqcqcqt caacaqaqqa ctgaagtaga ctgtaatctg cgtttagttg 360 ataatcttag agtgacaatc taggcagcag caaaatcgtt tgataaatct agtgaacagg 420 480 ttgtcggcaa tcgtagaaat ccgtttaatg tgttgttgga gagcgaaggt ggagtatgaa 540 aqaaaqtgaa agettcaggc ttggcatccc aacctcactc catccaatgc ctcgcttaac taaagcactc ctactccaaa ccatcgtttt acacctcctc gcatttcgaa tgctaccttg 600 ccatcctctg ccagtttgcg taacacttcg tcgataaacg gctccaatgc catcttgcga 660 acctectegt egattecate tecatgeace ageaceacta getetttaac egtaacgeta 720 gccttcttac cttgtcccgt gcgtctggac tccttgttga tcctgtccag tgtcaaaagg 780

acctgcttct	ctcgtctcat	tttctgcgct	agttcaccag	caatcttcgc	gggaaggttg	840
gtgatacgtc	gccatgggcg	gggtagcaac	cgcacaatgg	tgtg		884
<210> <211> <212> <213>	2726 2627 DNA Aspergillus	s nidulans				
<400>	2726					
gctggtcatc	ttgtaacgtc	tgctggcagc	gcttcctctc	cgtcgacgtt	gcaggcaaag	60
tgttctttct	ctgcaaagtc	accttcttta	ccaacagttt	cctctcgcac	tcggtcctct	120
ccacacatac	caaagtcccc	gcctttcgag	ccttcgactg	gtcccccgtg	gacgagaccc	180
tagtcgcagt	agggcaatca	teeggegatg	cgacgatcct	gcgcatgcgt	gagggcgatg	240
actcgcagga	atcgttctct	ttccctgtgc	gacatcagag	atactgcaat	gcgattgcgt	300
tcagcaccca	cggactgttg	gctgcggggc	tggatcgagt	gcggaacgac	ttttgcttga	360
acgtttggga	tgtgaaccag	cggttggcga	tgaagggggc	gaaggggcat	gttgagccat	420
tgaggaagct	ggcgagttcc	gaaccaatca	cgagtgtgaa	gttctttagg	gatcagcctg	480
ataccctggt	cacgggagtc	aaggggcagt	ttgtgagaat	ttatgattta	cgaggtatgt	540
tttgcttttc	cccctgtacg	ggttgcgagg	ctaaatactg	tagagggccc	ggggcttccg	600
tcgctgcagt	ttccgacgag	gtgcgtgcat	aatctggcta	ttgattggct	tgatgagaac	660
tatattgcgt	ctggattgac	gtcccatgat	tccactgtct	gtgtttggga	ccggcgggtc	720
ggtgctcgtc	tttctgcggc	tgccactccg	ggtttggaga	cgggccaaat	ggagccagcc	780
ctcgagttta	agaacgtgat	tgcgcccaaa	tcggctatct	ggagtctccg	gttttcgagg	840
acgaaacggg	gctgcttggg	tgtcctttcg	agcaacggcc	atctgaaaac	gtacaatatt	900
gaacaaagag	tatgtggttg	aagaataccg	ctcgccgatt	gataggacac	tcggccaaaa	960
ctccgttagc	aactatccag	agcagatcta	taccaagtcc	gttcgcgatg	tctttagccc	1020
ttatgaccac	ccatcgcgtg	gatacgaggt	gtctcaacga	gtagtttcat	ttgacttcct	1080
caacatgagc	agctccaatg	agcctagcgt	tttaacgctg	tccgctgatg	atcaggtcaa	1140
aattattacc	gtcaagccac	caccacctcc	agtgcgacta	tcttcacagg	gaacgttgat	1200
ttgtgggcgt	ttcgatgagc	atcgcgattt	caaggcgatc	tatccgctgg	ggactgaagg	1260

ctcaagcatc gcgcaaattg caaagagtct acgggacaac gctctggaga ggcaagagga 1320 gcaagctgaa acccgtggtt tgcgagagaa ccccgaacaa cctctttcca gtcgagagaa 1380 ccgggagcgc atgctgtcgg ttggcactct aggtagtcct ctaactgctg aagaagcgtt 1440 gactctcttg acggtgaata ggctgcggtg caaagaaggg tatttgttca atggaatgcg 1500 gaacaagcag attctggccg atgacccctc attgcaggat ttctgggatt ggattgagcg 1560 tgagtactag cttgctgaga tacgaagttc tacactaacg agtcaggtgc acgatcctac 1620 tctgcggacg attccatgat catgaaccac ttggatctga attatttggg cgtgttcgat 1680 gtctggacgg gagatttagg taggttacat tcttcacgtc cgctaaacca gtgcggtgat 1740 tgggctaact tccgtagggg tcagccttat agccctatgg atgggcccca gtgctgctca 1800 taacccggat atcaatgata cgatcgtgga tttggttcag gagaagctga accttccttc 1860 gagtgagagt ttacactctc gttaccctga gcagaggcgg cttggtctgc ggatatgcgg 1920 cgcagcccag tcacgtcgtg agctcgagga gttggtcaag acattgtccg ccgaaagtca 1980 gcatacaaag gcggctgctc tggccgtctt ccaaggcgag ccaaagcttg cgtatctcgc 2040 gctgcgaagt catactccta cacaggctca taaactcctc gcaatggcca ttgccggtgc 2100 tgcgaaagaa aagccagatc ctgactggga agagacttgc gccgagattg cgaaggagct 2160 tactgatect tacgeteggg caattattge ettegteage aagggegaet ggegetetgt 2220 catccaagag actacactcc cactaaaata ccgcgtcgaa gtcgctctgc gctggcttcc 2280 agatgacgac ctcacaacat acctaaccga aaccacaaaa cgtgccattc aacagggtaa 2340 categaggge atagteetea eeggeetegg ceatteegee atggaactet teeaateata 2400 catcaacaaa ttcaatgacg tccaaacacc ggtccttggc atgagccaca cagtaccacg 2460 cttqqtcaac actcccqcaa acaaacaccq gtttcqaqac ctgqcqccaa acctacccqt 2520 tggccaaatc aaccttcctg gaaaaccttt caagcttcga aacggcgccc ccgcgtttcg 2580 aacagttcgg gcttttttgg caaaatattc gccccccca cctttgg 2627

<210> 2727 <211> 1425 <212> DNA

<213> Aspergillus nidulans

<400> 2727

60 aattaaatac cctttttcaa ataaaaaaaa taaaacattg attagaacgg ataaaacatc aaaccgaaaa gcccagcttg gtaaacgagt cgcccacgag aaggacctcc tttggaaggt 120 agcacatagg ggctttaaac aacaaaacct tgtactagta gatgtttgga taaccaatcc 180 ccgcaaaaca ttcactctcc tgaatacacg ggattactca tatatttcca cccctcgtgt 240 300 aaaatgcttg atgctcaaaa tgccgctgcc gccaggccaa gcgccaagga tgcgcaggcc cgtcggatcc caacatgcca acaaaacaat ggtagtcaag acactcgcag atatgttccc 420 480 taacttggac cgtgatgtga ccgacgacgt ttttaggatg aaagagggaa ggttagtcgc tctgcagttt cattatctga aagatgcggc gctaactcgg ctgataaata gggtcggact 540 ggcagaagac gcgttgtctc gctcttagtg ggggttgatt cgtagatttc tagcaacata 600 tcttaatatg atgtagttta tactccgtac cccaaccgct cctctagacc aggcgtacgg 660 catttactat tataactagt gacctgggac aggagctgtt tgatactaga agtatttacc 720 gaatcaatga gataatcgtg attttggttc gttatttatt ccactatcta atccagacca 780 ctatgtagca cattgtatga tcagatatat ccctaactct aatgagtaga tatattctca 840 900 cqtqattgga tattgctcgc ttaccactag cgccatacca cgtgcctcgc cagggtataa 960 atteateget etceegeegt tettttaget tttttettet ttetttett cataettace ttgtttgggt ggctgcgatc aagaaggcgg cccaccacag actggtccct gcattgcaca 1020 gcgcggcgga acggtctgtt caacggcctt cgggtcattg acaggcgtat tctttggcac 1080 tttcctctct ctgagagact ccttttcatc aggtctcggg ccaggcgctc gagggtggag 1140 aagaggtttc tttcgtcgca taggttaatg gcatttattt gatgtcttaa aacaggtttt 1200 gcgaatatgc atattatgga aatacgaact gttgttattg gatttttgcc acctgtagtc 1260 ctagaggttt tttcgaatgt tagctgctca attgtcttag tgtcgagctg tcaaacatgg 1320 gaccatagcg gtctctgaac cggtctcttc acttctggat cacaaaattt gctcaacctg 1380 1425 ccattcggtc aaccacgaaa tataatagct gcttgagcca tagcg

<210> 2728 <211> 3354

<212> DNA

<213> Aspergillus nidulans

tttagattat ttggagaagc acggctttat tgacggcatt atatcggaag actctgactt 60 gcttgtattc ggcgccaaac gactgttgtc caagcttgac cagcatggtg aactgattga aatcaaccgt gctgatttca cggcttgtcg agaagtcagc tttgtgggtt ggacggacgc 240 cgccttcaga cgaatgtgta tcatgagcgg ttgcgactac ttgcccaaca ttgctcgcgt cgggttgaag acagcatacc gaagcattcg gaagtacaaa agcgtggaga aggcgcttag 300 360 gatgcttcaa ttcgagggcc cgtaccatgt gccagccgac taccttcaga gcttcatgca ggctgaactg actttcctct atcagagagt attttgccca aagtctggca aattagttcc 420 cttgacatca ccggatgatg gagttaactt ggatgagctt ccttttatcg gtgctgatat 480 540 qqatcctqaq accgctgtcg gagtcgcgaa tggtgaccta gatccaacat cgaaaaaacc 600 gtccctcagc cgaagacaaa caattggctc gttctcggat ataaaaccat ctaagccaat 660 aaactccttc ttcaccccga aacgcgttcc acttgccgag ctggatccaa atagcctcac 720 tccatcgcca agtcagcaac gactacttca tcgtcatgtc aacagttcct gggagccctc 780 ccttgctccg tctcgcccat ccgtcgctag gtctaccacc gttaatgact cgtctagtcg 840 900 tctttcgagt ccgctcgtga gaagtgctga acggtcttta tttctagcac gcacttcgaa gttgacaact ctgcagccta gcaaacgaca gaggctctgc tcagaaacag acgaagtgat cgctgctagt acaccagact gccgcagtcg cttcttcgca gccagctcga atgatgaaac 1020 ccctagcggc ggccaaaagc ttaatcgtag caagaaagcg cgcaagtcta ctttagacgt 1080 tttctcggac gatgcgaccg aagatattat gtcacagatg cctgatccga gcgaagccgc 1140 gaatatgacg aatgagaaat teteageage aggteactee ggtgaaagea gegaaegtga 1200 agatgaagta accaaaacaa atgttccaat tactaccagg agcgagaccg aggccaccca 1260 acttgatgct aagaagcagg cctacgaggc tgcatttgac agcagaacgc tatccagaaa 1320 gataagcgcc gcatcagagc ctcaggtcgt tccacaggtt acggaccatc atatcaagcg 1380 gcagacctcg acactctcga agtattcctt caagactgat gctagtggaa cccgacctaa 1440 tccacagcac tcggccgtga acggtcctga acggagtgct tcgagccagt tggttcgcca 1500 aagaacctgg acgcctacac aacccaagcg gctaacccca ttacagcggt tgggccagaa 1560 cgctttatac cgatcacgat cattgaacaa catgccggcc tcacctacga tttccagatc 1620 cccaagtcga attgaggaca gacccagcgt cagctccggt gactgtcctc ctgcaatcgc 1680 tttacgcacc gacagggtag cgaggatctc atagtcccag acagtgaaga ggaggaagat 1740 gattgcgatg caggcgacga cagtgttagc caatctcgag taacagcttt ggatctcaaa 1800 cggttctctt tcacggcgag atgatgtaca tattattggt ttatcaaagc acctgatcat 1860 gcattggtgt cttcattggt gtcttggagt ttggaagagg ctaacagtct ttaggaggtc 1920 aatatgccga tcggttggtg aacggattgt tgtctggatg gttgttttgc ttcttggcgt 1980 tgtattgagt acataatttt tattgagatc attacattgg agcaatgaat actgtatcac 2040 tactctgtat tcaccgtcgc gcttcgacga tcgcaggcat ccgacagact ttccgacttt 2100 aggetteagt cactaaatat gggttggaac ttgggaatet gggggeggte etggegetaa 2160 tccagtttac gttagctcga tctacggctc gatctgctgt gtttactatt aaggggaggc 2220 ggtgaatttg gttaccgggg aaccggggct cgtaaacaat gggcgttggc ccagcctctc 2280 gatttagtgc ggaagatcca gttgtatacc gtcagatggc ccagccaccc actatcttcg 2340 ctggtgacgc tcacgttctt gttttgcaaa tactcggtgg caggaagtct cgccggtttt 2400 gggttgcagc tgtggatttg tccagatacg atctctcccc ttctccgtct tcctccctct 2460 tgcatacttc tcacttgaac tgcccgtttg gaccattgtt gtcccactga cactctgggt 2520 aacggtgctt tgttttcatt gaaatctgac tgttgtgtat agcaccggat ctgtcaacca 2580 cgtttgcgag acaatcccca tacattccct cgatctatta tcgtcattcc tcccatctag 2640 atctcctacg tcgcattcca cgccgtattt tgctacattc ctttgagcga accgtcgctg 2700 ggaatcatcc gggtagcagg cactcagtgg ttgttattgg ttgttattca gattcacgag 2760 tgtgacaacc gtttccttca gttttatagg agcgggcatt gctgctagac aaggtgtgta 2820 gggtcagcag cactccttct cggggctccg agaagtgaga ctcaaaaaga aagaaggaat 2880 caacacagca ggaagctgtt gcatattcaa gatgccgaga ttcgcgggcg gcttcgcccg 2940 tatgtgtttt gtccctagct atgggtttgc gactggtatt tgctaacagc ttgggttagg 3000 cttcattacg atggtcggat atcaccacgt gctgatgatt atcattgcta ttattatcat 3060 ccttctctgt gagtcactct acttctagct atccgtttga ctgtagctaa ctcacataac 3120 cactcagcgc tgctgctcgc aggatgctct tcatcatcgc ctcaaatgcc aacaattttc 3180 ctgatctcta tgtactatga gcgctacgac ccaatatttg acctcgcgca ggtcgaccct 3240 ggagttgtta ccgctacagc aaacatcgtt ggaggtgctc agctggaggt tcgcgtagga 3300 tattttggca tttgtgtcaa ccagacggtg gatcttacat ctgcaataac aacg 3354

- <210> 2729 <211> 4255
- <212> DNA
- <213> Aspergillus nidulans
- <400> 2729

60 cgtcttctgg aagagggacg ctgtcttggt aatagacagt gtttttgaag ccatcaatag cagggtcgat gcgcaaggag aacatgtgtt ggtggaaagg agccatgacg cctgggccga cattggtgcc ccacttgaca gtttccccat ttgtattgtc aaagggcacc gtggagagaa 180 taccggtggc gcggacttca agttcgatat tcgctacttg atcaaggatg taggcgaaga 240 tgtactcgta gttggccacc gtacagatca tttggagaac aagctggcgg ttgcggacaa 300 cggtggctgc tcccgatctg taattggtgt gtttgtgctg aagcccgtta tcctgttcat 360 420 gcatgcagat tatattette agacgaacag gttggeettt agaateggat eggtaacegt cgaagtattt gatgtgtcct aagcagtcac agccaagcga gagctgattg gcattcagac 480 caaatcccac atcaccaacg tcgaaagctt gcttcctatg atacggtgct cgagggtctg 540 tagagcttaa tcagcagata gtcaatagag taacctggta gacacaaagc ctcgggcatg 600 tattaccccc cggagttatc ttatagcccg gatgcaatgt ggccagctgg aacagttcga 660 actcacctcc atagggcacg gtcatttcag agatggaaag ccgatacaaa acgttgcggt 720 tgtcgtaggt aagattgtag aggaccaagc catcacggtt gttgaatccc actcggaaac 780 gccacttctg ccagtagacc ttgtttcccg tcaccgaaaa cgaggcgccc tccggttgtt 840 ggacgatata tggcttgaga tcagtgcgga gaggctcatc caagagatca tgtgcatatt 900 gaatcgtctt gactggcttc cacggttgcg tctcagctgt ctgggtatcg gagcctccag 960 gcaagtagtc catgcggacc agctcgcgtg tatggccatc aaaaacaggg gagaacttgc 1020 acggaataga gtagtgattg ttctcagggt ggtccacaga cataatgtac atgaagcact 1080 ggaacaaccg gcgggtctca tgaatattgt ccgtgccata catccaggga tcattgcaaa 1140 ctgtaactcc ctggggaagt ttcaattttt cgatctcagc caacacagct ggatgctcca 1200

tgcaaagctt ctcaatttct gtgatttcat ccacgtctat gggaatctat ccttgtcagt 1260 gacgaaaccg caatcaagga agaatgatag atacctgaac cccagccggc aactctttcg 1320 cgtagacaac ggatgcatcg tcggcgttga gcagagcttt gcagcatgcc cctgtatcaa 1380 gacgatgaaa gtaagagtaa agcaggcggg ctggcttttt gggaagaggc ctccctagcc 1440 gttctgcctc gatgtaagga atgacatctt ttttgatagg ttcttgaaga tcaattcggt 1500 tgatccgaag ctgaactcca gggaacgcag actgcaggat acggtgacct agacgaattt 1560 cttgagatgt aagagggtca aatgggtgag ggactggctg cccttgcgct gaagacatgg 1620 ctgatcgtgt gaactgaagt atatgtggag gtcacagttg aggagctggg gaaggggtat 1680 gaaggagaag acggtatcaa agatgagatg gagatgcgac tcagctcctc tcaaaggaga 1740 gagacagtga cttatatagc tgtcatcttt gccatctgtt ttggagataa agaagagatc 1800 gagatagatc tggatggacc tgcctattag ggaaggtcac ggctagcgcc attgtggggt 1860 cgcgcctaag ttgacgacaa gcacatgaac ttgagccgct catcggagtc gagcattgca 1920 tettgagggt acttgcaage etetgggtet cactgcaega caatgetttg gttggggtte 1980 agtcactgtt gcgatttata cggaggatcg acagagccta ctctgtagtt agtggaagaa 2040 gtcagtcggc tagcctagtg aagtagacgg cgttgtatcc gtctgaaatg ttccatcttg 2100 cccacttaca cgaagattcc agtgtactca actttaaagc gtcgtgaaag taatgtaagg 2160 atacagtcct tatatggtga gaagaagaaa gtgcaagtac tctgtagagg gtaaatatcc 2220 caagtcgtgg cgaaagtcct gtctggcgta actctttccc aaaacggttt agtgtaaact 2280 gtcccctctt gttcgattct gcgagccatt cagatacaaa tgatcttttt attttgctgc 2340 tccttttctg gctatgtgct tcgagaattc tgtcattcga ggcccattcc tccaccctag 2400 tctctttgtt gaccgcttgt tggcgtaccg gcccgttccc gaagtatata tctccccgaa 2460 aaatgggctg cccggggacg ccgaacatat tccagcagta tgaaagcgag ccacgcacga 2520 agaaaagatg cagaagacat ggaggcaatt ggagtcgaac cggctgtttg acttgcaaaa 2580 gacgaaggaa gcgctgcgat gaggctaagc ctaggcaagt gtcctccgtt cactataata 2640 ctggatcttt gctaaccctc aacagctgcc atacctgcac caggttaggc ttaacctgtg 2700 aaggttatag ctcaatgtgg gcagttccac ttggaccagg cgctcagatc ttcaagccaa 2760 cagagecege tagacaceat agacetggge ecagtttate acetgetteg ttagteggtt 2820 caagggcatc gtctgcgact atagggcagc cattgccagt aacaggtcat acttcaccta 2880 tttattcgcc ggtccctgaa aaggatgacc ttgcggattc ggagagttgt agttcgagaa 2940 atgccaacca actagctgtt caggcggcct cccggtctcc ctccccctcc agattgatca 3000 atcatctttc ccacctcgac tcccattacc tccaatacca catggaacgg ggctcaaagc 3060 tgctaactaa cctagagtct gatgagaatc ccctccggtc catgttaatc cccagggctc 3120 tctcatcgac tcttctcatg aacgctctat gcgccctatc cgccattcac ttctccaacc 3180 gtactcacca cagctggttt gctgagaatg aaggggccaa gtactacatt gacaccatgc 3240 gcggcttaag aacaacgctt gcaacttccg agagaagtta tgttccagac gacgccatcc 3300 tcgccgtttc tcttctttgc aagtatgaga ttgtccgcgg gagcgtgaag caatgggctg 3360 tgcatctaga cgcagtgcag acgttggttt cctcccgggg aggactcaac cagctcgatc 3420 aggatgcagc cgagtttata cgtggactgt acgatttttc ttcctctcct gaacacccgt 3480 ggatgatgca actgataagc ttcccatagc ttcgtctatg caaacaacct ggctaggctt 3540 accaaccgaa gaaccttact caagccgtct attcccggct ctgatatcgt caagccccac 3600 aagctagaca tctacatcgg atacacagag gaaatcatca agacgtgcgc gcggatagca 3660 gacctccctc gtctggtctc agattcggag gcctttgaac atgaacttgt ttcaatgtat 3720 gcggactttt cttacccttt gctcgggcta tgaggcaaga aagaagaatg ctgacgcctg 3780 tegetegata gagacageat cetecacaca tggaceteca ecaagacaac etacategta 3840 cccaaaggca taacccaggc taccctctcc cgcctgcgct tggtagctga gtcctttcgt 3900 gatgccgcgt atatctacct tcattcagtc ctggaacgca caagcctatc cgaagtctca 3960 ctcccatctt ccataacttc acacgcagac tggagattcg aacacctcat ctcaatctcc 4020 aaaacgaccg ccataatgtc cctcctaaaa cgtctcaaaa ctcatcccat cgacaagaac 4080 tgcgagttct cagcgctcac attcccgctt ttaattgccg gctgcgagag cgcacagtga 4140 ggaagatagg cagctaatat ggggtatgct gagtgttgtc gaggccaatt ttggaatagg 4200 gaatgtgaag agggcgaaag aggcgctaga gatcgtttgg tcttcttgta ccctg 4255

<210> 2730

<211> 783

<212> DNA

<213> Aspergillus nidulans

<400>	2730					
attgcctgcc	tgagggcgca	gactggcgtt	gggccgcagg	tggtgtcgca	tgttttcggg	60
ctaaggaaag	ccctggagga	tggcacttgg	aagcaggatg	ctgagagcga	ggagggggcg	120
agatggttag	ctggagagga	ggggaatgcg	tggatattga	ggagcgtaga	tgagattgtc	180
gcggaaatca	gtgagggcca	gggatcgaat	tttgcgcccg	ggaaggccaa	gttgtagatt	240
atgagagttg	tatatatacc	agggtggggc	taggtgggat	gcgatgtata	cagtgggcat	300
acggccggat	atatatatac	tgagtttttc	tagcactcgt	tatagtgaac	agtatttgtg	360
cagagcaatg	actagataag	tacagcatta	tttatttgg	ccttcttgtt	ctcagataca	420
ctccggggtt	tttttctata	gctccccca	ccgagcgaac	agctgccgac	atttgaagcg	480
aggggcttgt	ccacttgagg	gtataacgaa	tgctcacctg	gacagctgtg	gccgaatagc	540
ttcgcacaat	gatgaaaaac	cattaatcgg	tgacctaccg	gaatcaggcc	cttaaggccc	600
ggtgcatcat	gacgggaagc	ctccgcgaat	ctccaacttc	gtgttcgcca	atgaacgctc	660
ttgccgcgca	ccccgaggc	agcccaaatc	acttctaaga	tgccagatct	ggacaggcag	720
ataaactccc	cgcacttgat	gggggaatta	agcagttagc	ttgtcgggcc	gggccgctgt	780
cac						783
<210> <211> <212> <213>	2731 2040 DNA Aspergillu 2731	s nidulans				
		aggatcgtgg	gcaattttac	catgaatagc	taacagggta	60
				ctatctaagg		120
					cctggagtga	180
					tggtggacca	240
					aatggacata	300
					atgagtcgtc	360
					ggtcaaggga	420
					acaatctact	480
		J J J				

ggggttagta gagtttggca tgaggtgagt aataaaaagg agggctctcg atcgctaggc 540 agagcattta tcctcttgcg acaattacgg cgcttgcaga gaggtctgtg gcgctggtag 600 cagggcagag gcacataaag atcgatttag acacggaaaa tggcgacatt gatacctata 660 gtcagcctag gggtccgcat tataataaca gccacgctga accgaacagg gactatgtct 720 caaccggatg gcactttacc gaatccctcg aagggcacgt tgccgtccca tcatcgtgtg 780 tgtcttatgc ggctgccgag cttgaaggga agggctgctc atcgacaatg ggcattcttc 840 900 tcacagtgga aatctatcgc agagttgaag gtatgttcat cgaaagtaaa agtacaagct gacatttgcc agggggtact ggaccaagat acaagggcct ctgcaccgga acagtttcat 960 gccgttcctt atcacgcagg acaatgtgcg ttatgcgtgg agatcttgat ttcttcgttg 1020 caggcaatga gagtgcctca acaaccttga catatacact cccactttgc accgtcgagg 1080 gcaggagatt gaccttgatc ggcgtcaagg ctataggcca atctgctgca ttttccatac 1140 ctagattatg ggaagccaca acaaccgtca agcttcatat actggacttc aacaacaata 1200 gtcttggggc cggtgtcgtg cgtattccgt tactatcatt ctggcggcaa atgcgaacat 1260 ttcatacgat agggccaaga cttagttcac tcccggtact gcttatattc ttgctgtatt 1320 tcatcatcca gctcagcttg gtcttcttct atccactcat acctttttgc ggcattctct 1380 ctccaaccag agcccacagt caagcgatct cagctaaaca acaaccatca gaaatactcg 1440 aaatccttac ctctgacagt gccaagatca ggcttgacgt gtatgaccct attcagcccc 1500 tgggtacgga gtcaagagct ggcaagcagt cacagccacc aatcctcttt ctcccaggca 1560 ttacaggeet aaacaeeteg caetetatet tegeeetgee attteaaege tgeaacatgg 1620 tcaaatactt ttcatcccgc ggacatcgtt gctacgttct taccccgcgg tggagccatg 1680 atgggcaaac cgcaaaagat ggcaccgttt tcgatagccg cctcgacatt gccgccgcaa 1740 tacaccatat ttccagcacc agtcccacgt gcgacagttc gagcccgaaa ccatatatta 1800 tagcacactg tcagggctcg gtggcgctcg ccatggccct tctaacaggc atcgtcaagc 1860 cggagcaact cctcggcata accgcgaatt ccgtgttcat gaaccaagtc ttcgggtatt 1920 ggaactccat caaagcttca tccaccttgc tgatccggaa aatatgagtt tttggacggg 1980 ccatatttcc cgatttcctt cttagagaga aggaaagatt tcaacaatac attcgggact 2040

<210> 2732

<211> 2580 <212> DNA <213> Aspergillus nidulans

<400> 2732

acggtcccat ataccaccac gtgacggcgc cccagatggc tgggaacacg aggaaggacg 60 aatacgactg aatgaacgca aagtaaaagg ccaccttctc cccgaacagc gaccggatcg 120 catccagatc ctccgccgtc aagagcactg tccggctcca tttgcgcaca acatcggcat 180 tcgccacctg gtcgtgcagc gggaatgccg aggcgacgtg cttccatttc ccgtgcttcg 240 300 gcgtgatatg ggccccgccc agtgtcttct tccaggtgac ggcgtggtag accgatcgga 360 ggatgatccc gtatagccag tctttgactc gagactggtg caccattcgg cccaggtgca tgcggggaac gcggatgaag accagcagcg aggcgccgtg gccaggacgg acctgggttt 480 cgagatgggc teettegagg tegeggatga gegettegaa ttetgegagt geagtagaeg 540 catcttgtcc tgttagcggc cacaccttgg aggggatcga tccggagacg tgtagctacc 600 660 gagateeteg aactgatagt gaacgaeeca gtegaegeeg aaattgteea gttgggeetg ctcgggcggc cgatagttcg gtgtgagact cattgcatgg atgaacactg atacgactga 720 acaacggaaa gaaaatatac cgttagcctt taatagacgg taaatgagcg actaattcat 780 ccaggcaccc gtcggtttca ttaaccgccc gtttttcagg tgtgcgtgcg tgttggggga 840 gagtagagac gacagacgac ggggaaggag cggctgcgag caggttggag acaagtgggg 900 tgtagtccta ttaatgccct ttcggattca atagcagtca ggagaggtga ttgtcgttgg tttattcttg gaaacctgac atggtgattg ccctgaatag tcgtgctact ctggccaaac 1020 atccccatcg caatccccat ccactccatc ctgctcgctc tcagccggga accgggggcc 1080 aagettgtea geeetacagg geteageeaa tgegagegag gtgeeatgeg gtaggtggat 1140 tctcgcttgt atgagagagt acggagtaga gggactggcg cgaagaatgt ggactgcagc 1200 tgatttattt tgttgcctgc ggagctatcg gatggcctgc tcaatagtca agaagacgga 1260 gtactacctg tgttatgact atattgacag gtactggctg ctcttctact tccagcctta 1320 aaaattgtcc cataccgctg taatcattgc cctccagatg aggaacttca agtcagccat 1380 gactgctcta tatggaatgg tacccttcat agacaatagt tgcttccact cacctgagaa 1440 tectgetgee tacgeettae gtttggaget atacaagget gttcactgea eetaggtgga 1500 ccctggatgt ggagatgaac atttttccat ccaatcagag gctatactgt caatcaagaa 1560 tggggatcct cacaggcatc cattttgata ccctcaattg gcccaaattc aaagccttgg 1620 gatgaatata agcattcatg cgttcctgca aagattatca ctatcagggt gcttgatcca 1680 ggcgctatag gagtaggtca gttgctggtc tgcttggata gcgttcattc agcatctata 1740 aaccaagett gteetgttea tactaeteea aaccetaate cacactetge tegacetgae 1800 gccaatgccc ttgctcacca ctctcgccga acatatggac cgccggcttt tccccggcca 1860 gagectegee titgggetga gtetgtteet gtteacatte atgtteatte egaegetggt 1920 tgtcctcctt gctgtcgtcg tgttcttcct cttctactat ccacaactgc gaaaagggtt 1980 ataacactat tgactgtatg tctatactaa caacaccatt tgcaaggagc cactgactct 2040 tgtagaccct gagcgtcgaa acgaggacgt aaaagcatga cggttacgat gttgccttga 2100 ttttgatcta tcgacgtggg cgtcgagcga ctgtactata ttccgcctat cttcattcgt 2160 tactttccta tatttattat atgtttattt cctatgttat gagcactgcc gagctgttcc 2220 aggttggttt gaatcttgtc atgatgacaa caaggacgat gtattatagc agatggtcgc 2280 ctagtggata tctaggggtt aatggactcg taataagcaa caacataaag cagccgagac 2340 catggtagtt gagttttaca tatgctacca cacttatcct tccaagtcat taagaataca 2400 tgcaaagagg acaacgctat gaatgaggcg agagcgaata ttctacaaaa aaaagatcct 2460 ccgtctaccc tctagccaat cttgatacca ctacttctct atctaaccgc ttccaaccgc 2520 cgtccgcgag acaagaccta ctccaacctc ccaaacccta gtttctccca tttccccagc 2580

cctgggtacc tattacttta ggtactacca gaattaggaa atgcaggtcc aattatgaac 60 gaccgaatgt actccacgga atcgttctga ccctcgattc cgtgctgatc gctacgtacc 120 cagtagcatc agcaactttg ttctattcag agtatatctc gaaagacttt cgatcattaa 180 cgcttttagc acagtcgcat gatcacagcg gatttcagca gcaaacatct cagacacagc 240

<210> 2733

<211> 2384

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2733

agcaatcgac ttttggcagc ctattgccgt tctgccaata cctcctcttt atccgaatgt 360 agagcatccg aggactgtat cgaatccact ctccaagata gtggcggtgc atctcgacgt gcgacccaca acccacgaac ggcagggagc aaaggcgtgc ccgattgctg gctagggtca 420 480 agccatgctc tgcccatgct ctgcttgtgg gcattttcgc attcgtgccg aagaaggggc gagaggagat cctacagccc agtagggaat gggtagctct gcaatgcctc gttagccagc 540 gtctggtaac cttccagtgg agagagttgt gctgtagagt tgcggaccag atccgtggct 600 660 accacgatga gtccgtcctg aaatttggat gcctattgtt aaactcagag tgagtctctg ccaagctggt gtgatgcagt ggaataatca cttaacgatt cgcccatctg gattgtgtgt ggcaattggt caggacaaga agtgtgaatg cgtcgttgat gtcttgtcga tcgtttttgt 780 840 cacctcagcg gggctacagg gctgagacta gggtactgcg tgaaaactgg gctctctgaa 900 gagctggaag tcatcataat gaggataatt atagaagatg cagacttttg gttggcggac gctattagat gggccaagtt aatagtatgg agatcaagaa aggatgagtg acgccaatcc ccggggcccg tttgggactc cagattgttc gtcatctcct tttgcttttc ctttggtcct 1020 ctcctgactt ctcttcaagc ttcaccctcg tttctttctt cgactttatg attcaatagt 1080 atctctatta tattttcagc taatattgga aatcaagaac acaccttata cagagcgcct 1140 aaaacaacta aggtttgccc gaccgcagac gtcatttgca acgcccacgc taaataggca 1200 gacggattcc gtccttcggc ttgatccaga cgcagccgac cctgtgctta gcctcgatca 1260 ttacgcgctt tctgcttaat ccaccgcgga tctctttatc ggggaattttt ggggttctgc 1320 teggteaget taetteataa gtaeceaage eeceatagtt gggggetete titetettea 1380 gaatatccac ctggccggtc aattgcgcac tatgcacgcg accaacggag ttgtcgactc 1440 gcctacccct cgccaagatg gcgaccttgg ctataagcca gtcctgactg gaaagcaaga 1500 acactgtcgg tccctcaata tacaagttgt cgagaggggt tgctgactgt gacagatctc 1560 aagcgcgaac tcatcgcccg ccaggtccaa aaagagatct ccgaactaaa ctccccaacc 1620 gecettegge getttggege teeetteaag teggattteg gagaagtege geetategat 1680 tctgagcttc caatccttcg atatatattc gttcaccatg ttcgaaattt cccattctta 1740 gatcaggcac gggagaaaga attttggcag gacaagctgc aagtggtgcg tgccgtgttt 1800 ttgcctctct cgacagaacc ggcggagctg acaatctgga cacagtttct cgaatcattt 1860 gegaacaaga atgtttegte etetgaagae egactggagg agacgaageg aagaaagtgg 1920 geecegaaagt gegagaaact egtegagetg atgatggttt eeggtateee eacegeatet 1980 ggetatgagg agegtateea gtttteggaa atgaaggtag ttgacegtgg tgetaatgag 2040 aaggggette ttgtcaatat geeggagggg aatgegatta atggetggga tateaatgtg 2100 getgetgtge gggtaacate egtannnngg aeggttegae ateateaaca tgeeggtatgt 2160 etagtatace etggaetaat acateaacat aataategge aggaatttat eateeggta 2220 agaeggaacg gteageeaga tatetttgta getegaeggt teggegagtt tgtegggett 2280 eaacegeggt tgeacteeaa aataceeee agggeggtge egeeeeteee gegaatgaee 2340 aaategteaa eagaateaac aetetgggge ggtageaeeg egea 2384

<210> 2734 <211> 1146 <212> DNA

<213> Aspergillus nidulans

<400> 2734

60 aaataacagg ttattttacc aagtatatgc gccttcgcgg aatatacctt actagaacgt atactggatg aaaaatatgg gctgcctgac tggccagtct tagaccattc tttattccta 120 180 gatacattcc acatcgagtc ggtaattgac tctctccaaa tcaagacgag atattctcga atcgagaaaa gaccttcctc ttgcgccctc tgatactctt tcatgatggt ctcgcgccgt 240 ctctccgatc ggggcataat ccgacatgga aaatcatttg cgcagaccaa aaaacccttc 300 actatatccg gtcgttggat gcaagtccgg ctcgatcagt ttcccactct catccactcc 360 gggctcgata gagaaggccc aaatgagttt cgaaatggcc agaaacaggt tccgctcggc 420 aacatggatg cccgggcaga tgcggcgtcc ggtgccgtaa ccatagtggt cgcgcgcagt 480 gtaatcagaa gcattagcta attcaggcgc aagggccgtc tgacccttgt agtggtctgg 540 atcgaagact gaaggattgc cgaaccgggc ttcgttgtgg tgcatgcccc agccactgat 600 gatgaccgag ctgcctttgg gtatgaaatg gccgtcaacc cagtcatctg gttcacattc 660 720 tcagcattac gatcgacaac gaagctgaag ggtgtgggag aagtggagga ccaaccttca 780 gcagctgcat gcgggaacgc caacgggaca gcaggtctcc atctcatggc ctccttgact gtagccgcaa catagggcag cgagccatag tctgaccaga ctggcgttct gtcttcgcct

acgacactat	ctatctcagc	ctgcgccttc	ttcagaacct	gaggccactt	tgtcatggcg	900
tgaatgaacg	ccagaatgat	cgaactcgac	gtgtcagagc	caccctccat	gaggacaccg	960
ccgaggaaat	agagctgatg	gcgcgtgagg	ccgagcttct	cattctggtc	aagcaccgta	1020
tccatgaacg	agcccgtgct	gccaaccttt	ttgcgccgcg	agtccacaag	gtccaggtac	1080
tgcccgtaaa	gctggcacat	ttcatcccgg	acccctttg	cgcgcgagag	ccagttgcca	1140
aagact						1146
	2735 633 DNA Aspergillus	s nidulans				
<400>	2735					60
				agaatcaatc		60
aactttatca	cagatttagg	tacagcgcac	cacataacag	attcctgaag	gcgcatttga	120
gaacagcaag	tggcaaggta	gctatagtgg	atggcagaac	tgaccgatac	attaggtcag	180
catctatgaa	gcccacgtt	tcgttaccta	atttgtcctc	ttttgttcag	agaatgtggt	240
atgatcatga	tatatcaggg	cgtcactaga	tcgaggctgg	ccggtttata	caagcgcaga	300
aatcttagaa	gggagaatcc	agcgcgggtg	caaagcacta	gttcagccct	gttacagaat	360
atctggaatt	cgaaccttgt	gctcagtata	aagtgttcac	ggctatttat	gaatagaacg	420
ttctgccggt	accgatcatc	tttgcaaaac	cacggtatac	ttggcgactg	gatggctact	480
agttagctac	agtcttggac	ggtgaaaatt	gccctggcct	gcgatattcc	cgccggacga	540
acggccaaag	gcctatgcgg	cgctctggct	ctgccaacac	agccgtatcg	gattattatc	600
gacgctcacc	gaacagagtg	gtgaccggac	gca			633
<210> <211> <212> <213> <400>	2736 1120 DNA Aspergillu 2736	s nidulans				
		agatogaaaa	atgccaatgg	agtgctcaac	ataccatago	: 60
				gcgcacaata		
cyclicityct	ccaacaccya	. youacytayy	coungicycl	gogoucuucu	2222234246	

tgttactage atagetggag tageegttat cetattgatg teageeagea aettteatge caacaagatc gaatcataca atcaaccagt tgccgaaacc tataagggta gtagcgcgca 240 300 gggccgggcc atctcgctga ggacgacccc aggagccggt aaaggcggtc atatcaacat agaacttggg ctctgcaagc cctccactcg ccagaccacc agatgggttt gagacggtct 360 420 gcaaatatgc ctgagagttg gtatattctt caaqaatagt ctgtaggctc agatcgccgt tgtgaaacag gtcgacaagg actttcacgg tcagagcggc atctcgtgtc caggtatagt 480 agtotgotoc tgttaatgtt tattocacag gagaccaaaa actagatago cgotgagoto 540 acagtetggg ettteagtge tagggetgge gatgaceaea eeageettgg eggtetttge 600 ataagcgcca tttgcgccaa tattgqtgag aatgccatcc agagcaaagc tagcctcggt 660 720 agataaccag gtatttaagc tggcagtagc ccgcgcagac aactgaggag ccgccgcgac agcatggctg agagctagca caggaagtac tttagagagg gtaagcatgg caatgcgaac 780 aggcgagagt tggacagaaa agatagagtc aatcaggggg aacaaggtta ttctattaca 840 900 ctgagtatca tgaattatcg tagaccaact aactgtcgga tctgatttac tttaaaatag 960 tcgtcggcat tgtatgactg gtgtctgggt actatcggat gtcttagtgg gtggttagca tccacggttg cagtgtctcc ttagggttta ggaatctgat tgggccaccc aagatggctt 1020 catatatgac caccaacttc tgcatattga gatttcccga gcgcaccaaa ggatagaaaa 1080 1120 aaatggatgc tctgtgaata ttagcaattt ccccatgggg

<210> 2737 <211> 1460

<212> DNA

<213> Aspergillus nidulans

<400> 2737

tgttaagaat ggtggtccta tgttcaatta tttatgtatt taaggttcta tatctatgaa 60 accctaacgt gaatgctata cgttctactc tatcaggggt catctattcg gccaactcag 120 gccaatattt tcgtacgacg tctttcttat tgactttccc catggcattc cgctcaatac 180 cgtcgacgat cttcagcacg gtggggattt tatacggcgc catctcctgc ttcaggcgtg 240 tgcgacggt ttgcaattct agtggttccg tctagtttat cccatcagta tcttgctttc 300 ctttcttcct tttttctagg agcggcttct gtgaaatcag ggaaagggtg attaacttac 360

accaggeete tgetttacaa etgeageaae aegetgaeee eatteeteat eggeaateee aacaataget actteegega teteateeag egeteageag ettaegetet aceteeageg 480 cagagatett gtacccaccg gaettgatga tatcaactga ggegeggeee tggatgtagt 540 600 atgegeeteg tteateeegt egegeaacgt egeeggtett gaaecaeeeg teegeagtga actecttggc cgtagectcg ggccgtcgcc agtactcgga gaagacgttg tcgcctttca 660 cttcgatcat gccatcgacg tctgcggcct caattacggc tcctgtttcc ttgtctgtga 720 ggcggacctg gacgccggga aggggccagc cgacactgcc gtcaatgcgc tgcgctacat 780 cgagcccgca gctgagaccc atgccaattt ctgtcatgcc gtagcgctcc aggagggttt 840 ggttcgtgat ggtggcgaat ttggtcttga tgggggtcgg gagggcggca gagccagaga 900 caaggaggcg gagtgctgct gcgccctcgc gggcgggtgt ttcctgctct gtaccacgga 960 tatgtgcttc gaaatagtcg acgagacggg agtagatggt aggaacggcg aagaacatgg 1020 ttgaagagcc cttgtttgtc cagcgagtcc agatagttgc ggggtcgaat ttcgggtaca 1080 tttcaacggt ggcgccggcg aggagggtgg ctgtcaggcc gttgatgatg ccgtggatgt 1140 ggtgaagggg gaggacatgg atgaggtggt cggtgggctg gtactgccat gcctgqatqa 1200 ggcattgege ttggaaggtg atggttttat gagtggtgat tgegeeettg ggtttgeeag 1260 ttgtgccgct tgtgtagatc atgagcgcac ggcgctctgg gtagtaaact gggaagaatt 1320 egggeagttg eggagaeaac gggetttgeg tqaaqqqeqt taqqqteatq taaaqqeqtq 1380 gggtgtcggc ggtgccctca cggagagggg aaataaattt ctcgaacgcc gggtggatga 1440 1460 tgataagcga gggaccgggg

<210> 2738 571 <211>

<212>

DNA <213> Aspergillus nidulans

<400> 2738

aagagttagg aagtgcggcg aagacgggtg aagagtgaca tagggcgtgc ggcccgttgg 60 atgtaggget egagggacaa ettaceteag getegttete atgegategt eeaggtegee 120 acceageate tgccgcacca gtggtgtgat gaagetggga agtgcagagt caacgtagac 180 toggacgtac tggtcgtttg togcggttgg ccgcgcgact tottcctcgt aacggaccgt 240

ccaatcgcac	agttccgaag	cgaagtgcag	gccatctctc	catccttgtg	ctgccgacgg	300
aagcacatcg	aacgggattt	ccatatcttc	gcccaggttc	ttgtggaaga	tgccaagggc	360
gcatttctcg	acttcggtca	ggctccgcca	ctcttcccgc	tgcaccacgt	tcaggatctc	420
gagaagaccg	tctcctaacg	tatggaggag	gtcggcgtcg	gtgatcttgt	tggcacggcg	480
atagcgggca	tggctggtat	caggtcagca	cgtgttaaag	agtgtgaaga	gcgtgtgtga	540
gagagagtgg	gtggtaaagg	tagcgtgtgg	a			571
<210> <211> <212> <213>	2739 835 DNA Aspergillus	s nidulans				
<400>	2739					
agttgtgttg	cccacctctt	ctttacttgc	ggcactgatc	acagcttctc	cggatggtac	60
acccggcata	gtgacggacg	atgcggtatt	gatcgctgcg	tcgcctttta	gaacataata	120
gacgaaattc	agaaaaaaga	tacagctgtg	ttgacgcggg	atgccaagct	cggctgaacg	180
aggcgcagcg	gtcgatccgt	tgataagtcg	ctgggaggcc	tgaagatgaa	tatcggcaga	240
ccgacagtca	ctgccggcca	atatgagctg	atcatcatat	catcatattg	cccggaagcc	300
tgccttattc	tttgctcctc	gacattagct	gactcgacct	ccatgaaaat	gactatattt	360
aacatcgtta	tatccaacaa	ggacagcgcg	ttcaagcgtg	aaggactagg	cttagtaaag	420
acgatctcct	acctattcta	gcgagtctat	cctatagatt	atcagctatt	ataagactaa	480
catatatggt	ctaggcatat	tcgtacctct	gtacctccag	gcgacccaga	tcctgccgat	540
catcaagagc	attgtgatca	aacaacaaac	: aattgtaccc	: tgactcttca	tgcccgttgc	600
tactgcgctg	ctactgccac	: tgccactgtc	ccaatacago	tggctgtgaa	ggtacgtgtt	660
ggtccaccga	cggcagggtc	tagctgaaga	ctgtcgaggg	g aaccaaagca	cccgctgtca	720
tcgcaagctc	aatatcaatc	: ctccattgca	aacaccaaac	tggaaactco	agctaaccaa	780
cctttcaccc	r tagadagtag	r gatgaggete	agctgcgaca	a ggacggcgat	atttt	835

2740 <210> 1203

<211> <212> DNA

Aspergillus nidulans <213>

<400>	2740					
agcggcattc	agagcctagc	catattagca	caatgaagga	ccgagtcact	agtgatgcac	60
ttacttcacg	gcacctgcgt	aggagatcca	cgtagttctg	agcctgctga	tcgtctataa	120
tttatgagta	cccatcacca	cccaaagcac	gcgcaactta	ctctgaggat	actcccaatc	180
aatatcgatc	cctgagcttc	cattagcagc	cattcattat	cgaactcaga	atcgaactca	240
gaggacgcgc	accatcaaaa	ccaaggtcag	tgatgagctt	tgtcgcagtc	tgcgcaaagc	300
gggctctgtt	ctcaggggta	ccagctccgt	tggtaaagtt	gggagaatag	gtccatcctc	360
caatcgaaag	gagaaccttg	agctgtctgt	gctgccgctt	aagcaagccc	agctgcttga	420
cgcagccgta	gacgttgttt	ccggtatcat	tccaagaatc	agtggggtag	tgcttctcga	480
tatcagacca	ggtgtcagaa	aggtagctgt	gtcggcatta	gcttcggctt	gggctggctt	540
ccacatagtc	catggttcgg	cttacacttc	gccagtctct	ggcctgacat	tggcgaatgc	600
gtaaagaata	tgggtcaatt	tctccgcggg	gagatcttgg	gggttgtagt	tgcggccgta	660
gatggcctgt	cgatcgttag	tgaaagatat	atatattggt	aggagacagg	aagtacgtac	720
ccaattaaca	aaataaccaa	cagttttgta	tccagacatc	gtggttgcgg	ttaagtgctt	780
cgagaactcg	ggaatgctgc	gctgtatgcc	aaatagagag	gtgttacttc	caaagtaatg	840
aaagtagaga	gtgacaagca	aaatgggggt	aaagagaaga	tagagagctc	gggaaaagac	900
catatggagt	cagaaagcta	atacagaata	gacacgaacc	aatttgaaag	tattctggag	960
cctgcttcgt	acctgcccta	aacaagaata	gctgcgagct	caacaacaac	tgtacctgag	1020
acgctgtggt	gccttattct	acaggtatca	aggtggcgta	agtggcttgt	cagtggggac	1080
accaggggcg	gtgcaaatag	ggctggctgt	ggactgtggc	: tgtgcgtggc	: tgttgaagaa	1140
gttgcttact	cagcgctgtg	gacgctagat	ctgtatggag	g cagagagata	acagtaaact	1200
caa						1203
<210> <211> <212> <213>		ıs nidulans				
<400>	2741					

catcgcagcg accgacctgg ttcgtcttac tggagacgaa gagatcaagg ctgcactgga 60

ccgcatgtgg atggacatga cagagcggaa attgtacgtc acagggggta ttggagccat gcgtcagtgg gaaggctttg gtgccaaata cgttctagct gataccgacg agtcagggat 180 240 atgttatgcc gaaacttgtg cctgctttgc gttgattatc tggtgtcaaa ggatgcttca gcttgacctg gatgccaaat acgccgatgt gatggaagtc ggactgtata acggctttct 300 tggagccgtg ggattggatg gggggtcgtt ctattaccaa aaccccctac gaacatatac 360 tggccaccca aaggaaagaa gtgagtggtt cgaggttgct tgctgtccac cgaatgtcgc 420 gaaattattg gggtcaatgg aatctcttat ttattcattc aaggatgatc tggtcgccat 480 tcatctttat attgagagcg acttcacagt cccggagacc ggtgtggtgg tttctcagaa 540 aacaaatatg ccttggtcag gcgacgtcga gataagcgtc aagggaacga cagccctggc 660 attgcgaatt ccaacctggg cagaaggata ctcgagctcg gttcagggag aggtcaaaaa 720 tggctatctt tacattcctc actctcagga tttggaagtg aagctctcct tcaccctcaa agcacgaaag ctctatccca acccagcaac agaaaaggat cagatctgta tcacacgtgg 780 accattggta tactgcattg aagattgtga caacgaagtc gacattgacc atgttggttt 840 897 ggtagaccgc cctgtgactg accgtgaacc aatcgatatc gcgaacggga atggtgt 2742 <210> 1459 <211> <212> DNA Aspergillus nidulans <213> 2742 <400> acgctgagat atgaattcgg gaatggaatc tgtcatccat tagtgggtta tttccagtgc 60 cgtgcaaggt acgtaccagg aacatcagtc tctccaacag cactcttgac gaatcgtaag 120 acceatettt cetecegett ageaaceage teecaacaga gaataegate eteegeeagg 180 240 tacatattgg cagtgaacac atctgcatcc ttaccatgca gcgtctctcc cttgaaatac 300 tggttcagag gaccgttacc ttcggcgtca ttttgcaatg cgaagaatcg atatgcacta agcgcacccg gcaacacagt gatataccca aacacagact ccaatggctt gtcgaggatg 360

420

480

540

tttgacatct tgtattcaaa gttctgactc gcgacgagcg gattcagaag acctagcata

ttcttgcctt tactggcctt gatttcaccg gctgcaccag caacattgga atcctgatcg

aacgctttcc atagatggta cagtgcggtg ggctccggcc gggtaccgac gtcaaggagg

atgcaaatgt taggttgcaa agcgcggcca aaagcgttga agaaccaacg atgcgagttt agctttttct gattgtgctc cttcagacag aagataacct ggcaaggcac gatacctttc 660 tcagccccct tgaacttgag gtcggagtcg agcgacactt gtgtggtata ctcataaacg 720 tgggcattga cctgtttctg gttgacgacg ttctttgcaa tgccctcttg gtacacaccc 780 agegeageca gageatteaa egteegggga tgeacettet ttegeeegte egaaatgata 840 caaaccacaa tcttcttcca tccatctttg ccccatgtac gagacttgga tcgagaacaa aaatggctga tattctgcat gacgccgtgc atggtcctcg taaagtgggt ttcgtcctcg 960 ttatacatgg tgatacatat aaataactcg gtctcgcgca tcgtccttcc aatctgctgg 1020 cgcagtttat accccctttg cgtaaaatca tctggatcgc aggtcacagc agtgtatctc 1080 atgtgcgtaa actctcggtc gtctcggcgt ggcagaaagc tatgcaaaat cgtgggtatc 1140 ttacactcca aaatcaactc accgttgacc agctgaactt ctttctttgc catctgcgcg 1200 ttgcggacgc ctcggcggct ctgcttctcg ggggcagggc cgtagtgcag attgggatcg 1260 accattgatt tggtttcgtt actttcttct tcgtactcat ccaaatcaac cttttccaag 1320 tccgtttcgt ccgcgataaa cgtcgattcg ctcgtaaacg attgcacgct tccctggggt 1380 ccgtggcgag aacttattgt tcttccaccg ccgccgaatg ggtctttttc gccgtcgcca 1440 1459 tatcgatttc gtgtcttga

<210> 2743 <211> 845

<212> DNA

<213> Aspergillus nidulans

<400> 2743

aaatcaggaa cgcatttctc gtagcgtcag ctcgcccgct acgagaaaga gcacccggac 60
tcaaagtccc agccctcgat caacacgtcg ccgtacaaca cgtcgtctta cgacatttca 120
gcaagacact tcaaggttgt ggcagaagct ggggtgggct ttgacaagta cctctacgaa 180
atcaaacgca agactccggg agagcaggcc ctcttgcatg gttatcgcat tgactcggtc 240
acccataagt cgcctcaaga gcctggcagc cagtttactg caggccaggg gggtatacct 300
ccaagcaacc agggtctctt tcccggtcag tcgagtccat ccctacaggg gcattatgat 360
ggcctccaag cccataatcc tggatcccgt cagtctcaag ctcaattttc tcagtatggc 420

tatacagegg aeggettaeg eagecageet ttegtaeege aeggeeatga teetaettte 480 540 aatcgttctc cgcaaacggg atacggccag gagtttggaa tggggatggg aatgaggaat 600 gaatataatc ttcagccacc tccagtgact tcaagcaagc attcttttaa aggttctccc aggggcactc caagtggatt ttccggcacc gctgggcatg gagatgatga ttctgattct 660 720 gatgattgac gtgatgcgca gcatttgtta ctgtttgtcg atagctgttt ttcgtcgtaa tcaccttagt gtcgtttagc tattattgct taaattctta cttagtaaat ccaatagcac 780 aatecqteaa taqctqcatg tegaaaacqc cactttqcac teactqaqcc agetqcqcqc 840 gagaa 845

<210> 2744 <211> 3526 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2744

aageggatea geteeaceeg tattactgtt ttegegttgt egetgeagta ttttgaceeg 60 cttgacgagt gttccaaccg agataggtcc aatcagagtg caaagcgaga ttgcccagac tactacgaga tacgtctcag acgacccttg cgaatccttt ccaaaaatac cattggactc 180 tgccagagaa gcaatcaggt agccgatttc gccacgcgct accatggcta gagacaggat 240 cqttqctqqq taqaqqqact tqqqcttqqq tqqqaqtqat qacacqaacq qtqtacqctq 300 gtcgggttct cgctgtggtg gacgatcaga atcagtgttt gtggcgtatt ctccttcttt 360 ttggttgttt gagccaacgc gcgcacttcg attatcgctg ggttcctgtg gagccccgtc 420 cgtattctga accggctccc tgtgctgtgc ttgttgagca tggggggatt tctcgctttg 480 actetttage ggeeggegga gaeaggatgt cacataagae aaggaageet tgagtataeg 540 ggcgaaggtg gtaagaccgg acacgggaga tcctcgtacc agccacaacc ctgtacacat 600 tttgccgaac gtcatcaaaa gggcgtagac gaagccgcgc catacaacgc taccctggaa 660 720 catctcggtg attggtatgc aaagccaatt gaagcctagt ttgttagatg attcagtaaa ctttcggtag aacttacgaa aaacatgggg gtcagaatcc ggttaacagg gccttggtag 780 tagtgctcgt aaatatgcat teetgttatt tgetetetet ettggeeagg ttegggtgat 840

900 cgaggagagt gagttacgct tgagtcgcgt gaggcaggtt gtggcgaagc ctcatggcgg acagaactgc tttcggcgat tgagaccggc atcgctcgca gcaggccgtc aaaccacgag 960 cttataacac cagcgaggta cgcagctaac agactcgacg tgccggcgta cgtagcacca 1020 gcaaccaagc ccacgagcaa gccagtatac ctaaggaacg cgaattgggg cgtagacgta 1080 aateetggea gtetgteeet agatgggage aeteteatea gaaaeggeeg gaggaegaae 1140 cgacatgeca gaacaacgee aacteegagg eegagtgata egaacagegg geggaetaca 1200 gtcagtgcac tgaacgaatt gccactccca cccagattgg atattatctg aaccatcaca 1260 aggecaaega egteatecag categeegea etagttgtga eegteeegag gegggtggtg 1320 ataagcccag ttgttgagag aatcgtgaac gtagtgccca agctcgtcgc gctaagagcc 1380 gcaccagcag caaaagcctg cagcggggtc gcggagacca gttccatgag aacaaatgac 1440 agtgccatgg ggattccgat gccagtaaag gctactgcaa cagagaggta catgtttgct 1500 ctgagggagg agagcgaggt ggataagccg ccctcgtaca cgagcataat caggcctagg 1560 taceccaget getggatgae ggteteaaca etgegatega gecattgage tecaggggta 1620 ccccagagaa tcccaacgaa gagctggccg atcaagccgc agtaaagcag cttgtcgagg 1680 caagtattga ctatattcag caccagcagc aggccggttt ggttgaggat ggtggaaatc 1740 gatggctcat gataggcaaa tgctgagtct gccatatctc atctgtcaag cagttaaatt 1800 ggagttacag ctctggtgag gggctattta tgcggtaata gcagtgttcg gtgtttgcgt 1860 ataggcgaga caacaacaga ctccatcaga gatgagttgg cgaattgagt tctcagaaag 1920 cacaatcaag ctgtacacag agtagagcag agtaacaaat cctggagacg aagggcgaca 1980 aagaaagaaa gcctaggaat tgagacattg agagaaagaa gaaagctggg cgcttggcag 2040 gcagatcatg tgactatttc cgccagtcga tttaacccga tatagcaatg ccaagacatc 2100 gatatcatgt atgtaaatga tggctcacta tccacgtcta cgtcctaaat acagtcttat 2160 agtecaaaae acaacatete etaaceeata gagtgtaaeg ggeageteat ecateceata 2220 gtctggcact ggcatccatc tatatccaga ccctgggcct gcgcatactc cagcgtactt 2280 eccecactae eegegggata eeetggagtt gggaccagga tgatagegtt agaggatggg 2340 ccaagcgttt gcatgacctg tggaagggat gtctctgcgc acgttagcgt caggctcgac 2400 gcggaaaagg aggggacagt accagtcgtc agataaactg acccctgaaa cccccaccgt 2460

tcacacaact gcattgtatt aagaccaagg ccaaacgctt gcccggattc agggccagtc 2520 ccaattcccg ctccggttcc taatattcca ccggttccaa ccgtatcgga agcgacaagg 2580 teggtgggac tagacgtgcc gcttgcgttt gttgtcatcg aaccgacgcc ccccgatgca 2640 tectegtage gggeegtgga gtgaaaegge atetgggtgg ttgtgtttag gttaagatta 2700 cacgaageet geegetgaag etetgtggga gtggaggagg aacatagegg eagtgatage 2760 gacgaggaag ctgacgaggt agacgagggc gatggcttga cttcatacgg gatacaaggg 2820 gtagagtgcc agccgtgcag ggttgcggca gcacgaagct cgctggcaat gactcgctct 2880 tggagcttag cgatgcggtc gcggatcttt cggcctttct cgaattagtt tggttttcaa 2940 gtcttcggtt ccctccctca agagtagggc tgggataagg caaggacata cggtggttcc 3000 gctgcgacag acggttctgc aacctccgcc gctccgttgg atcctgtttc gacaattggt 3060 cttcttctgt ttggtgcttt gccggcatta tgactatata caaaatgtga ggggggacca 3120 cgacgctgag tacgtgggta ggcagatagc agaccaccga gagcgaggta cttatatccc 3180 gtacctaccg tacttcctct caacagaggc aatgactgct aagctccggt gtgtgacaag 3240 aggttcccta cttctcgtct acgaattcca attcgacaga caaactccgg agcctgacgc 3300 tgtacgtctc cgctcatgaa ccatgtgtat tgcgaatgag tgattgggac tttgggtaag 3360 ctgtacgacg ccggagttct gaccatgcta tgtttagagc cgtgcattat cgattaggca 3420 atacacccga agataagcca ttgaggtcat aaagggtcgt tgctgacagc gaagcgggag 3480 3526 aagnttacaa tgctgggcgg gaagagaatc gctactcttg tgggcc

<210> 2745 <211> 958

<212> DNA

<213> Aspergillus nidulans

<400> 2745

gettacgact gttcgttttg cetegaaaga cagtggatga agaatcagac teagaaactg 60 ceacatetga eecectatag acgaaagett gageggacac tegaegggta geettaegag 120 acattgtact tgeecettag getetggatt catgeaacca acaagateta eetgeggtge 180 ceteacagta teateatett aactgtggaa egeettata egatgtetgt tteeggeate 240 geatgggtga egttgaeeet taagacaece acttgetetg aagaagatte ttteaagetg 300

gtcgtcaact tatatatgga tgcgacggca gcccattgaa catcggcata tgtaacgagc 360 taataccaag gcgatgcttg atcgccgaaa gcgagtgtta acagggatgg cttacgcgcg 420 attgggaaca gcaatgcacg gctatacatt atctttggag aataggtcta aactggaaag 480 gagtgtgaga gactacataa atgtttctcg cctactaccg cagcatacat ctcttgctcc 540 ctctgttaga agctacacgt acaaccgact ccccattatt ccattattc atattactgc 600 atagacatag cattgtcggt caggtcatcg tctcccatcg ctgtcttgcc ggtgccacaa 660 ttatcaatag ccctgatcac gatgaaacca ttcctgcgat atgctcctat agcgctcgtc 720 atcctcctac gaactacgta tcctgctgtt tctcgagtga aattacgcgg ggcccaaaca 780 840 tggggaaggc cgtggcagat atggctaatt tcgccgaacg gccaactcag caggtatgct gaatcctgtg agaggaccga ctcttaatcc agcccccagt ttctctaggc gagagggctg 900 958 gctgtggcat gtttggacgg agggcaagtt agaccaccgg attggcttgg gtcgggag

<210> 2746 <211> 2925 <212> DNA

<213> Aspergillus nidulans

<400> 2746

60 tacgcacacc agccatatct aatcgcctct agcgctccaa actacgtaac ttcctcatgc actcattcca cctaatcctc tggctcctta cacccgcgaa aaccgccatg atcaaagaca 120 cccagtgtgg attcaagctc ttttcgcgag cgtctctgcc cgccatcgtc ccctacatgc 180 actccgaagg ctggatcttc gatgtcgaga tgctcatgct cgcggagttt gcgcgtatcc 240 300 ccgtggccga ggtccctgtt gactggcgcg aggttggcgg aagcaagctt aatgttatta gggatagtgt gggcatggcg tggagtttgg ctgttttacg cgcggcttgg ttgttggggg 360 tatatagacg gacatagtgt gctcttagtg gttagttagc tataagggca atttatcatt 420 ttccttggtg ttcgcttttt cctttggatg attctttgag gtatttggat ggctttaagt 480 agacgaattt aaaaagagag aaaatcgggt agatgtccaa gtggtaacca ttcaccgcat 540 caaagtaatt accattatta ttaagtatct aatctgtata aatccatcag taccctaaaa 600 gatgcaatat acctttacac ctttcgcacc aatatagatg ataaatagac aatcaaacgc 660 caggataaat aaatccatct actcatacag gacagaagtt agcagtaacc agcaatttca 720

aatccaccta gctcaggttc tatcgacgtt cagtgtcagc actggcgcag tcacgcacaa gaacagetet teecagegtt tggetecate acaggeegag getttgaete caetgeette 840 tcaaccgggt tttgaggctc gttcacgaac tcagtctcag cctcgggggc aggttcaggt 900 tetggageag ggeaegttte gateteetee teaaeggget ettetggtee etcaateaea 960 gtattgtctt cggtctccgg aataggagta tcattttcac tctcccctgt ttcagcaggg 1020 ggcaagggaa caggcgtata gaggtccaca ctcgggggca ccgaagttgg aggcggcggc 1080 agagggagcg acggcgtcgg aatctctcca ggttcctcaa ttacctgaga agtaggaact 1140 ggtgttgtct ccggttcgtg gtagtcctct tgataacttt cctgatacgt attctcgtaa 1200 taatcgccca gatttagcga cgggccatca ggtatagcga tattgatatc tgagccggct 1260 tctgtatagc cgatcgcttc tcctgaattt gaactggggt cggtgttctc ggtatatgtg 1320 tctgtaaaaa agtcgtgatc attgtagact ggtccgtcgg ggatgctaat agcggtgttt 1380 gtgccagtgt ttgtggatgt gtcgagattt gagctcgggt tgaattgtct gcggcttaga 1440 gcggggtcgt tgactggcag ggagaggacg gtacttgtgg tgaggaggag gggcaagagg 1500 aattgcatgt tgaaggtgcg tttggaggga atatatggtt gctgttgatg tgagataaga 1560 cagtaggaat gagtgatett ggtgaatatt ggatatateg atggagaaac aaatgaaatg 1620 atgagagtga gtggccaaga ttgaaccagt tctatctgaa ggaatgtaga gagaatattt 1680 agaaggtata tatggatgat tgaacgaaag actgagtgct taggaagtgc gagcaaagag 1740 gcctcaaatg accettatat agccccqtct ccattqccta atctcttaat gtatacaagg 1800 gttttgtacc gttccaaggg cttcctagac agtaagccct cccagggctt tcccgtagtt 1860 tatttccata ggaacgaaca caggaaaaat tcatcaaggg cgaatggccg ctgctgctct 1920 gtatacatgt gctaggtctg gcgacggagc tgagacagac gcaaggagtg aagggggtgg 1980 tgactggctc gtgatatatt caggtactat catgatgaga gatgaaggaa gggatgaggt 2040 agcecaaace acagaaatet caatgeatea aateegttta ttetgtgtgt acatacatea 2100 tcccaatcat tatggtgcac tcagtcaaga caagagtgta gggtatagat aggcaaacaa 2160 gatagagaac agagtgattc caagagcgcc atataataaa acatacaatt tcttgtccgt 2220 cacatggact gtccaaatgc agtgccataa tttgttgtat tcttgatctt gatctctggg 2280 acctectege cetgaecetg accagaggga etgtegaggt eegeetegte eteateetee 2340

tactccctgt gccctagaat cagcttegec tgggcaagga gcttcatgtc accttcttgc 2400
aaaaagttat cgtcgtgact cttctcattg accacgcata agggcccttg gacggccgga 2460
tcatctggta aatccaccac cccatcaaaa tatgagtcag cgcgttctgt aggctggtgc 2520
aaccgggtag cgggtggatc aaggggatct tcggcgaggc ccatctcccc aggtgacccc 2580
tgcgctgtat ccaagtcgcg atcgatgaca accatcggag tgtgaccagc gtcccgcacg 2640
aggttggtct cgggcgggcc tagatccgag agcttgagct ttacgctgct gcggcggtcc 2700
atggacggcc tttctcttc ctgtaaagtg gaggtgggc atggctcgcg ggatgagggg 2760
gatggtggcg tcataacccg ggctacgacg tctggaggca gcgctgttga tttgagggtg 2820
atgccgtcga gcttgctatc gagcttctcg ataggtacgg ggatgtcgc tagtggtcg 2880
gttgggtgag atttcggca gagtgcggcg tctaggagg gttga 2925

<210> 2747 <211> 2270 <212> DNA

<213> Aspergillus nidulans

<400> 2747

qacqtaqacq cactatttat ctcatggaac gtcctctcgc caatagtgca cttctattca 60 gactgatttq cagatagaca aatcatccgg tqaactcaaa gqcaatgagg acgcattggt 120 180 acctqqcttc ctqctqqccc qccaqcqqcq tccqcqccga tcggtatatt ttcattcttt atgctcaaaa gcccgacttg agtacttcag aagaggtaaa gcggaagttg agggttgaaa 240 300 gtaccctgca gagaatgagg tttgatcttg ataggctggt taaggagtta ggattggggg 360 aggttgtgga tgtgaactat tttgtctcga attagcctcc tgttctttta ggcaggaagg tatatatatg tggcctgttt aaattetttg cetattgtte geaataeaca gtateeteta 420 480 atactctgtt cgtgtaatgt ctattggcgt agaggccggt gccgatcccg tacgggagaa tggttattta gaaacctagc aacgagagga tgagtcggct cgagagcgag caaaggccaa 540 600 gaaggeggga gtgteagget ateagtetat ggtgaetgag taetteaaae aagtataeea aagetttetg ttettetgae ceateaagtt atgeatttag tegaggeget gaggetgeee 660 ttcattcaag ctactctgta atcagctgat tgttattatt ccccttaacc aactttgttt 720 780 accacaaaca ctattctctg ataaaaccag tacagcggcg ccagatattt atgcgctaga

gaaccatgag cttgcatact tgtacatcag ctcatacgta cgtatcctcc ggctcaaata teggeggeae cagegeettg ggeggeeate egaceettge gtegaatgte tteteaaaca 900 cccaccgtcc ggagcccacg ggcttgctgt cttggtcccg gccaccagga agtatcacca 960 tegetgttga gttaggegge acaacaaget ecagettgaa etggteacea tttttaatet 1020 cccactggca ctctaaccga ccatatgacg tctcataggc tgcttcggca gatgtgattg 1080 tgccacctgg taaaggttgg acaaggatct gccgccatcc aggctccaac ggactcacgc 1140 cagcaacagt tttatgcagc cagttgatga tcgatcctag agcgtaatgg ttgaaactgg 1200 tcatttcgcc ggggttgatg ctgccatcgg cgagcatgct gtcccagcgc tcccagatgg 1260 tggtagcgcc catgcggatc gggtacatcc atgaggggca gttggattct tgtaacatgc 1320 gataggcgag ctggtggtgt cccgctttgg ttaatgcgtg tgttatgaca ggtgtgccgg 1380 caaagccggt agagacttgg aatttggcta tccggacgag tcgggctaga cggctgcccg 1440 ctgctgcggc ttgttcaggc tcatcatgga ggtcaaagac tagggcaaga ctgagtgctg 1500 tetgggtate tecaatgaga aggeetgtgg gagagatgta ettggtetga aagegegaet 1560 tgagggcacg atagtcggtg ctgtaacggg aggcatcggc ggattctcca ataatagcac 1620 tgatgcgggc aaggagtcct gttatataca ctaagtaggc atcggcgacc agggttccgt 1680 ccgtgcgaga gttgccaggc tggtctggag gggcagtagg atcaagccag tcacccagct 1740 ggaaaagcgt gtcatcccag agacggtccg gaccgcgctg cacgccacga tcgaggtagc 1800 cggccatgct agggtactgc cggcggagga tctcaatatc tccatagtac tgatacaggg 1860 tccagggtaa gatgatcgtg atatcatccc agacagcctg tgggaatgtg ggccagaaag 1920 actcgtctat cacatttggc acgaccaatg gtggaactgc cttaggatgt gccagctgtt 1980 cagccgagag atcctgcaac cagtcactta gcatccctgc tgtccggtag agaaagctcg 2040 ctgaaggagc aaagacttga aggtcaccag tccaacccaa gcgctcgtca cgctgtgggc 2100 agtcggttgg gaccgagagg aaattcccgc gcatgctcca ccatgcattt tgatgcagtt 2160 tattgaccat tggatgtgag cagctaaacc aaccagttcg atcaagaacg gtatgcatga 2220 2270 cttcggcggt caggctttgt agagtagagg ggtgtggcgt ataagggctc

<212> DNA

<210> 2748 <211> 1202

<213> Aspergillus nidulans

<400> 2748

atagttaggg gccttgccct tcggtttcgt gtagattcgt cggaggttga gcttctccca 60 catcatgtcc aatagctcgt cgatattcca gccgtgctct gaactgatag ggacggcgtt 120 gggaatactg tacagcaggt cgagttcctc gatagtgacg gcatcgattt tgttaagagc 180 gtagacaacg ggaatatatg cgcgactttt ggcctccagc acgtcgatga ggtcatcaat 240 tgtcgcgtcg caccgaatcg agatatccgc agaggaaatc ttgtattcgc tcatgacggc 300 tttgatttcc tgttaagttc gaaaacggaa gtgttaataa ccgtcacaac aattgaaacc 360 ggtctcttaa cgacttacat cgttatcaat atgagtgaga ggcacagtgc tcgtaatcga tataccaccc ttgtccttct tcttgaacat aatgttgggg ggctgcttgt tgattctgat 480 tecgaatece tecaatteat ttteaateae ettettgteg accagagget tattaaegte 540 gagaacaatg aaaatgagat ggcatgtctt ggcgacacga ataacctgcc gcccacgacc 600 tttaccatct ttggcacctt gaatgatacc gggaagatca agaatttgaa tcttcgcgcc 660 gttgtatagt acttgtcccg gaacggtggt caacgtcgta aactcgtacg ccgccgctgt 720 tgcaaaaatg cgtcagtgtc cgtcacacgg ctcctgtctt cgttaagcat accttcggaa 780 tgttggcccg ttaacctgct catcaatgta ctctttccga cggacgggaa accgatgaaa 840 ccactattcc atagttaatg acaatttcag agcgacgtcg aacgacggaa gaaacataca 900 cactagctac accggtacga gcaacatcga agccggcttc atacaacgtt agcgcaacta ggttgggtat cagagaggtt tgttcttacc gccgctgccg ccaccacctc ctcccgacgg 1020 tgtcaaaagt tcacgcttca gtttggcgag cttggccttc aactgtcctg tagtcgttcc 1080 atcagtgatg gcgtctcgta aagaagtccg ctagaatcct ccccaagtga tactaagtgt 1140 teetgttett etgagteegg gecatetgga gaacatgtea atatgegeee eegaatagaa 1200 1202 gt

<210> 2749 <211> 1724

<212> DNA

<213> Aspergillus nidulans

<400> 2749

tctccaacgg aaatcagtct caacgaaaca gatcagtgct gtctacgccg agtttttcga 60 cagcacatet tggcgatetg gtecgegeag tegggtteea geeggeacae agegegageg 120 agttccggcg cacgctcaga caatatatcc aaaaatttca cagccatggc cttgcgatgc 180 tgagctgctt ggacatcacg gggcggtatc agttcgaggc agtgttctcg ccgatatacc 240 acttcctgcg gagtctggaa gtggactacc ggttcgatgc gcgggtgaag gatattggga 300 cgacaatgag agaggggcag acggtcgtgg acagaatcga ttacatcgcg gatgggtttg 360 agttgagaca gccggtcggt gtggacgata tagtgatcct cacgctgggg tcgacggtgt 420 480 cagggtcgac gacgggcacg aacgccgacc ctccgctcag ggagccgttg cagccgggcg aggcgctgga cgcgaactgg gagctgtggc tggaactgga ggcgaggcat cccgggcttg 540 gggatccgta taacttctgc acgaagcaga gagagtcgat gatcgagagt ttcaccgtca 600 660 cgaccgagga cctggaggtc tacgcgcggc tctgcacact ctcgaagagc cccgaggggg ctgggccagg ggctggctcg ttcatcgcgc tgcaggagag tccctggcgg atgaacgttt 720 gcctaccgac gcagccggtc ttctcagagc agccgcccaa tgtgcgcgtc ttttgggggt 780 tegecagett eccegaaaac caggggaaat ttgtgegeaa geegatggta gegtgetgeg 840 gcgccgaggt catggaagaa ctgctggcgc atctacattt ggacccgcgc catctgatca 900 agegeacgat gaeggtgeeg agagtgatge egeggatgag egegateetg etgeecaggg 960 cgctgggcga tcgcccagcg gtgattccgc cgtgcatctc gaatctcggc ctggttgggc 1020 agttttgcga gctgccgcat cagagctgcg tggatatgag ctacagcgtg cggacggcgc 1080 agcgggcagt cgcagatctg acggggctgg aggcagacga aagagatgag cggcactggt 1140 gtcatttgag cttgctgttc aggatcctgt tttggaagtg atccgtcagg ccatagcatt 1200 gcctcagtcc ggctagcata cctcctacca tccctaagct ctactagatc taccagctct 1260 atctccatta ttatctcatc actatcccag caccttattt ttccagcacc ttaatacgac 1320 cctatcttag catctcagta cgtccactat tttagtatct ttagtacatc ctatattctt 1380 cagacatccc tatctcaaca tetttagtac aagccatcgc geettgetgt gggcgttgag 1440 cactggtctc tggcttcgcc gccgtttctt ctgtactgac agtggccaga tcacacgggt 1500 gagaaaaaga aagaagggc cagtggccag atagcgatcg ggcgaggcgt ggggggccga 1560 tacgagcaag aaggaacata gcgtgggctc tttcctttac attcgcctcc ttgataggac 1620

catgcccgtc tcgagtcagg accetctgcc ctgttcgatt ggtggtaaag taagcatctg [1680
cctattattg ccatcaaaaa tgtaaagaga aggcagggta tgta	1724
<210> 2750 <211> 4268 <212> DNA <213> Aspergillus nidulans	
<400> 2750	
cgcaaactgt tgtttttgat ggcgtcttcg ccgaaaccgt cgatcaagcg agcatctggg	60
actateteae gaatagegte ggtettteet geaaggetae aatgteteta ttetggeeta	120
tggccagtcg ggcgccggta aatcctacac aatgggaacc gctggcccaa atgagcaaga	180
cgtagagtct tcgggtgagt ctgatggatt gtcgcaagat tgcagccact gataaagtca	240
ggtatcattc cgcgcgcggc tcaacttctg tttgagaaac tggaaggtcc caagcattct	300
cgcactagct ccaccgggct ccgcacaccg tcgcgttact ctatcagctc tacatcgagc	360
ttcggaaaat ctaccgtcga caaaaactgg cagttgaaag ccacctatgt tgaggtatgt	420
gtatctcaat ttttagccgg cgagtctaac cctggcagat ttacaatgaa caattgaggg	480
atttgctcct ccccgactcc gtgtccgccg cagaccgcag taccgttact atccgcgaag	540
ataccaaagg ccgcataatt ctgaccggtc tgcatcaagt caacattaac tcgttcgagg	600
accttattgg cgcgcttaac ttcgggtcat ctattcggca aactgattcc actgccatca	660
atgccaaatc gtcgcgatct cacgctgtat tcagcttaaa ccttgttcaa cgaaagtccg	720
ccaatggtgt aacaacaccg agagagaagc gcatgtcgat gcccaccgac ctctccggag	780
gcgaccagtc catcaccgtc gacagcaagc ttcactttgt cgatttggcg ggaagtgaac	840
ggttgaaaaa taccggcgcc tctggtgagc gcgcccgcga aggtatttcg attaatgctg	900
gtctcgccgc gcttggaaag gtcatctcgc agttgtcctc ccgtcaggcc ggatctcacg	960
tttcctaccg tgactccaag cttacccggc tacttcagga ctcactgggt ggaaacgctt	1020
atacgtacat gattgcctgc gtcaccccag cagagttcca cctcagtgaa actctgaaca	1080
cagttcagta tgcgcagaga gcgagagcaa ttcaaagtaa gcctcgtatc cagcaggttg	1140
ccgacgaaag cgacaagcat gctgtgattg aaaggcttaa agccgaggtc gctttcctgc	1200

ggcaacaatt acgcaatgca gaagatagtg atcgacggac agtggctccc caggaacgca 1260

cagaacqtca gaacqaqcqa qaqattqaac tccagaacca qctacttqat qtccaaqaqq 1320 gctacaacgc actgagccag cggcatgcga agctaatatc cgaacttgca cgggattcaa 1380 qqcctqcaqa tgcagagagt gagtctattg tgggcgactc tgtcgagaga ctcaagcggt 1440 cacacteatt tgcggaatcg gtcgagcagg tcgtgcttga atacgaaaag acgatccaga 1500 gtctcgaatc ttcgctttca agcacccgag cttctctggc cagcaccgaa agtaccctcc 1560 tegaaegega gaccaaatge aettaegtag agaeegteaa tgegeagett eaggeeegea 1620 tccaaaagct catggaccgg gaggcgagca cggagactta tcttcatgag ctagagtcca 1680 agatagatgg tcaagcctct ggggaagagc aacacgcggc aatggtgtca gagctccgta 1740 aagagctcgc ccgagctcgg gagaacgagg ctagctgtga agaatatatt tccacactag 1800 aagagegeet ageegaggee gaeeaggata tggaacteat geaaegegag atagategge 1860 tggagcatgt tgtggaccgc cagcggagcc tcggaaaact ggataatctc ctctacgagc 1920 tegaceaeat teageaaaat ggeaagaaag aegaceaaae eeetgaaeag eetgagagga 1980 cqtccactcc tccaqqaqca taccaacctc qaaaqcqcqq attqtctctt qacqtqctca 2040 ccqaaqccqc cgaaaccqct attcctgatt ctgacgaggg tctgtctgat ccgattcctg 2100 aagaggacga ggaccaggct acacccagca agcccgtgtc aaaacaaggt gattctggcc 2160 taaaaatact cgaaagtgct actagccgcc ttaagtcagt tcacgatgca gagcctctga 2220 gccccaccca gatgcgggtc gtctctgaca aatttgaaac cgagactcat gagcttttcg 2280 attegegeat geageatgag aacacactea atgaetaega gggeetegag geeataateg 2340 aggaagccat gagagtcatg gcggcacttc gccaggactc atcagaacga aggccgtcac 2400 tatgcctccc cccaaaacca tacctgtttt agcccgatct cttcttttga ggatccacaa 2460 ggcccccgcg tcgaagactg gaacacaaca ttccttctcg caatcactct catcggagtt 2520 atcettggce ggggageetg egaettegeg agatteatat aatgteaaca eteeteagae 2580 taccgttggt tcacaggacg gaagtgtgcc gaacgggacg cacgacgacg aagatatgcg 2640 caaactcctt ctggagcatc aagagagcgt gaacgcaatg aaacaaaagt acgatgagct 2700 tcaggccgaa cacgaggaca ccttgagctt gattgagtcg ctcaaggccg agttgcagag 2760 atctaggtct tcgtcgccgc cggcaactcc tggcttcaat gtcatccgta ggaagaccag 2820 ccagagcate atgteaaace ttgategege teacegatet ttgaatggaa tgegtaetat 2880

tgctgctgag gaatttgcat cccgcccaga tactatgcag aactttgaac ttcatctcga 2940 gggagcgatg catgaactcc atgtgcgtat ggagcggatt cagcaacttg aggcagagaa 3000 ccaaagtgtg aagaaggaga tggagatgaa gtccaccatc atctctggac tcacccgcga 3060 qcqatctagt ctqcaaggag cttcccctqt tqaccgtqgt ctcgtqaatc aattgcgtqa 3120 ccaggttgtt cagcaggaga acaccctcat gcagatgaag gaagcccatg atcagaggga 3180 gaaggctctc atccaggaaa tagaagagct caaggcaatt ctgaagaccc aggaggaagc 3240 tgccaaggcc caggatgccc atgtggagga gcaggagaag aaaattactg atcttgaggg 3300 tgagctgacg gagtggaaga gtaagcacca gaccgctatt gagtctttac aatcctccga 3360 gaaccagete aagtetacce tggaggaact gaacagtgca ettgecacaa ttgaetetat 3420 gggctcagcc aatcctgccc gtgacgccac ggataaggag gcggctgcca ccgagctgga 3480 qaqtqaqcqt qcccqacaaa aacagqttqt cqatqaattg acccgaaaaa ttgaagagca 3540 cgaaagcacg gctgccacct atcttgagaa gatcgcgtcc cttgagaagc tgcacgacgc 3600 ccagaagcag gcatctgact ctgcatccac gtcagccgag gttgaatcgc gccaggctcg 3660 tattgcggaa ttagagcagg agattaacag tcacaggagt cttgttgagt cgtacaagaa 3720 ggacttggaa tetttgeagg agteteacaa acgagagttg gaggagetgg aateaeggge 3780 aaaggctgca cgtgacgctg agcatgagtt gcgcctggcg gagcagaata aacagcacga 3840 agaggccatg aaggctctgc gttctgaggt ctcagaatca cgagacgagt tggttaagct 3900 gctcggcatg gtttccaacc taatcaagtc agatgtcacc gcagacaacc tcgcggacca 3960 gatacaagac atcctaatgc aaaagcagca cttttctgac aagtacgccg agctgatgga 4020 cacgaatgag gatcttcgca agcagattga agcaaggcaa aacgatgaca gccgtgtgga 4080 agageteaac aaggetattt cegteaagga tggeaaggte aacgagettg etetgettgt 4140 cgctaccttg gaggacacgc ttctgcagcg cgatgagcag atcaagaaga aagacgccct 4200 cgttgccgaa gccatagctg agaagcaaaa aagcgcgcgc ctcgtggagg aactcgagga 4260 4268 ccagatca

<210> 2751 <211> 1089 <212> DNA

<213> Aspergillus nidulans

<400>

2751

gatttgttgt	gctacgagga	aagaaaaatg	ctgaaaaagc	tctggaggct	gtgaacggga	60
aagaggttga	tgggagaacg	ctagctgtgg	attgggcagt	ggagaaggaa	gtgtgggaga	120
atttgcagaa	ggaagaagag	catgcagaac	cagatgtgaa	ggaggagtcg	agcgatgtgg	180
atatggaaga	cggaggggtt	gggttggata	atggggagct	tgatgaggat	atgagtgagg	240
acgatgatga	ggaagatgac	gaagttagcg	atgaagaaga	tgaagacgaa	gatgaggaag	300
aagaagaaga	ggaggaagag	gaagaaaaag	aggacgagag	aaatgcctca	accatattta	360
tccgcaacct	accattcaca	tgcgatgatg	agtctctcta	cgaccacttc	acccaattcg	420
gaccgctccg	ctacgcccgc	atcgtcgttg	atccagaaac	cgaacgtccc	cgcggtaccg	480
gcttcgtctg	cttctggaag	cccgagcatg	cgcaggcctg	tgtcagggcg	cccctaaaca	540
gcaagaccct	ctcgccgcag	aaaaggaaaa	ggcaaaaagg	gcacgatcat	caagcaatcc	600
gtcctgcaga	atgagaatgc	cgatccaacg	ggccgataca	ctctcgacgg	ccgtgttctc	660
cagatcagcc	gggccgtgag	caagtcccgt	gccacacagc	tccgcgaaga	aggtgtctcg	720
aagcgactcg	tccgcgacac	cgacaagcgc	cgactctacc	ttctcaatga	aggaacgatc	780
tcacctaact	ctactctcta	caagagcctt	tcgccttcgg	aaatcaagat	gcgcgaagac	840
agtttcaagc	agcgacagaa	ctttatccgc	aagaacccct	cccttcactt	cagtctcacc	900
cgtctatcca	tccgtaacat	accccgccac	gtcacatcaa	aagacctcaa	gcagttagct	960
agggaagcaa	tegteggett	tgccaaggac	gtcaaggaag	gtatacgcca	accactctcg	1020
agagaagaaa	tggaccgcgc	gtccgaagag	atgagagagg	cagagaagct	gcggaagaag	1080
aaaggtgtc						1089
<210>	2752					
<211>	1535					
<212>	DNA	- nid				
<213>	Aspergillus	s niquians				
<400>	2752					
tgctgaccca	acctggaact	cttggatcgc	ccctaccacc	catgatactg	gacacaaata	60
cagacgcctt	gtctttgccc	gcacccacga	acagaacgaa	caactcggaa	tcgcgtcaga	120

tcccgaagcg ctcaagaacg aagggaaaac aattggcaat ctcgatgacg tcgatattgt 180

ggatggaaag gtctacagtc ttcccgctga ctgtcctgcc tgtgccaagg agtgcaccgt caacatgcag aaggtggata ttccatactt caaggaagtc tttatcttga gcaacgtctg 300 cgagcactgc ggataccgct ccagcgatgt caaaactggt ggtgaggttc cagagaaagg 360 aaagcgcatc acgctcagcg tcgagacgat tacggatctc caccgtgata tcctgaagtc 420 480 cgatacctgc gcactccaca gtgaggagct tgaagttacg gtccagcctg gcactttagg cggacgattc acaacggttg aaggtctcct cactgaaatt cgcgaccagc tcaagggcca 540 gatctacgat atcgacgatt ccacacaaag cggaggtgac agcatgtcag ctaccgacaa 600 660 ggagaaatgg gctcgcttct tcgaccgtct tgactccgcc attaagggcg acttgaagtt 720 ctccatcacg cttgaagacc ctatggccaa cagctacgtc caagactagt gcgctcccgc ggaagaccct caattaaaga ccgaagagta tacccggact gaagaggaag aagaagagct 780 gggtcttaag gacatgaagg ttgaaggata cgaggcagag gcgaacgaga aggatggaga 840 ggaaaacaag tcatgaccta ttgtaacgat acccacacag acattggaat gtctccatta 900 tgatctttcg gtcttgatgt tatgataact aggcctctga tgagtatggc gataatagag catgaaagag attgatagag cgagaacctg tgagctcact ctcatgacat ttattactgg 1020 aatgccgtat tgtcatcacc gccggccgac tcttgtatat atataaacta ccttgctgtg 1080 ctgaccttct tctgcgacca gttccttttt gctcgaggta catatcatgt gggaacccca 1140 tcacgacctc acgactggtt gcctaagcta ttaccaaata cccggtcagt ttaacctggg 1200 atateegget tetgetgaag etataaeete aggaagetgt eettggatee aetaagteee 1260 ggagcctctg agttgcctgc cacttacaac agaaagtagc cgggccctga ggtatacgaa 1320 ggtcaaatga caggctgttt tccgtcattc agtctagaac aggaaaaacc gggaaagccg 1380 ttttccggag gataccctaa aaattaaacc ggaaatgcct ccggaagaaa tctttaaaaa 1440 1535 acattatata ccttatacag aaagaaccaa taaat

<210> 2753 <211> 994 <212> DNA

<213> Aspergillus nidulans

<400> 2753

aaatgtgggg aacaggaggc actgctcgtg gattgaaaat ccgcaggagt cgtcaatgat 60 tcgaatggag ccgtgctaaa cctagagtgt cattgagcgc tctcaattca atgtctccac 120 gaagcgcaag ctggtggctt cattcagcat tattgtccac actaagaaaa gaagaggcag 180 gccaagccca gtgtactctc tgcctatcat aggcagcagg caacactgac ataggtcgct 240 aatttcctgt gaaggtacaa gttgaattct ttaagtcctt tttttgcttg tatccgaacg 300 agtcgcaggt acatttttct atcaggtccc atcgtaggca gcgaacggaa gccatctgaa 360 tcctaaaact caaggtgcta ataatgtgta tatgaccaat cttatccata tgcttcggaa 420 tatatcaagt gacccgtgca ttcctatcct acatatgtac gcgctttgta atatgttctt 480 tatttcctac taaaaggagg tttatgaaga tctgacatgt catggatgtc gcaggctttt 540 tatattgtat tctattttaa ccgagcacaa tatctcaaac tcattcgtca tcactttctt 600 cgtcttcttc ctcctcactg ctctcctctt cctcagcttc tgcaagccag tcaatgaact 660 gttgcgtctg agctcggact ttgcgcatct cttcggtact ggtcgaccgc tcgtctgccc 720 accattgctc taaggcctcc tcttcgacaa cttccaactc atacagctcc ttggccagga 780 840 acagaagcac cgtctcaccc cggggacggt ggacgagatc ttgctggaac tgaatcagaa ggtccacctg atcaggcttc gcgtcggtgt cgcggtcaaa cagtgcacgc tcaatgattt 900 cgtgatactt gctgaagata tcgtggacgg cgtcccttgc tccctgttca cctttcatca 960 994 actgcgccac acgcttcata aaggctgaag tgac

<210> 2754 <211> 1362

<212> DNA

<213> Aspergillus nidulans

<400> 2754

ttggaaccag gtcactcttg cattgacaac actcgtcact gtcgtcgtca gctactttcg 60

tttgcttgaa cattatggca agctctactg agtgccaaaa agggagaact atattatcaa 120

cgagtaaaga tacatgtaga ctcgtggatg gagacgtagc tgatgattcg cgtggatctc 180

attgatagag gaagggacgg gataataaga gaagaaacgg gaccaagaac ggactgtcga 240

tcatctagag atctgcaggc tgggtttcca ctctggataa gaggtgcacg tgcatccgga 300

gcaagacgat tcccgctgac tcagccacag gtataactta acttatctca acggccttcc 360

tccatttacc ttcatatatc cgcagggaca ggtccactat ctggctaatg cggttcgttt 480 agttggctgc agaatgagca caccgactcc cccgcggcgc ggcggtaggt tacgacgcgc 540 ttgcgacttc tgccaacaaa aaatgtacgt ggatagcttg acaacccgct gcaagtgcaa 600 ggatacgtcc cttacaacgg aaatattgac agattcggtg tgacggcggc aaacccgatt 660 gcgaaccatg tcgtatttct ggtgttcgct gcacagtgac gcggaggtcg cctcggtaag aaatagcgcc aaacagtaag agcaattggt atctgttgca gcattgttgt taatacttct 720 cagacagett geegaaacea aageaeggat tegggatttg gageeetggt taceetaate 780 840 agcagaaacc ggcagcctct gataatagtc tgtctattgg gtatctacaa gatccacgtg atcttgacac tggcctggct atgtttcgaa gagaggtgtc tctgtgcggc gtcggttctt 900 960 ctggctcagc agagagggaa ttattctgct ccgctgttct ccaacaaact agctgttatt tegatgtega ecaattttta caaggattgt ecaaagegtt tggeactagg gateetegag 1020 actcagaaaa ggcgacagtc caaaagtagc caccacggca cttagtccag cgctgtttgc 1080 accagtatgc taataccggg ctatattcag tctttcttgt tgccaacgtt gaagcgttgc 1140 agaggttgct tgatgaaaat gccttgcaca ctcaaatcca gcagaaccac accgcacatc 1200 tggcctgttt agtggctttt acttcccaga ttacggaaat catagacttg agcccgcctt 1260 tttggattcc gattcggatg cttacatacg tgctgtgcta tcactgatac cccgactgtt 1320 1362 aatcgaggat cctagcgtga gaagcttaga ggcattcgtt at

<210> 2755 <211> 1993 <212> DNA

<213> Aspergillus nidulans

<400> 2755

atgeteatea tatggaetgg atggetatgg atgacgaetg cacataageg ttetteettt 60 cetgtaacte teacttatgg tatatteata etatgeggee accetgaate gaeagtaeta 120 tggaaggget gaatatgeea acetggeagt tteetaegga ategeeaaca gatteegeaa 180 gteeeggegg aaateagage tetgagttta eceaacagge tggtgaeteg ggtgetaeet 240 etgageaee taaaaggeae tateeaagte gettatgteg eatttgeetg gagaeegtge 300 etecaaeeet tgtteeteet teggaaeata tgeetggett eetteagege ggagttegtg 360

tegtetacga gtetgaggat eeggageteg ggegeettet caageeetge aaatgeaaag 420 gttcatcccg ttatgtccat gagggatgcc ttcagacctg gcgattatcc agccccagcc 480 acgacaagag acgcttctgg aattgcccga cctgtggctt tcagtaccgg ctagagcgcc 540 teacttggge gggetggate aatageecaa teagteagat ageettgaet ageetegttt 600 tgcttttgac cattttcttg cttggtttca ttgctgaccc tatcattaat ttttacattg 660 acccggtgga aacggtgtat tatgccgatt actgggagga aaatagttta cttggcgcca 720 aaagtcctac ttggattgat cactttctaa aaggaatgac atcgctgggg ttgctgggct 780 tcgtccagac tctttatggg ctcgcgccat ggcactggtc taccgtacga tcgtccacga 840 ttgttcgtgg tcgtgccagc actggaaggg atcgagtttc ttctatccgc tggatcgttg 900 ttgtgctcgg cattgcgagt tttttctggg tacgtatcct atgggtcccc atgcatactc 960 ctgggcggcc gctgaccact tgaaggccgt ctacaaaggt gtaagggcgt ggagccgttt 1020 gatattggaa agggcaagtg gacgtgtaat ggacgtcccg tcacccgacg acgacgatga 1080 tgacgaagcc gaggacagcc acccgaaaac cgagtagatt cggttgttag tctgtatccg 1140 acctggcgca actctgtaat atcccaaatc gcacaacttt aagttgtcac ggtcctgtca 1200 atgacgtgcc aattagtcaa cgtgcgaata acgacaccga ccctgcttaa ccgcggagag 1260 tttgagagat agatactgtt gggaacgttc tgttcccttc tgttcctcta tctcgttaaa 1320 tcaaacgttc tttgtgggag ggtcgaattg cagactcgat ttctaccggc gctctcgcag 1380 tgggcgcttc tgattgaggt gcggtacatc atctgttatg tagcgagttt tgattaggaa 1440 tgaataacta tgttcaaata gtctattcga ctcataaatg agcgttcttt cagtgctttc 1500 acttacacgt gtcagacact atctattccc ttcaggttca tcagacgatc ctcgcggcca 1560 gtgattccga cggcgatatt ctagagtggc agcaactagg accgggcgac tccatagcct 1620 acataaggac gtccttgcta ctcaactggt ttagtccagc aagctctaga gcttcctcat 1680 cttgcgcacg cttccattag tatcaaagta tctcgcaaat cttggactct ctcgaccaac 1740 aacagcagcg aacctccagc ggcctcactt tctctccaat tgactttccc aggtttctgc 1800 attgaggagc acaatttacg tcactggtga tgttcagcag cttctgttaa tttgactcac 1860 teettaggta ggatgggetg tteaggetea gtgegetett taeaggttea ttetgteeaa 1920 gccttttccc ttgccaacag gaatatcaaa gactaggcat gtcattcacc tggtctcaca 1980 tttattggtg gat 1993

<210> 2756 <211> 1422 <212> DNA <213> Aspergillus nidulans

<400> 2756

60 acttcgtttt attgcctgcg cacggtgtgc gctattgctg atttgttgtc accatggatg ttcaggagac ccagcgtctc ctttctgaat atcttcatga gctcgcgaat cttttccatc 120 gcgttccggg ttcggcaatc tttctgcgct atgtgaagtc tagctaccag aatgacccca 180 teegetegge egtegagttg tttetattee tgttegeegt eegetatttg etegeeeega 240 agtattetae caageetggt gtegteeage ttteggaaga tgaaattgat gaeetagtgg 300 acgaatggac accggagccg cttgtgggaa agccaaccgc tctggaggaa atggagatag 360 ataagagacc agttattgcc gggtacgaac cgtgaagcta cttgtccctg cctgcatttt 420 cqcatgctqa ttctcagagg accatagccc cgttggtcct aaagttagac tttcaaacgg 480 tcgaacagtg atgaacctcg gttcctacaa cttttataac ttcaatacga acgagtctat 540 caaggagaag gcaatccaga cacttcgcaa ttacggtgta gggccctgcg gcccccgagg 600 cttctatggt acccaagatg tccacatgaa gaccgaggcg gatgttgctt cctatcttgg 660 cacagogtog tgtatcatct actoccaago gttttcgaco atatcaagtg tgattccggo 720 attetegaag egaggtgata ttattgttge ggacaaggge gtgaattteg ceatteggaa 780 gggtatacag atctcgcgga gtatagtccg gtggtacgag cataatgata tggaggatct 840 900 tgagagggtt ctggccaaga tcaccaagga gcaagcgagg aagcctctca ctcgacgatt tatcattact gaaggettgt tegagtegta tggtgacatg agtgacttge etaagategt tagtctcctt ttcacttcct taatatttcg gacatagctg attagctgtg aagattgaac 1020 tcaagttgaa gtacaagttc cgactgatcc tcgacgaatc atggtcgttt ggcgttctgg 1080 gaaqqacaqq acqtqqtatc actqaacacc aqaacqttqa cqcqqccqaq qttqacatqa 1140 ttgtgggctc gctggccggc ccattggttg cgggaggggg tttctgtgca ggatcggagg 1200 agattgttca ccatcagegt atctcggccg ctgcgtacac gttttcggct gcactgcctg 1260 cgcttctgtc cacgacggct agcgccacaa tcaacatcct gcagaacagc cccgagacaa 1320

tetegeacet gagagacete acaaaggeaa tgtgggegea gettgaeeet egeagegatt 1380 1422 gggttcgatg tacaagtgcg cccgagaacc cgatcctggt cc 2757 <210> 1599 <211> <212> DNA Aspergillus nidulans <213> 2757 <400> ctacagagtt tgcgattcta acagaatcac atttattaca cccttgccag cgccacagat 60 tctcttcccg accgtacttg ggagggaagg tcagggacac gcgacgagca aactcctgca taagacatac atgatgatag teteaggegt caaggggaac acaeegatge catgegtaeg gcgcagggac cgcgagaaac aggagcaata cggcatacgg tccgacgttg gtcgactatt tgacaattat tagagattat caccaagttc cacggtaaca acggcgtgcc ccgtcagttc 300 agcgccgatc gatcggatcc cacctatcta tctatctatc gagatagctg gtcgacccaa 360 420 acttgcgaat aggctagcaa gaacggcgtt gttttcccct ggcgggcgcg ggctggaagt 480 ggctggccgg tgcatcgcgc gtctgctccg ctggtgcctg gaaagctcag agaagacgat 540 ctcgttccag acacgttttg catcccactg tgactgacaa ccgagtgtgg caggaatcag 600 cggtgggctc ttgccccgac tggatcgcgt tcccaggaac gtcggaaacg gaaaaagcac 660 gttctttggg tcgaaatgaa tatagcgagg tcgaccgaag cgggaagcag cgcacgaagc 720 taggaaggag cgagttagtc cagttttgag tagcgaggag gatgcatcga aagcccatgg 780 aacccccttc atgctgtgtc acactaggcg aggtacctgg ttctgattcc tagctcgtta 840 cagcttttca gcgtcgaact cctggctgct actgacattc cccaggtcgt cgacaaacgg 900 ttgaacagtg agcagagagc agagagccgt gaaactgaaa cccgaggcct gacataacta aggaacacaa ctccgagatg tcaatagaaa gtcaatccag gcacctcaac gctctcccca 1020 catgettetg ecceetgagt ggetgeecaa geaateettt eetaeggtet aggacegegg 1080 gcgaaggatg gtcgcgtcgc atccttcttt cagtaactcc gctaccgttt tgattttgtt 1140 atgattgacg agcatctgag aaaccaatat ataccgagtg gatcagttat gaccgttcat 1200

tagacaacga taaccagatt tggccattgt ttgagggagc ctcaaagggt ggcaggcaga 1260

atcgggctgg gcattcagg gcccgtggga tgaagaggt tgtccactgt ccacttccac 1320 ccgtccagtg ccgtcacaga aatagaacac gaggcttcac gacgaacctc agcatcctgg 1380 agacagacgc atgcaggatg accgcagtac cacaattcaa gctgggaaga tcacaccggc 1440 agtacctgca tccaagacaa ggggcttttg agacctgtca tccagctgca tctcaagcta 1500 ccatgcttt ctctctctc gtgccattcc gctgggttt tgcagagacg gtcgatagat 1560 tccgacaacc gactcgattg tcgatactaa ctggagggc 1599

<210> 2758 <211> 1701

<212> DNA

<213> Aspergillus nidulans

<400> 2758

tggtgtgttt atcgtcaaca tcaacataca gaccaggaat tgctagcttg aaatacctta 60 tatattaata atattcgcac tctcatgcct ttgattttat gtgaattcgc tgttttgaag 120 cacctaacag cgtattccct tcttgactat tgcctcgcga tcgagcccct tgcctttaat 180 gagatagaac ctgggcccgc gcggtctgag tcccctgcgg ccaagtttac gacctaagta 240 aagtgtgaaa aatctccaga accgtacagt gggagattca gggccaaatg ccatcatgtc 300 aacgggttca ggatcgcgga agcgttctgg tctcacccat cattccagtc gctcagagtc 360 tgaccgaacc acctaatcgg taatatacaa agaattgact ccttttctcg tctttcttt 420 cttcttttct cacagttatg cacgtcagca tatcctgaat ttccatcgtc ggtaaggaga 480 atcggaagaa gtttcggttg aagactgggc tgacgggtaa cacatatgga tgagaatcat 540 gccggagtga agcggtcaca ggacgcagag ttttggcagt cacattcgtc aagcagtctg 600 acatagggga acttaggtgg tcttgaaagc gaagtgcggc tgcgtgcttt tcaccgtccg 660 gctccgagtg gacaggctct cagcgtgtta acgtgcatct ggatcgtccc ttgagaccac 720 780 agagacteca tgeggttete ceageteeca gaagtegegt gacaataagt egaaageege 840 aagcctctgg gtcggcagca ttaccccgaa aagtgagttg aaaggttatt tggcccgaca ttggtcttat ttggtaccta atcacgaagt gctatcggcc ggatgctgag tctcgaggca accttcaatt tccagtcgct attatgtgtc catgggtcaa tcgagtcagc tcgtactcgt ctgactcttc aaaatggtca atcgggagcg accttgacca ggaggccaag ggccaatctg 1020 aggttcggac cactattgca ctccctgaaa atgaacaaga cgagcgcacc atctgccaat 1080
aaagtggcta gagctagact aagtacagtt ctgccctttc tataaagcat cgctgtcgtt 1140
aacagtttta atctacctgt gtgctagggt cgactacata tgcagcctta aatagtgtct 1200
cctacctaga gtctcgcctt tcgaaaagtt gatataccct tggatcactt ttgatgtact 1260
cgtccaggtt ataattcccg tatctgtggc agcggactat cttagcccag atacacagcg 1320
aactgggaca gggctttctg agcctctggc tacaaagtaa taacaaactg ctggaaccgt 1380
tagcagggag aacctgcacc tcattaaacg taccattact atctcctagc tgattaccct 1440
aattaaagtc taaccctttc gacggatctt tctatgcagt atactccatc ccaaaaagcc 1500
gctagtcatt cctcacctca taaaagatgc tgaatactgg aatatcaaca ccagtccgga 1620
ccgctgaata tgcacccact tatgtcagcc agatgtcgtc ccatgtaggt ggttcatcgt 1680
ttaagcaaga taagacaggt a

<210> 2759 <211> 1594 <212> DNA

<213> Aspergillus nidulans

<400> 2759

atacttgage aaatattgca acgtetteat egtgettget geatecaett agtegteetg 60 aggegeecca ttatettaat ataacegtet etteaaceta atatateetg caactetgtt 120 ageggttcaa ttacaegaeg aagectattt egtgeegttg teegetgete aaatgegtag 180 gccattgcga tgagtgattc ctcgctccat ctcggtccta gaaagctgat tcctaatgga 240 atteceggag cagegtegae gagatececa egacegttat acagaaegga egtattegeg 300 gggaacgaat caaatggaac ggtaatgact ggcgtaccaa caatactggg tatatctgat 360 gccaaggatg aaggcaggac tacagcgtca agattatgcc gtgccagcgc acccaacaga cccccttctt cgccgaagcg tagagattgc tggtaaaggg gccagaaatc tggagatgaa 480 ttgttgattc cagcaaaaag cgccctgtcc cactgttgcg tgttcctcgc cggatagtcc 540 tetteagege tttgetgegt gaagttgega atgteeceea gteeacgaag attgtttgga 600 ttgctagaca aatcggagag ataggttgcg aagccactta ggatatctgc tgctatcacc 660 tttgatggag cgtcactttt caggtaggat tcataagctg tgaaattcgc gtcgtcgatg 720 atagttgcac ctgcgtctct gattatttca acagccttct cgaacgagga tataattgga 780 ctggccatgc catggcgcat gcgaaagagc gcttcgagga catttcgagg gatgcctatc 840 cgctttcctt gcaacccagc catatcacac gctgcggcat actcgggaac tcctgtttgg 900 aacggcgaag ttgatgtata attgtcgttc gcatcttgtc ctgcaatggc ttgtaggacg agggccgcat cacggacagt cctagccatc ggtccaattg tatccaagtg ctcgctgaca 1020 ggcaccacca tgtatcgcga cgtcagaccg actgtcggct ttataccaac aatattactc 1080 ttctcggctg gaagtattat actaccagac gtcttgaggt gaattagcag aaactagtaa 1140 cagaaagagc atatcactca cctcggttcc cagtgttgca aacgcgagac ccaaatcagc 1200 agetactgcg ctgccactcg ageteccgct tggatectgc teetcataat aageageata 1260 ggtctggccg cctatagcat tccacccatt cgaggagtta gtagagcgag tatttgccca 1320 ctccgacaga cttgtcttgc cgagtactat cgcaccactt tttctgagat ttacgataac 1380 cgtggcgtcg gctcggacct ttgccccaac aagggcatag gagccggctg ggacagcgat 1440 gtgtcagtgg gagactccat cacctccgtc attgtgagtc gagtcgagca cataccagtt 1500 gtgtccattt ggtcaaatgt tcctatgagg tctttgacaa gtatcgggag cccatgaaga 1560 1594 gggctagttt gatgtcaact ggctacggtc aagc

<210> 2760 <211> 636

<212> DNA

<213> Aspergillus nidulans

<400> 2760

attcaaagga cgtaaagcag cttgagcaag atgccaaatt ccgagatcgg atggtaaaat 60 caccgagtgt aaccggcgag cagctatgta ctccttacgg tgtgcgggta aatgcccggc 120 ccagaggcgt aaaagccacg gcctcggctc agtcggccaa ccgtcaatcc ctccctcca 180 gagactcagc cgacccttct tcttctctc ctctcccttc cttccgacca ggcgattct 240 ttcttctct tctgacatca attgggtatt gcaatctcaa tcctatctct gtgtcctttc 300 tcttctcttc actatgtctg cctcttcagc gctgagacgg ctgacccaca ggtctccccg 360 caatctccag tcccgcatcg cttcgctct ccgcacctct tgttccctt cgtcgacgtt 420

caactcctac agagettett cateteetge tttacetegt gettegagat teteaacaat 480 ggcttctcta cgatcggcgg cgccaattcc cgcgtcctcc caagtggact atgatcctga 540 aatcaaggac atggccgact acatccacaa ctacaagatc gactctgatc tcgcggtatg 600 636 agctccaatt gagaaccaat tatggattga tggggt 2761 <210> 1246 <211> DNA <212> Aspergillus nidulans <213> 2761 <400> cctaaatgtt gtttttgaat tcttcgtcga gtgtttaatt gctgtgagcg ccgagagctt 60 aaatctgtgc aagccgaaat actggccgat tcaagacagg ttcacatgac acctgcaaga cttccatttt tttttctcaa gattccatcg tgcataacgg tgctaatatt ctacttggat 180 atcctcaatt aacacagctc atcttcaggc acaacacgct agtttctcac ttctgcaaca 240 gataccgaat attcaagccc aagcattatc tttcaattcc tagcggggtc aaacaagagc 300 accccctcac agccagtgcc acttcattcc cagttttgaa aatacccaaa caacgctccc 360 ttcggcacgt accccctgta aagactctgc catctggccg caaaagacgc ttcgatgggt 420 cctagttctc cgaatccaag gacctcgagt atccagggcg tcaatacagc caacacgccc 480 agggcaataa gcgtcgcgta aacggggtgt tcagttgcga acccaattgc ggcttctttc 540 gcctgagcta cagcatcagc tgcagccttt gccatcttcg ctccggtctt gatcgcgttt 600 tegagaeeet ttagegtege ttttgegaga gettetgtee agettgtggt ggagatetgg 660 tcattgagct ccttgtggag agtatcatgg gagtcggcgg taaggatctt ggtgacaacg 720 780 tccgatgcta tgctttctag ggagcgagag gaggtggcgt tgacggtgtt ggtggtggga ggacgagtcc cgaagataca gtcgaggaac ggctggagga tgcacatttt gcaaagatag 840 900 aacggagttt tgttgttaaa aaagtcttgt cttgttctta ggaagaggaa ggaacgagag gccgagaaca gaggaaatat gaaaaggaag gctgtgttag tgagaggctg agggtttcac 960 tgtgttgcta gaaagcgtac cccttcataa tgagcaccgc agtattaaca aatgcctcaa 1020 tctagacgac aacgagaagc aaaacctctc gttctcgact cagcaacaaa tcagaaccct 1080

gaatagccgc agctaccatt cgttgcacat cactgtatct gcattctcaa cctcgataga 1140

tttagggcaa cttagcctag acaccttgct acttatgtta gcagcgttct tttgcatcct 1200 cacattacca gaacaataaa acctcgacgt cttcccaacc caaaat 1246

<210> 2762 <211> 2056 <212> DNA <213> Aspergillus nidulans

<400> 2762

aattgtgtcc tctatatacc taaggttcag gtaaaggaaa gtcggacgga gcggccaccc 60 tcgttcactg ccgggtgggt gtctcacgct cagcaacaat atgtatcgcg gaggtcatgg 120 cgtccctcaa tttatctttt ccacgggcat agtaggttga gctctaacgt ttctggtacg 180 ttgctaacct agatccagtt gttacgtccg tgcaagaaga ctcaatgtta ttattcaacc acacctacga tttgtgtaag cagcagtact acattggaaa gcattcatca gacctaacaa cttcgacaga tacgagttgc taaagtggga agaacttcaa caaaagaaaa acaaacagcc 360 agtgaagaga gaacttgaat gggcaactgt agctcgcgag atcgccctca tgaacaagcc 420 480 ttattcgaga taagtagaac atcggagttg gcaacggcca tctactcttg ggactactac acgagacaac actgatatac catcagaagc gattaaataa cgacactcca tcgatgcatc 540 gataataaga acgatcagac gaactaacga gccatttttt cttctttt ctatttatt 600 ccccgttctt tcctgatacg atctaaccgg actggacttg attttgattt tggcgctaga 660 cggatttgat ttgacttgat ttatatggat atgcctgcgt cctttcagtg acatgacact 720 actactictc attictitct tcttatgaaa ticaatctat ticgtgaaca tgacatgccg 780 ctttatttga ggggctcatt tgtcttgttc cctcaaattt cacgctcaaa aggaatctcc 840 ttggctgtag ttttggagag caccgttctc ggtttcctgg aagtagatac ctgcttgacc 900 tacgttccta cgcttttatc tgcttgatgt tttcgtaccc tgccaataat cgttatctta gcagtgaacc gcctatacct tactctacga cagctggatt aaccgcacct gctgtatggt 1020 caactgacaa caagaggatt atacagcgcg ctgctaagtg aaaggtacga tgagaagctc 1080 ggggcgcgtg aataggacag taggatggag gactggacca gacatcgcat tgcagtttag 1140 atattcccgg cctgtcctcc ccagcaacct actctgtata cgagtcaggg taagtggaga 1200 acggagagtg ggtggggaaa gtgcgggaat ggcgtgccat ctacgggtaa ccctaactcc 1260 atccatctca gagccgcat tctagagaca actcacatca cogttcaaca ctactgataa 1320
ctgattctgg gctcaggtag catcttcaa actaaggaca tgtgatgata atgggcaaag 1380
gagaaccaga aaatgatagt accaggaaga gattgctgca gtgcccggaa gaactttcca 1440
ttgctggtca atcatccaca cgcagccaag caacagggaa ttttcaccgc gtgggggaat 1500
cgtcagatga gagtcaagct tctgaattat aagatctata aagctgaaag ttttacagtg 1560
catcaaaaaag ctgctacatt atcagaagcc gaccatctcg acggtcaggg gcagcttcca 1620
cagcaatact ggtactattg aagccttcga aacgatctag atatgttgtt ctttaaacta 1680
cgttggtcag aatatagtaa agatcactt ggaaatagga atccacatct cgattcctag 1740
cagcaagcgt aatgtcagaa gccctgcccg gctctagctt cgcgcggttg ccagggcaa 1800
gtccagcaac tcaccatca tcagcaccta cgtattggga aatctgcaca gaatactgcc 1860
aatatgaaaa gagtgcgtcg cctcccgata tctctgcccg tatattcatc taatcccagt 1920
tgcaggttcg aagttcgaac agcttttacg actcggcagg cttcctttt tatggatgta 1980
gtacatttgg tagagcaata tctgggttct cttagattgc ttaccctgct tcaaaacctc 2040
actcgaggttt taagaa

<210> 2763 <211> 1367 <212> DNA

<213> Aspergillus nidulans

<400> 2763

aaccgcacat tgaccattga gcaacccagc ccctttccac ctttccctgc accgcttgca 60 tettteacag cecteaacae ateegteect aatgeagaeg caaggagtte accegeetee 120 ccagcgagtc gttcaaggta agcatagatc ctctcctcgc caccgcagac ctcatctctg 180 aagttgagtg ctgcagggac acacgcatac gcgctgtcgt ccgttgtccc tgtgaactca 240 aagagcgcga cgaacgggga ttttccagta tttgggagcg tggacggagg gatatccttg 300 tcttcgcctg attcagaagg tggaacctgt ggcggcacat acccccatga cgtagggaga 360 cttgtccgga tgaacttctg gttgcgctcg ggaacgtata agactgcgca ggagcgcgga 420 gtgtagagcc acctaagcat aaaccatcaa gcctgcgcta gggtaatgaa aagggagaga 480 cagggcatac ttatgacaat tactcgtgaa gaagtccacc cctaacgcgg ccagatccag 540

600 cttgatcata ccaaccgcat gtgctccatc aataagactc agcacaccct cttccttaca agccctcgta atttcttcaa agggaaacct gatgcctggg tttgacacaa ccgtctcaaa 660 gaccgcgage tteggegtea agecetettt teteaegete tteagtgeet ceetaaaeet 720 780 cttgaccatt ccccctctt caagggggaa aacatactta accttcctca gcttgacgcc ccaggattcc tttagggcaa agagggcgcg ctcgacggcg ccgtagacgg tgtcaaagta 840 gaagataacg tcatctgcag tcagagtacg ggtcagtgcg agattgtgca ggacagtgtt 900 gacacctgtc gtggcatttt tgaccaaaac gaggtctgag acggggacgt taaggagggg 960 cgcgagggcg gcccgagaag tgtcgataag gccgggctga atgtaacgga tgaagatgtc 1020 gggcctagat tcgagagatt tctggatgga ctgttgcttt tcaaggacct gggaagggta 1080 ggtgccgaaa gagcctggtt gtgtcagcaa ttgctgtaag cgacgttgaa ggagaggaaa 1140 gaccgtggtt gagattgttg taattaggat cgaggaggaa gtgcgctttc atgggggcgc 1200 caaacggagt tggagaggcc atggctagtt tagaaggttg ttggagggtg aaagagtgaa 1260 agaaaatctg gaacgttatg gagccattta actaagttat ttaactacgt ggagatgcaa 1320 aatgccaatt tctgtgctac tactgatcat acatcaatga gtcacag 1367

<210> 2764 <211> 3768 <212> DNA

<213> Aspergillus nidulans

<400> 2764

aacactcggg aacatcttgg cagactgcac gaatatttcg ttgatgggat tgaagatatt 60 gatgtgccca agaacatacc cacaatggcg cttgcatatt gagtttttgg ctttgtcact 120 ggcggttaaa atcatagaca cccaaattag tagcacgagg agcaagagta tcagccctac 180 cagccgtctg aaggggcgga agaacgcttc aagtctgaac cacatcctag gaaggagtgc 240 attgcccttc ccatccgcct cctgtgccag gcgctgcctc ctgattaggg tccgttcttc 300 cctgattaaa gcgtccagct ctctgcggtc cttagaggat aggtgatcga aatttccccc 360 acagcggccc tctaattggc gccgtcgttc cctgttcgaa tcaagctgaa cagtgaaagt 420 ttgcgttcca actttctgca tttgataagc gaggaccacc tttaatcaga cgaataggta 480 gaacggcaag acctgtgaat gtatccaggg cataaacata catcccaatc gtgatcaaca

agcccagagc aaaagtaaag ggcacgttcg ccgcctgcaa accagcagtt agcactaact 600 tgagagcgag tttcaatatg agggtcctca cggttctctc ctagtagact cttgaaggga 660 720 tcaagaccgt tcccaccatt ggctctggaa atgggcacaa aaacgccgac aaggaacaaa 780 attatgagta tggcaatgaa tgatagtgta tatttagaag caccccaaaa ccgctgtccg gatgattgct cccctgtttg agctgccact tcatcgtatt cctcgtacca aaagtagaca 840 900 aatggaacaa caagaagaca aagaagaatg tccaaagaat acaagatgta atatacaagg gtaagagaga acgttattct atccactact tetggagtcg cccagtcctt ccgttgtccc 960 acagaggacg acacggtgga cgaaactaga gcgacatcga ccggtagcag aaggatagtt 1020 gcaagaaggc ttgtgattgc gacaatgcat gtcaaagtca ctgatggcga gcggtcgcga 1080 ggagactgat acacatagat gaacaccgaa gcaaccgcaa acaagaccac caccacgact 1140 gcatagacga cccagattag cgatgtttgc agaagaatca tgctgaagcc tttgacaatt 1200 agagatgcct aaatcttctt ccgttgcaag agcttgagga taatgaacct gacaggatca 1260 cettacgtca tcgaagtcag gatcacgtgg aagcgcggag agctctccgt gcgtgcggag 1320 gaaaataatg atattatacc aatgcccagt cctcaaccgc aagagcagtt gagattgtcc 1380 aattattgcc gattgggacc aattgacggt cctttggcgc gtctataata tatgaacgtt 1440 ctgacattta tcatcccaag ttttacgtcc ctttctctgg caatgtctct ggccgcacag 1500 cacagctgaa gtgcaacgac gtagatcctc aggttatagc ctttgcacct cacgaacttc 1560 tetttacete ttacaageeg aaatgeagtg etacaetgaa ttgatatete egacaggagt 1620 tactcatgcc ttggcagttc cttttctttc agcgactgct aacaacctga tcgtcgcccg 1680 gacttcgctt cttcaaattt tctctttacg cgatgtgtca ttgagtgcac ttgatacgga 1740 agttcgaccg gcgcaacaca ggcaggaaac gtgcaagctg gtcttggaaa gggaatatca 1800 actgccaggt acagtaactg atatctgtcg ggtaaagatt ttgaagacaa agagcggcgg 1860 agatgcagtt cttgtggcct tccgagatgc taaattgagc ttggttgaat gggacccgga 1920 gegetacggg ttatccacta tttctatcca ctactacgag cgtgatgata tgacccgtag 1980 tccatgggcg tctgatttga gcacttgcgg cagtatcttg agcgccgacc cgggcagtcg 2040 atgcgcaatt tttcaattcg gcgcacgaag tcttgctatt ataccttttc accagcccgg 2100 ggatgactta gtgatggacg actttggctc cgaacctgac tacgagaata gggtagaagg 2160 gaattcgaga agtcatgaag ctaaagataa agacgccgct gagtaccaaa ctccgtatgc 2220 gtcgtccttc gtcttgccct tgactgcgtt ggacccttca gtcatccatc ccataagtct 2280 ggccttcctt tacgaataca gggagccgac ctttggcata ttgtactcgc aagttgctac 2340 ttcacatgcc ctacttcacg aacgaaaaga tgttgttttt tatacggtca ttacgcttga 2400 tttagaacaa cgtgcctcta caaccttgct ttctgttact agactaccta gcgacctgtt 2460 taaagtggta gctctcccc ctcctgtagg aggatcgcta cttatcggat ccaacgaact 2520 cgtgcatatc gaccaggcag ggaaaaccaa tgcagttggg gtcaatgagt tctctaggca 2580 agcatetteg tittecatga eegateaate egaeetggee ettegteteg agaattgegt 2640 cgtggagcgc ttttctgacg ataatggtga ccttcttttg gcactctcga ccgggggtatt 2700 cgctctggta agcttcaagc ttgatggaag gtcagtatct ggtatatctg ttcggccctt 2760 gtccggtccg tcaaaagagt tcctggcttc gaccgcatcg tcttcagctt tcctaggcaa 2820 cggcaaggtc ttctttggca gcgagagcgc ggattctgtc ctgctaggct ggtcttctgc 2880 ctcatcagcc acaaagaaat ccttctctgg gagcacttca aacgatgaaa gtgaagatga 2940 cgcttacgaa gacgatctat actcttctgc gcctgctgcc atgacagaca atcctcaaaa 3000 tcaaccgagc aattcgtctg tcgctgcgtt tggtgatttg cgaattcacg acaggctttc 3060 cagecetggt cetateagag acattgtget egggaggage tetgaagegt ettegegtga 3120 cacaaaagac ggcgtgctag agctagtggc agctcaaggc tcggatgaag gtggtacaat 3180 ggtgattatg aagcgggagg ttgatccgta tcttgtagca tcaatggctg cagacacagc 3240 aaactccctc tggacagtct ctttgctacc ggataacaat gatcaaaaac gtgactatgt 3300 catactgtca aagcaggaga aacctgacaa agaggagtcc gaggtgtttg tgctagagga 3360 taaactcagg ccaattacgg cgcctgaatt taatccgaac catgaattga ccgtagaaat 3420 cggtaccttg gccagcaaga gtagggtaat ccaggtattg aggaacgagg tgcgaagtta 3480 tgatgctggt gagtgcctgt cagtccgaag aagagacata ctaattgagt agatcttggg 3540 ctggctcaaa tctatccagt atgggacgag gacgatagtg atgagagagt agctgtcaat 3600 gctactctcg tggaccctta cttggcgatc atacgagacg attcaacctt actactacta 3660 caggccgatg acagcggaga ccttgatgaa gtgaaaatga acgaggatgt cgtaagtcaa 3720 3768 aagtggctgt ctgcctgctt ctacagcgat aatgctagtt tcttcacc

<210>	2765
<211>	1271
<212>	DNA
<213>	Aspergillus nidulans
<223> <400>	unsure at all n locations 2765

60 cccactcgct actttgccga ctacctttcg tgggtaggaa gttcaaggcg aagaagacaa tgcgcactgc cggagagcgg ctagtggagt tgtagatttt gcattcggca tcaaaccgga ttccaacaat gctagctctg gagatatgga cacgggtgca gatgaggatg gagacgtgaa 180 tgacgatagc gatagtgagg gcgggtacta caccctcacc cttcccacaa gagacgtgga 240 tctgccagat acggattgtt tgaatgagga gaggcaagag gccctctgga gaaaaacact 300 ccaatgggcg ggcatttcga atgtgaatac agcgattcaa gtcgagatct gagccatgtt 360 tgttgtctac gacggagtcg tatagttcct ttgagcaact gtttctgacg aaatgctttt 420 cgagaagaga gcttcatcga gccttcgcat aaagattgct tggcatattg agtgatactt 480 ggaaagaaat aagagattgt ctcccttcgc aagaagacgc ccgcgaacgc gtttcgacgg 540 cagagggtgt cagacacttt atcgagacgg gccaggacag tcttgcccac ataatgaggt 600 cccagggtct gggttaatga aataaatcaa ctgctgcggt cgacaaataa caattcaata 660 gggggcgtac tgcgtactat gaacgaggcc atgagctaca accactgcgc ctctgcaaag 720 acctcccggc tcccccgggc ccttttgcct gtctagagtc cgtgggcaga gtgacagact 780 acacaaacac ggcaaatagt ttcaattact gagatgatta gcctttttta caggtattga 840 acagtatgct gtagatatgc agtggaccct ggcttgcccc gccatccgcg tattccgcag 900 acagtgcagg cagcagcttt tttctaccct atccttcaaa aaacagtcga atacaggctg cggtgtttca aattcactgc tcttgcggtg tatcatgagt ggcaatcatt tgacaggttg 1020 atccgtgcag aatatatggt agaaattctg agagggaaca cagccctaac ccttgagccg 1080 agtcggttct actgtcggag ccctgcctat cccggtctgc cggcgacttg gagggctaac 1140 aagccctact attgtacagt aaggcatggc gtttctgtag attgcttaag atacgggtct 1200 acaagagtgc catchgcatg gcaagggtca atccactctg caatctacat ggcacaggtc 1260 1271 gaagaaccca a

<210> 2766 <211> 1532 <212> DNA <213> Aspergillus nidulans

2766

<400>

aatgggaagt ctgttggcga ccgtagcgaa ccacccactt gggatcccag tggttggctg 60 tgaaggtgtc gtaggcgtgg gggaggtcga gtctgccatg acgtaagaag cagtgtttgt atatgaggag cggtttgggg gagttgggca cgagggctgt cggggagata gtacattttt ctatctcaag agcgctttcc attgtgagaa tgtttgaagg atggtggatt gagttgagga 240 ttcttgataa cggtgattgg aaagcaagtt tgtggaagag accgttctag gttcggatgg 300 tccattgcgg atctccaact catgcggggt catgactcat gcagccatgg aatctgaaag 360 cattctgttt attggctaat tggaaatgca atatatagcg ggaagatagg atcgggcagg 420 agatggatat agggctaggg ctagggcatg acatggacat aggtaaaggc tcccactcat 480 tcaccggtct atcgtatgca tggttgttag tgattccctc tgcaaatata tccttgtcta 540 tagttcaagt gtcgaacctg acgagttggt tcttcttcag cgggagacgc tgggtctaga 600 agtaaattgg aagcagatcg gttgtatgga atcatggtag aaggctacct taaatgacta taaagttgcg gccaaaggaa accgtgtttt aatgtcctag ggtcatttag gcttaggcag 720 tctaatacga ctaacaaagc aatccaagtc ctcaaagccc aattggagtt atatcacccc 780 aaatatacca tgcaagataa gtacggcctc accatacgta cactttcctc gcgcatcaga aggteettge cagttggage teggeettet cageegggee aagegatgte aatetatgtt gatccaaaac ggtcagaggg gggcgggctc ggggcattct tgatagtttc ggggcttttc aacgccaaac ggttcgctta aagaaggtct ttgcatcgaa tctggggttt gccagtatat 1020 atttttgatt ctagccgtcc aactccggac tttttcttgg gtctcatggt ttggctccca 1080 aacggcctca aacgtaggag cttgtcatgg gagggttgca ctgtcctatg tacttgtgcc 1140 ctggttgcaa tttgtagtta gtcattatca gaccctgtag gagtcgccgt gggccatggc 1200 ttccgttgtg agacgctaag cagcaatcat tgctggttcc ttgcaatatt ggccgcaata 1260 cattgcccat tgcgatggtt tgacacatga ctaggacctt aacttacgag atacacatta 1320 aagagaaggc agcagccagg atgaaggtga ctctgcctga gatacaggga aacaaagctt 1380 ctccgctgcc ttgcctttta ttcagtgtaa attgtcaatc cattaccaga aatgcaaggc 1440 ctgaccaagt ggatcggctg atgatagtca cattaacgat acgttcatgg cagacaccct 1500 1532 gaacaagaag aatatcatag gattcaaaaa gc 2767 <210> 1476 <211> DNA <212> <213> Aspergillus nidulans <400> 2767 60 cacaagccga gaagctttgt caaatcctga tacttttcga gctcatttgt gattcgtgca attgcatcgt agtacttgtc ctgtttggtc aactgcgcca aacgcgtgaa ctcgagagag agagagccaa gctcggcgag aacagcctta aagtcccccc ggcgaaactc tgaagcatac 240 tctgggctcc atttataata gagggttggc atccggttcg gtgtgtcgaa ggcgtccatc aagacatccg caagctcaac agacttttcc aaaagtatat cgtatttgtg tcccgaaata 300 tcataggccc cgagcatccc gcctaggtag cgaatagtgg tttcaaagac cggaatctct 360 ttcttggtgc tggtggtaaa atcgattttc ttgacgtagt cgactgccat ggagaactcc 420 tetttgagat ccatgateca cagggtatec aaggegtega caagggtege geeceageea 480 ttgaatgtgt ccttgaaacc accgcgcaga ggtctaacct catcatgacc catggcagag 540 atcttgtaac cgttccacgc atgtaagaac gccgacttga tagtgtcaag ttgttgcagc 600 cgctgcatct tgtccgagga cgactcgtcc ttgaacttag cttgcagttg ggggagttcc 660 tttgattgcc cggttggcag cttgatcaaa gcctccggac tgactggatg ccgttcgggc 720 atcggcttcc agtgagaaat tgggacaata tcctcatcat cttcatgttt attttgggtc 780 tgcgcacccg tctgaagtct ggcggcatca aattcaggct cctgagatgg gacattgctc ggggtgtcca ggcgttcttt tgacggagtt gggctgtcat ctgaatctgt gtaaagtggt 900 ggtcgttggt attcttctgg ctctaccaac gcaggcggag gagccccact gccggtcgca ctattgtcgt tttcgtatgg atctttgagg ttctggtcgg ggaaaggggg attatggtga 1020 tcgacgggcg gcggaggtac ctgcaagatt gcaggctgat cgtaactgcg agagcggcta 1080 aagtggaata tgaggaggac aaatataacg gcaaacacca gcgagatgcg agatcgtcgt 1140 gcacgaaaca tggccggcga cttccctgta ttggaggcgt agggaggagc ctaataatca 1200 gcagtaggag aggtaggacc gtggtcaaac gtaggcaacg agagtgaagg cgccgcagcg 1260

ctagaaagaa	agaacgtcga	aggacagatc	actcgcagaa	tgcagagaat	gatagtaatg	1320
				cctaaggctg		
aggtcgcgca	ggttaacgag	ttgcggtaag	gacaggatgc	agagggctga	agttctgggg	1440
aaattcagct	aaagggttga	tcaaagacgc	agagcc			1476
<210> <211> <212> <213> <400>	2768 844 DNA Aspergillu 2768	s nidulans				
					250000000000000000000000000000000000000	60
				aatggccatc		
aaatattatc	acaaacattt	atttgacatc	gaaacatgca	aaagaaccgg	cttattgaaa	120
ccgtggggta	aagcctggct	tccatttacg	ctagagacag	caggctggac	agcatcggct	180
acaagcatcc	gatcacgttc	aaccaacttg	cctggccaac	taggatccag	attcagcatg	240
catactagtg	aaccaaatga	actgtattct	cttatatact	attactgtaa	acattccatg	300
tactacagtc	gaaggttatc	tgcgtctgct	atgcaacccc	ggcctccggc	ctcaccggcc	360
cccagatata	catcgacgca	gcaccctcac	tcttctccct	ccctgtctca	ttatcctcgt	420
tcaccaggtc	accatcagca	taatgttcaa	tcgcaaaccc	gctcgggtcc	ttccagtagt	480
caaagatctg	cgagccgagg	atatgccggc	ctacgcccca	gatgggcgtc	cacttcttgc	540
tgagcaggta	ctegtggeed	agtagctggg	tgtcaaaatc	ctccacctcg	aacgagcagt	600
ggtgcatttt	ttgcttttca	ttgaaatccg	gtggcgcgcg	tgaaaggaag	acggtgtggt	660
ggtcgacgta	ctccttgccg	tgatcgagat	gcatgaaggt	gagggcgtca	gtctgcgcgc	720
ctgtcgcago	attctcttcg	, tagagaacat	cagagggaac	aaagttgaag	gtctgcgtgt	780
agaaggccac	gtcttcatcg	g aacaaaactg	tcacgtaccc	aacgtgaccg	agtttgtgaa	840
tcat						844
<210> <211> <212> <213> <400>	2769 4046 DNA Aspergillu 2769	ıs nidulans				
ヘモリリン	4107					

ttcgaatctc tcttgtgatc tcattgagct tttgcagggt cacaagcacg ccgctggagt 60 tgggcgcgct accaccggag agtgtaccag acgggtcata gacatcaccg tcaagagtaa cgctcttgat acgaacagaa ggatcaaagg tcacccgctt cgctgtctca gcatcgttgg 180 caattaaagt gttgccgaaa acgtaattca tggctgcagt aatttcttca tcatattcaa 240 300 tgagcgacaa agccaagtcg acttttcctg gagcgaggtt ttgcgcagcc ccaatcttct ctacagacgc tcggaaggca gaaattttgt tcagaggaat aatggtcaca cgcttgcgga gctttccctt ttgaagaagc tgcgtaccag tatcggaaga gtcaacaacg acattataca 420 ggcgaccgcc agcgcagatt tccagagctg tagcagcctg gagcttctct ttgtccacag 480 tgaaaagctg ggctacaaga cccttgacct tggatcggtc aaagttcggg tagggatcag 540 agtagttgaa ttcgatattg gcaacctttc tctgaagacc gtcagctctc tggcgcaatt 600 cacggatttc tttctggagc ccgctctgtt cttgatatag ctgctcctcg cgcccaggct 660 caaaacctaa cttcgagagc tcatattcca atttcttggc ctgagacttg aggccttcga gttcttttag aagccctgaa ttctgctcct tagccttctt ggctcgcggt tcttcctcct 780 tgatcctctt ttccaagtgc gcaatcttga gcttcgcctg ttcttgttct gtagcggcgt 840 tgctcgcacg gttccgggcg tcctgtaatt gaccctgata tccgctttct tggccttctt 900 tegaagegae aceggtetge aaagtetgga geaacteete ettetgtteg aetteggetg tttgtgcatc aagttccgct ttcgccgcat catattctgc ctgcagttta tcatatatct 1020 tetttttete ettgagtgat gtttegaggt eetteactga ettetggage tetttgetet 1080 tctccttctc ttcagcgata ctcgcctttt tgaggtcaaa aacagtcgtc aaacggacta 1140 gctcatgaga atgagccttg acctcatcct caagggcctg aaattttccc cctttgcgta 1200 geteettgte eegaacegee ttgaceeget ttacatette ttecatgtgt getatetege 1260 tettgagett egeegtgtta tettecagtg eetggatett tegettettt ttetegeatt 1320 cctcgccaga agcacggagt cggtcgccgc tcctaagata gtcatgagca accacaaggc 1380 gggtcaatcg ctccaaatca ttctgtgtct gctggaaatc aaggaaagct cgcttctcag 1440 ccctcagttt ttcgagtttc ggctcaattt cctcctttaa taaaccttca atttcctgta 1500 atttcaggtc ctttttagcc atcgtcttcg ccgccttttc ccgcctatcc tcaaacattc 1560 ttgttccggc cgcctcctca atcatcgaca ggatttcccc cgctttcata ttgagcacct 1620 tcgtaatccg tccctgcata atcaaaaagt ttggattgtt gatatttaac tgcacgctct 1680 ggaataaatt ttgtacggtc tgttgttggg cacggtgccc gttaatgagg tatttgctag 1740 tecegeegag aacaatttgt egegtaaegg agatggtege atattetteg aaccegateg 1800 gtgatttcgc ggtgtcccta ttgtcaaaaa cgattgtcac gctcgctttg gtaacgccgg 1860 cctgaccgcg cttgtagatg agatcctgga ggttttgcgc tcgaactgtg ctcatatttg 1920 tgatcccgag cacgaaacag atggcgtcga gaatgttgga tttaccactg ccgtttaggc 1980 cagtgattga gttgaacgat tcatccctag gaatcgaagt taacatccac ttatacacgg 2040 tegeaaatte tgegatetgt agatgacaae gaaagteege cacataceat eetgaaatea 2100 ctgtacgcac agcgtacgat ttgaagccct gcgaccggat tagtgatcga accttcgatg 2160 gcactgaatg gtatgttatg gaaaatgcct cacgtcaatg attatttctg tgatcctcat 2220 ggttccgaaa gcagacgggg cccgtcaact tgagaatccg cagcatgagg gagcagcccc 2280 gagttgtttt gcgggagatg ttttggcggc gggatcatgt gttgatgcat tcccgcttgc 2340 agtttagcgc tgctgagata acggcccagc tgaggggtat cacgtgcgta ttcccaatac 2400 ccttcctctg ttatattcag aaagtactcc gtatacccac ctctttaatg acgcatattt 2460 tggacctgcg ttttgacttg ggaggacttg gggctatatt cacttatttt ctcaggaaat 2520 ggtggcctaa gtggtcgtag ctgctatgcc catatcttca tccgtcagcc ttgtatagtc 2580 atactacaca gggcatacgg agtacagaaa gcatageeet egaetgaeat ttageetcaa 2640 acatgcttcg ttttcattac tactcgcgcc tcacatccaa ccgacttagg tggttatagc 2700 tacctcactg aggctttggc ctgtgacttt attgaataat ggactcctga acaacaacaa 2760 cagcgagaat tctccgaaac gtgggatcct actattgcct gtctcaccaa tggactgaat 2820 caccacagta ctttactaca tcaacggcct tcgagaatga catacaaacc ctaaggattc 2880 ccccagctct catatctttc agatcttggt catctcttca aagtacggtc actccaagtt 2940 cetttagtat acatteeege tgecaeegat atteatacea geaegaeeat aacaaaegae 3000 attcctgacg ctcttgaaaa aagaaattca ctagtcatgc aagcttgcgg agcgtcaccg 3060 ggcctgaaaa atggtattcc gtatagtaag ctttggctgg ctactgcctt gctcttctac 3120 cttccttcga atatgactgc tgtattgcca atactattaa aaacagccag cagtcggaat 3180 attetegege caaactagtg agteegatgg eggetetege eggaegagea tatgattgaa 3240 atattacett ggatcagaaa atggtecaac ettegaagta gacatgggge agteattgga 3300 eegttgtagt tetegeeett gtgtaaacgg tegageatgg tactegegte eacttetetg 3360 aagggecaaa eeceggeaga eacgteteac tagetteaga aagtagtgee ggtttggeag 3420 aatgtggaact tatteagttg gaccaagget egeteacggt gttgeacgag ggtettgaaa 3480 aactetggga aaggeggatg etaaataggg gtgtgtttgg teaggeagtg aggegtetgg 3540 aaaatgaaaa geeegeacge gtetatgte ataatetaga egeettaatt agataactag 3600 teggagettg eeaateeget ggeeagttte gettaaggge tgeaaaatgg tetagttee 3660 teagetteet acceattgat gtgeacacgt atattttgga agaactgagt eagttaggee 3720 eettatggea teeactgat agtageacag ettagtgea eeagteeta geaateeatt 3780 taattggtet eaatagatae eetattate eeaateggea eeggatagga aacgaeaga 3840 aaageetgtt teageaagea tggtacacet taceeggata accataaggg aactgeage 3900 eaggaagtgg accaaacgee gttgetgate aetgtacegt eetaegtaa eteetaeca 3960 eeggaacteag gegattatga eecatgetge ggaaatgega eteeggacaa tggteegtt 4020 ggateeatte ggttateeag gteete

<210> 2770 <211> 923 <212> DNA

<213> Aspergillus nidulans

<400> 2770

60 tactgaacat ttccgcagtc cgtgcatggt ttaccagggg tattattatg agctgatctt ttttcatcgc tattggctaa tgatttattc ctcaccctcc atgatctcct cctcggcgct 120 gcaaaaacgt tagattgggt acacgacaaa agcgatatcg aattacttac tactcctcct 180 cgccttcgga gatggaggcg tcctggtact gctggtactc ggagacgaga tcgttcatgt 240 tgctctcagc ctcagtgaac tccatctcgt ccataccctc accagtgtac caatgcaaga 300 aageettgeg aeggaacata geagtgaact ggteaeegae aegettgaag ageteetgga 360 tggaagtaga gtttccaatg aaggtggaag acatcttgag gccgcgggga ggaatggagc 420 aaagagcggt ctggatgttg ttgggaatcc actcgacgaa gtaggactgg ttcttgctct 480 ggatgttgcg catctggtcc tcaacctcct tcatggagac ctttccacgg ctgaaaagat 540

gttagtcaga	gtaataaatg	taaagaagga	taatgacata	caagatagcg	gtgcaggtga	600
ggtagcggcc	gttgcggaag	tcagaggctg	ccatcatgtt	cttggggtcg	aacatttgtg	660
gggtaactcg	ggaacgaacc	accccgaaag	agaagccccc	agcttgtcaa	agagccaacc	720
caccttgaga	attgcaacaa	ggaagggacc	atgtgcagca	gttggcagta	aagtaattta	780
ccggaattaa	gcaaggtccc	cgaatacggc	ggacaggggt	aacaccatga	ggtgaggggt	840
ggggctctat	ttttaggtta	tcaacaacca	cccctcggaa	ttcacttttt	acaaaataat	900
actttccttt	ttctaggggt	tgg				923
<210> <211> <212> <213>	2771 525 DNA Aspergillus	s nidulans				
	tttccgcaga	agtttccgaa	cgaatgaatc	cgggtcttga	acgaactttt	60
			-	cggctgatgt		120
				gccccgcttc		180
cggcgaagag	gtattcgcgg	aggatactga	tggttcccga	acgagggagg	tcaagtgaat	240
cgaatgtgat	gataattggt	tggcaagtac	tgtatttcac	tccatatgac	cggtttttct	300
tgggcttgcg	ċgacttctta	ggcgtcccac	ttgcttccga	gtctttctga	gtttcgggct	360
gcggttggct	tgaaggggca	gccaacttcg	cacgggctgc	atctggataa	acatcgcgtt	420
ctgaccattc	attttcgcct	ggcttagacg	cctcttcttg	tggaacttgc	gtgtcgataa	480
ggctcataga	agctaacgac	tgcctagctg	tttcatcttt	gatag		525
<210> <211> <212> <213>	2772 1256 DNA Aspergillus unsure at a	s nidulans all n locat:	ions			
<400>	2772					
gggcccggcc	cgaggaggag	gaggatgatg	gtaagactgt	tgggcggggt	ggagatattg	60
cgacaaagaa	ggtcgatgcg	aactacttcg	gttatgggct	tgatgaggag	gatgggactc	120

tgctcgctta tgagatgcag agggagaaag aggccgtgga gaagttacgg aaggagggcg 240 aggacgagga ggatgttgag gatggatggg aaccgttgcc tggggacgct ggggatggca 300 tcgagtggcg actgccaacg ctggaggagg tgcaagagga gcttgtggat aggaggagaa qqcqqctttt qqaqaaqatt tcataaqqtt ctcqtttqca tcttqtctct aggcttggga 360 420 tttcgtttgt tttacggcgt aactcggtgc atcttgaatt tacacttgtt gactaaggct gtacggcttt cgttggcttc atcttatact gtatatgctg ctagcggggt atattttatg 480 tacatagatg ctatttttgt ctaactgagg ggtctgttgc ctgctgtcgc ctcgctgatt 540 600 tototgottt cagggottgc gttatactga tactggottt gtcctcgtcg cttgactccc gacgacgtcg ctcttcctgc aggtcgtcta atatgaacct accgagcccg ccaccgcgcc 660 acttttggat gaaatgtaaa gcagcaaggt ccatattcgg tataccaccc ttggcaagca 720 780 aacccgtact gcgggcaaaa ctatccaaaa gcgggtgaac ctcattcgtc ggtagggacc agcgctgata tacagtggga tcgtgcaggt taatatggta gagcaagtag tccgctaatg 840 tgaccggaga gattaccgaa tctttaacgc agccgcaaag ggccagcttc aacatattct 900 ccgcgtcagg cacatagggc ataaacacgc cgggtgtatc cagcacataa acatgggcgc cattgtctcg ctctatgatt tttacaggcg ttccgatttt ccgcgtgatg cccggttggt 1020 ccccgtgtg cacggctttc gcctttccca cgccgcgatt gcgcaggtta ttgattaatg 1080 ttgacttccc gacgttcggc atcccgacaa ccataacgcg acagccaacg agcctgtcgg 1140 qcccttqqqc qtcttcqcqc agatgcqtta ggatcqtgtt cacatcccgg cggttatttg 1200 ttcgagactt tgatncgggg tctaaatgat gtggactgac gaagaaaacg ggtgta 1256

<210> 2773

<211> 1729

<212> DNA

<213> Aspergillus nidulans

<400> 2773

caggaactgg ggtgaagagt ctcaggcata tttgcagcta tatgtttatt atttctcgcg 60
aaaccatgct cactaaactt aggggctaat agaagctctt atgcattcaa tcctgaagct 120
agcactttgg atatagtgta cagaaccaag aagtaccaag agaaattgtt agttgggtaa 180
actggtgcgc actgtagcag ctggaatcga ggcttgatta ttccaaagga tcttgcatca 240

atttcatcca agtcagctga accctggcag ccaccctcat agatagcaga tatcctataa 300 cgcccgcaaa agctagctga ttcaaattct gaaatgccta gagatagata ctggttagat 360 taaaatcaaq aaagcacgta taatgatgcg ctgcatgaat tagcagtaca ctataatctt 420 480 atttggatag tacttgagaa agtacaaaac ccagttctta ccggctcttc tagttatccc 540 acaggcatag ttgctacgct ttctttatga ggtataaagg atctgcttgc tctgtctgtt tattaggctt gtgagtcttt ctcatggtat ctgttaagta attataggta ctcatattgc 600 tgcttcttta tgccctgggt agccttatgt ttttaagcaa gtatcgctgt ttgatactag 660 actgcctcac tttctaatgc aaattaagct gtttacctag cttaaccgat tcaattgctg 720 780 ctagcacctc ctttttggtt ggtgtacaca agacggtcgt tacgtggtat ctttcgttag acggtcaagc acaaagcaac acaggatacc ggaaaacaat gtcaagaagg ttgcaaactg acatqcqqct tcttatctcq ctctcatcqc cqtcagtagc ttggaaacct gatctggggg 900 atgaggcgaa ttgggaactt agggcagtct tggaattgcc accggcgttc cccaacgtgc 960 agecteteca aagggaeggg agtatgegea gaatggeeet teccategga teggaaceag 1020 cgctccgtac ttggttatgg tattctgttt ccaggatcgt ctgcccactg ctgttcaccg 1140 ggtagcctga gccgcggccc agctggagca tccagtcttc agccctgctg cgaccatcgc 1200 catcoggggc tottgacacc ggcgccagat actocatgac tacagagacc gcgggtcgtc 1260 agttgcggct cgctctacgt gcacctagcg cacgttgaat gcaacgcttt ggtggcaaag 1320 ggggcaattg gcggcctgaa cgccatcagg accctattca gggactagca agatttagtc 1380 tageegeaca gaaattteea eeagateaca cateecacae teegegegte tgtactettg 1440 ggccgttgat gtttctctcc cctctctagt atgccgacct cgacgtcgac aatcggctgg 1500 actttggcca acgtgggccc agcgcccacc acgtaccctg ccgctccatc atgcaccgct 1560 gccagctccc tgatcttgga ttggcagaac ttgcgagagt cacaatgggg agtcagctgc 1620 ggagtccctg acgactgctg gccgcaaccg acagactcgg ccttgaaaga tgagatcaag 1680 actaaccccc tcatcgtccc cttctactcg cctggggtgg catgtccga 1729

<210> 2774 <211> 1226 <212> DNA

\213 >	Aspergriius	5 IIIdulalis				
<400>	2774					
gaatgacgcc	aagagctata	aagaccgttc	gtgctccatc	atcctccatc	cagtccacaa	60
cgaacagcga	gaagaccagg	ccgtggaaaa	catctgcacc	aaagttgagt	taagctgatc	120
gagaatgagt	aatggttggg	aaggagactc	actcttgctc	cagttcaggg	ttaccaaggc	180
ttctccagca	tactgccggt	agctatcgac	acagaatgtg	atggacgtcg	tactccctaa	240
gcagcatcca	aacgacacca	ggccgaaaaa	gatggtcggg	acaatccaag	cgtctttttc	300
ttgggcgctc	cagccgaatc	ccataagccc	tatggtcgtc	gatagggcga	tggggatagc	360
cattataagg	cggaactccg	gctcgtaaac	tccaccgttg	cgtcgtgtca	tataccggac	420
aatgatatct	gaaatcttac	ctgccaccgc	cgtgcctagt	aagccgccca	cgaacggaga	480
gatatagacc	aggccagtct	gaagagcggt	gaagttatag	gtctccctat	cttggtagat	540
gtgggaaacg	acctctgaca	agacgatgag	ccatcccacc	gacagcgcgt	acacggcggt	600
cgaccacaat	actgccggat	acgcgaacaa	tatgaacgga	cggatagcaa	cccgtaacca	660
acgatcctgc	gaaatccttc	cgttccatgg	tcgcaggtag	taggtgtacg	ggatttttgt	720
cttgtcacga	agtcgattag	tatactgaac	gggcaagctt	aaccctgcag	ccggatccgc	780
tgactcgctt	cgcgcaggtg	acggcgacgc	aaatcgtcca	gcttctagat	cagaagagcg	840
agtcgcaccg	ccgttggtta	gcggcggaag	actcggcttc	tccgttgatt	ccggatcaga	900
aggctccaca	gacgggtctg	ccacttggct	ttggctctgc	accagagaca	ccgggtccga	960
teegtaggge	aactcctgct	tctcctgctc	taactcctca	tcttcgggct	cgttttcgat	1020
aaagccaaca	tgacccttct	tggaccgctt	ttgagaaacg	gcatctggag	catcctccga	1080
gatgtcacga	ggatgagcat	tggtggtgcg	gcccctgtga	agtccatgcg	acaccatgtc	1140
cgacacgctc	cggtagaaat	cagggcgttt	gcggtgtcga	cggggccgtg	gggtacgatc	1200
ccagaaggtt	tccggcagga	agaaaa				1226
<210> <211> <212> <213> <400>	2775 3869 DNA Aspergillus	s nidulans				
<4UU>	4115					

Aspergillus nidulans

<213>

gggtaacagt ctgtttgtct gatagacatg gaatttccta gctacatctc agcgcctcga 60 agaggagtgt ttttgactcc gtcaggctgt attgtatcta gccttgcagc gtaagccagc 120 tgaaagacga ccttggccac cagatacage gacgtctgcc tctgtccgaa gaagaccatt 180 qttcctatcq tcctctccat cgcgtccagt ttcctttttc agaggccttt aagaagacaa 240 actgcagaac agcaagttgt gagtggccaa cctacccata cggtcaaaga tggcatttct 300 gtaccaatat caactaggtt ttgaccctga ttgaataaaa atctctggta aaagacattg 360 420 ccggggcaqa cggatccggg aaacagcgga agtttcaaat ctgtttaaga ttccctagca 480 tttgtcctat catggggttg agcgagatac ctgaagtccg tgtaagatga tgatggcaca 540 tttcgtgaag tctgtgcaat acctaactag ctacacacat acatcgctgt tcttgttctg cacctaacca gggtcctacc cgagaccact acttgtcatg actctaccat ttttccaaga 600 gtcgtctgtg tatcagatac gtaaggagac cgcccgattg gcctggattt tatccggggg 660 gtgtacccgt ttcacaaccc aacctacatt ccacaactca caggaacctc aaatcgaata 720 cgtcaagaac cgatccagct ccggcgtcca attacgctgc ggatcatcaa gtgccaaggc 780 aatcccatgt gctgcatcag ggagaatcag cgcctggtag ggccgatcct tctccgtaag 840 agcattgata aacctcagcg cattctccac aggcactgtt gcgtcattcg ccgagtggta gatgaaaaaa ggcggtgtct tgtccgttac cctagtctct gcagacatct tcttcaccaa 960 cttctctggc gggttgtcgc ctagcagatt tgtcggcgaa ccattgtgag taattgctgc 1020 atccattgag ataacagggt acgttaaatg ccgaaatcaa gatcagcttc tgggtttgtc 1080 acagtgaccg ctgcgaggtg gcctccagcc gagtaacccc agataccgag tttgtcaacc 1140 ttgactcgct tctggctgcg tatgtagcgg acagcgccga gggcttcttc tagtggtact 1200 gggtaaagtg gtgttgccgc tgtttcggcc gtagagtagt ctagcaccca ggcatcgtag 1260 ccctttgcgt tgaggtaagt ggtcgagttg gtgccctctc ggtcgagtga gacgtacgag 1320 tagccaccgc cggggaggac gagcacggcg acaccgaggc cqttqttctc tqqtqctqqa 1380 tagtaggcta actttgatgt gttgaagctg cggcttctta gagaccgtgt atgaaataag 1440 aggagcaggg acgaacctgg ggctaccatg cggacggcca gtcaccatgg tgaaaagaag 1500 agaagcggca actgcaagtc tcattgtgtg tcggtggtct tatagggcta aattgataat 1560 ttcagaacag atgtgaagag cactacctca atatatagtc atcacccccg cattctgcag 1620

ggtctctttt gcggggaaat agacaagcgc cggcataatt caggccgagc cctccatttc 1680 caeggtgact geoegeteag ttgccgtcat teeggetaaa teatgtteaa tttacegtgt 1740 tttgacagtg ctccgtacct aaaaactacc tgataaggac tctgacgtaa tggtattaga 1800 gtagagttcq aaccaggttg gagctaagct ctttcggcgg aaatttcagc ggagcagccc 1860 attcaagcag caatggggtc accaaggcac caatcagtaa atattggttg tttttcctgg 1920 ctttcgaaga acatactttg ggtcttggct gtgctgcagc ccggctgagc catatgaggg 1980 atatgctgta caactaattc gcggatgatg cattcaaggc ccctcaaaaa tttgtcggtg 2040 ggcagatgca cttgtcctaa actttgtctc tgacaggtct tattctaatg gtcattcagt 2100 attgacattc agtagtgata ttcatctttg gacaatagtc cagccttacc ggcaggcgct 2160 gggcagcagc aggctagcca taagagccaa cgcaaaaggc ctatcatcag ccctaagacc 2220 tttgttttga cttgagaatc gatgaatctc acctccgcac tgcgacttct gacatggcac 2280 agatcccggt tcgggttgat tgaaaggttg gtagcgggga taatgcgcgg atcactggga 2340 cagtatatat ttcaagcaac gggactttaa agatagtaaa agattgcggt atcccagatc 2400 aggtagatta cagcctagta aattattaga cgaaataggg caccatgaat acaagtctat 2460 tgatcaataa gcttgagcca atatttgtgc agagtaccta tgcgcagtgc ccaaaccagc 2520 gcctacttcc agctgtgata tcgcagtgag tggtacagca agcttgcatt tagatatata 2580 ttaaaaaaaa ttacagactc ccaacaaatg gccggttggt gtagttggtt atcacgtatc 2640 gttaacaccg ataaggtcgc cggatcgagc ccggcactgg tcattttttt tggtcccttc 2700 aataccaccg caaatgctcg ttaacgcctt tcgccgatac attgccttca ggacgaccgc 2760 ccatgttcga cccaageget ttccccgcaa gtccactcgt atatggccaa cttgaccaag 2820 cactecetty etteaacaty ttetyteegt accatggtae gteaagttet caagttgggg 2880 ctaccggtcg accgccttct agttacattc acgtgatacc atgccagatt aggactagct 2940 cccatgcttg atcggaagaa aaaaaaagat cttgagctcc gcaagaattc tcaagccaaa 3000 cctcaaccta tctctcacat caacggccgt gatccgcagt cgtgagccac taaatcttta 3060 aataatcaac catggccgat gacaccaacg ccggtaagtc acctccattt gacgctggag 3120 tcaatcctat ggatagagat ccggccgcac agcagaaact gacaattcta cagcctggcc 3180 categorgat gaggetetet etcageaget cetegacete gttcagtetg ceacceacta 3240 ccgtcagetg aagaagggtg ctaacgagta cgtactccgc tcatcctgcc ccgcgttcca 3300
aagtcttgaa catcactaac gatctttct tgtttcagga ccaccaaaac cctcaaccgc 3360
ggtacttcgg agctcgttat cctcgctgcc gacaccaccc ccctccccat catcctgcac 3420
ctgccgctcc tctgtgagga caagaacgta ccctacgtct acgtgcccag caagcttgcc 3480
ctgggtcgtg cgaccggtgt ttcccgcccc gttattgcgg ctagcatcac caccaacgag 3540
gccagtgatc tgatgccca gatccgccc atcaaggtgc aggttgagcg cttgatgatc 3600
tagatgttat ttgctattga tgggttctcc gggctagagt gggctcctga gatctgaagg 3660
gcatggagcg acatgggaga tctggtgatg aatgtctgat ccgcgttatg ctctcctctg 3720
cttttgcctc ctgggccttt tgttaggttg tgggagtagc tagagtcagg ctgcttagtg 3780
aatcaaggac ttggatgta ccaacaacat ggtcggtgtc gcagtgcggt atcgttcact 3840
gtcctcggga agttctctc cactaaatc 3869

<210> 2776 <211> 954 <212> DNA

<213> Aspergillus nidulans

<400> 2776

gtcaacaaga agctcgatgt tccgctgaac tcgatgatgc tgggtatggt cattgaactc 60 cttatcggtt tgatctactt tggctcatcg gccgcctaca acgcccttct ctggcgtcgg tgtcattctt ctcactctca gctatgcctg cccgatcgcg gtctcgctgc tcctccgtcg 180 ccgcgaggat atcaagcacg gtagcttcga tctcggagcg ctagggttat tctgtaatat 240 tgtagctcta ggtacgttca ccccgccccg ttaactcctc atttattgat ttcatgcagc 300 atggacegtt etegteatee ceetetteaa ttteeceaqe tacatgageg ttactettga 360 aactatgaac tacgcctgcg tcgtgttcgt tggcatcatc gtcatctctg ccgtctggta 420 480 ctggatctgg ggatacaaga actacgctgg tccgcctacc gatgccattg atccggaggc 540 tgatcatccc gctgggagta gccctgtgca agtagcaaag gatatccaac gctaggtctg agttagccgc ttctgcagat gaactgtgga cggtagtgat tgttcaatac gtgtaaataa 600 ctaacctaca tagatattat atgaatatat ccgtaaacaa gaagcaatca gtccaattgg 660 atataccete gagageagte tagtateget gttetgttee agecaattee cetttegtat 720

caagaagaag	caattaaatg	gggtagaaac	gatggctcgt	tggatttcaa	ccccaactat	780
acgtacgcac	actcgaattt	ctcaatcatt	tgtagttgac	ccttcactcg	cccgcattat	840
caaaagttcg	cctgcttgac	tgatgaatgt	ttgttctccg	taacaagctc	agatcacgaa	900
aatcatgaat	gctacggctt	gaaaacatta	ttcctgcact	agagagcata	gttt	954
<210> <211> <212> <213>	2777 853 DNA Aspergillus	s nidulans				
		agaaatgtac	caaccagcca	caatcaacta	taaaaaaaa	60
			gacgttcctc			120
			gccatagtcc			180
tctctggaac	aggetgetgt	taccgagete	tccacaaatc	cacgeggeea	tgagaaccag	240
cagagctacc	atgatactca	gatacgcgga	cgcctccccg	gcgaatcccc	actgectegt	300
gaggacctgg	atccctttct	ggaggtagat	gaacgcaacg	tagaatccaa	agatgtcgca	360
cgagaagcga	gtcacgtagg	tcagggcgtt	gcaggcattc	attatagcga	gtatccagtg	420
cataataagc	gaccatctga	atatatcagt	gcacgagctt	gacgataata	aaggaggtaa	480
cttacatccc	aatccagcac	atgaactcca	tgtacggagt	tccacgaggc	gcgataatgt	540
catagacagt	ataattgaag	acagtaattg	gacctaattg	tattagcgac	gatccacata	600
attacgtcta	gtagactcac	cagtaacccc	aacaatgacc	aaaggttgag	ccgcaaaaag	660
cgaaaagaca	aaggagccca	agactgaggc	gaggagaacc	tcattgacac	cataactctg	720
atgcgtcttc	tcaaacatat	caagtgaaaa	cgccagggcc	ggcaggatac	tgtaccaatc	780
agcacttttc	ttgtccagga	tgggcgatgg	gcaagtaacg	ggccatactg	gcaaaataca	840
tatagacagt	aca					853
<210> <211> <212> <213>	2778 1052 DNA Aspergillus	s nidulans				
<400>	2778					

60 tctaaqtata caaqtqaaqt tcttcatcqa tqcctqacat ccatcatcat attgaggaat caagetetta ageeteagg caeteaettt geeggeeacg atgeeteete egaacagaat 120 gaacgtctgg atcgagctgg gagaacatca gcaactaatg gaataggtgc gcaccgaaac 180 acttacgaga tecaagaatt etggaaagee gagtaatget tgagttggtg tteetgatag 240 300 taqtcttqaa acacaccaaa cgctatatag agagtcagtc accatcggca accgaatagc 360 ccacactcta ctcaccattc gcccatccaa acatagagaa aaagatacac catcccccga 420 caacattcaa ccaaqccttt qtaqctccat cqqqaaaqtt qqatqcatca ttqatttqtt tctcqctqqq tqactcgtaa tcaatactqq taacctccqc cqqctcqtca acacttctct 480 qttcatccga ttcgccggtc gattcgagaa agctcataat tgaggaagat gaatccacaa 540 gaacctgtct aagagaagta aaaacccaga agggctttgc ctagacgaag gcgttgcctt 600 taactctgcc tqtaacqcac qccatgtatc tctqcqaqaa gagccgggac ccaatactag 660 catggtttga ttgctttttc tgattttgat ttctcagcca ttgttcactg cagtccattt 720 gtcagccagt taatcaaaca tgtctgcgag ccggcgtaaa ttcctctggt acagtgggca 780 qccccttqtt tqtcattatc tagaaactaa acctgagcca gctagtatac agactgtcct 840 900 gaactacaaa aatatctgga tgacagcttt tgaaacacaa ttgaaagaga ataaccaatg agaatgacgc aaccaagcac aggtettete ttgeacegee aetetgtata eeettetgga ggcatgcagg tacaccacca aatcggatct cccaccaaag cagccctcag ttccactcta 1020 1052 gaaatctgct agaaacttgc taaaatctgc aa

<210> 2779

<211> 1277

<212> DNA

<213> Aspergillus nidulans

<400> 2779

cctatcaagc ccatacccat atacgaatcc agtaatcaat ccccaccaat attgcgccat 60
tctcatccct gatttgttt tacagatctc aaaagccacg atcctccatt ggcatcacag 120
tgctgtgtta ttccagagcc tcatgcgtaa acaagccatt tgcctcacct tggccggcct 180
ccaatccatt cacggctcat caacctccag tgtttaaaag catcagtaac agaatttaat 240
tgctctgcag cgctaaaggt cgcgaaaact tgtattgcct gatatcggcg cggtcatgtt 300

cgggggtagt gctctcagag gactgcgcca tctctgccct tgcagtagcg attatgcccc 420 gttagaacca ttttgggata gacggcaggt gaaagggtgc cagatagggg tacatacgtc gggtgggttc tggagtttgg cagcagatac aaagactgct tacagagcca ccgtacacag 480 540 ctatcgggaa ttgagaccag cctcatctga gcatgcgaga cagccccaga agaccagaaa cgaaatctat tagtcgggaa cggggcccat cccgcatatg tgtgcttgca acagaggcaa 600 660 caaaggctta cgctgcgtca tggggtatat ggactataaa ccgaacggta cttgcaaaag 720 780 atccaatccc tctatgcgca aggactccgt cctggctgtt cttgcgggac cgagctagat 840 cacgcctgct cgcatctaga agttgaaaca ggtgggcatg agaagagtta gatgaggtct 900 gtggtctgta ggataggtca tattaagagg tagagtcata gcagggctat taagtatgaa acagacgage ctagacctat gettgeacca caggattegg tatgaggtaa etetetagta 960 caacaacggc acgcgtacgt aatatatctt tctattttct tctacataac ctctattgca 1020 tcaagcatcg tcagagggac tataaataat tattttccta ggctggtagc tattttttt 1080 ctttggtatc tgttgagtct tgctggtatg gcaggatctg ccaccagttt agccgtccga 1140 tgttaacttc ttttctgttt ctatctgggc tgtaatagag tgctctctaa acttatcgcc 1200 agtcacggtc cactcgaaga tagtgaagat cgtgcaggac agggcattgg gcacatttta 1260 1277 gaagacgtta aggttgt

<210> 2780 <211> 930 <212> DNA

<213> Aspergillus nidulans

<400> 2780

gggcacaaga cagagtataa ttcacgtgcg ctgcctggag gttgactggg gtttggtacc 60
agtcgagacc ttgataacag cgcgcgtgag gaggcatcat acatagtacc cgccttgggc 120
ctgatcctcc actgaacgtc aacagcatga ctgatacacc tttttcccct tccggtggag 180
ctcctcgagc tcctcttacc accacatatt ccgcaccgag tatctcttct atccccgtc 240
gctcttctta cgcctctgtg ctttcaggaa ccgccgccct atcgccacag gctagcactc 300
ccttctcgca gttgaactcc acttcgtcct atcccccgc gttccacccc gaaggccgcc 360

cgtcgaggca ctcggccgcc gtggatgcag agatgcagac gaattctccc tggatgttac 420 ctccgcagga cacgettcct ccatactccc ggaagttcgc gagettcccg gettacgatc 480 ccttcttcca gaatctcagt aacttcgccg agacaccttc ctccttcacg ccttcttatc 540 teegeaacte ceggtacate tetegeeteg aagetgeteg tegegeeaaa eegggatete 600 aacgagatge tgeeteegte tegteeggee agggeaattt geeeeggata gegeetteat 660 accgcgggat gacgtatgat attatcgaca gggaacctgt cggcgacgac gatgaccata 720 ttatgccgct accatcccga tggagtgact cggacaaata cccaggacta gaacttctga 780 atgatggttt ggaaattcgg tacaatgggc cggttaacaa gcaggatcat gaagccgcct 840 ctgtccgagc ggatcaccct atgccaccgt attgaagtaa atattatttc gagatcacaa 900 tacattcgaa acctaaagag gggtgcgtct 930

<210> 2781 <211> 1769 <212> DNA

<213> Aspergillus nidulans

<400> 2781

aaaaaaaaag ggcacatgac agccggtcac cgttaacccc actgcgcggc atgagagatc 60 ccagttcgat ccagataaat aggccgcttt atgctagaat caqqccaact acccaqaggg 120 ccaacgcagc gcctgcgctc ccgacactgg cggcaatggc agacggcgta qaqaaqataq 180 cagtgccaat catacggtta gttctacaag tccattagga tgtgcttccc tagttccttt 240 ttgttagacg cttacattaa aaaggtcgtt gataacaggc ctaagtgacg gcgctggcgg 300 gagaacccgt catattcgtc ccgatcggta tccgggagct cgcgaggaag gaggaccgcg 360 tgttcgtggc tatcctcggc catcgggctg gaatctcgca atgaagactc catttcaata 420 aattttcatt atcacatagg tggaagatga gaccgtcgtg accgagtaga tgcaggtggc 480 taaggacaag gatggaggat ggagcaacgg tttgtcgtcg tcagtgttta ctgacagtcc 540 tagtcacgtg aatcatctgc caggaactgt acggagttgg aggcctcagg tgttcaggca 600 ggcaggactg cagccctagc agagaggcat gtgcttgcag caagtattga gcattcggac 660 gtctggctac actggcttaa taaacctttc accctctttt gagcaggcaa ttctcagtgg 720 tctcgcttga tgctgttgtg tcattcccac ttctactcgg cagcatgcta tgcgtggtgt 780

cgcggcagac atgtgctcta tttgttttgt atgggtgagt ggtcacgtca tgacatacca tcaatctata tggctctagt agtatcatat atggagctat aagtccaaca aatagagcaa 900 ggtataaagg aaactgtaag taatgcggat tgcaaccggt atctatgcaa atagggcccg 960 cgccgcgcgg ccaacagaac gaagccacac cgagactgaa cgcagcctgg actgccgtct 1020 tegetgtttg tettttagta agggettete atecaeetgt tgeggteegt egaeeaeege 1080 agatcgagcg gtgctgtctt gttccgtctg agcggagtca gtaggagttg gaatagactt 1140 gatageettt acagagegga agettteege tgeaettgae gtegaeteae ttaettegtg 1200 cacaggagat aggttggtgg gaatgtaaat gagcttggcg tcttccactg gctgcagtgt 1260 tacggcggcg gcatattgtg gcttgcccga ctctgggagc ctgatcgcgg cggcagcagg 1320 tgtcagggga atatttaggg agaggacttc ggccttttgt tcgtctggta gttggagttc 1380 agaggeteeg gtegatggga gagtettatg tteageagge teagaetgtt taggeetgte 1440 aatatteata gatttgtegg tetetaetaa egetggetga atageaaate etteggeegt 1500 ctcagcctcg gctgttgggg aattattgtg aataccggta tgattagtct tgagttgagg 1560 caaattgtag tetgeaacet tttgaggett tteaggatta aeggettgeg gtageteate 1620 aacaatcgct tggttgcctg atgcatcagg atcagaattc tctgttcgag acaggtcatc 1680 cctacgetet teaaatttgt catggegage gggeteegeg tteteggett egtagegaaa 1740 ccagcgatgc tcaagcccgg gatcgatcg 1769

<210> 2782 <211> 1381 <212> DNA

<213> Aspergillus nidulans

<400> 2782

tccacagtca ggcacaatta ctggcgtcct gatattgaac ctcaaggcaa ccatggagtt 60 gttacgactg tacatggaag cccgagcagc agtcaggaga accttaaccc caagcaaaat 120 tcgctttcag gggtcaatgt acaaaaatca ttcctagtga cgacaactaa cgagtcctag 180 attagaattt ataatggagc ggaatgatat tttcacaact tagaaattcg gaatcaatcc 240 ggtagacctg ggccgcttag gtagaattaa gaagtcctgt ggtggaattt ggataccttt 300 tggggggccga gtcagtagtc ttctggaatt caataaatga atatcctccc aaggttcttg 360

cctgctttga ggctctggga tgaaaacgaa ggtttgggct ctaaggcttg acagcctggc 420 gaaacaaaat teegtaatet tggeggeacg tggegetgae caateaacgg eggeageage 480 tccgcccagc ggcgaacctc ctccatcaaa tttatgcagt gaggtggctt cttcgtcgat 540 tcccatcttg tcgcgcggat tgcgggtttt tgagggcttg gagactaatg aacatcttct 600 cgtcattttt ccgtcgtttt ttctttctcg tttgaaattg atccccgtca ggcccagcgc 660 gctggccgtt cgatttccat tatgtgagta tctgccagct acagtgccgc gtcgtttcac 720 taacagagtc caaatctagg gcgagactcg tgaatgatcc tcagattaaa tattcctcgc 780 tgcataatcc catatctacg cagcttcaca cctacgtgtg gccgttcttg atcatctggc 840 ccaccttctt cgctttctac ctctcgcccg aacgttacga cacgtatatc caaggacagg 900 aatggacttt tgtgtattct ggaacaatca tcacgcttca gtcgcttctt tggttgatga 960 caaaatggaa tactaacatc cgatcgcaga taacgacaac taatgatcgg ctcactgatt 1020 ctgtaccatc ctattcatgg taaaatcgtt agacaacttt gcctaagact agatatcttc 1080 tctaaataaa qatacttaaa atatatcaaa aatcctacct taatttatta attacaacat 1140 ttttactact aataattaca gaaatatatt catgttttac atatcaacaa aatattacct 1260 cctatataaa aattaaaata ttaaataaaa aatataactc tctaacatta ttctattcaa 1320 actaacactt caatcacctt acactcatct tcctataata ttaatcatat aaactattaa 1380 С 1381

<210> 2783 <211> 4897

<212> DNA

<213> Aspergillus nidulans

<400> 2783

ateggatte aggggateaa ggettacett ettecagaeg gegaegaegt tgataatgeg 60 caageaegea gegatgagag gaacttttee tegaaataet aegettetee tgeaeggeag 120 etteettet tggateagag gegategtgg atgteaetgt ttgateeaaa etatgaaeag 180 aetteggaea tgegegtaat gaeattgaga atgaetetga caacaecaga aegtagggee 240 gaeaeetgee ttgeggagae eggtaeeaag gaateaaeea ageeeatata ettgeeetea 300

actcaatacq qqaqaccagt cqqtqataaa atatgacaaa agttccgtag gcggaaggat 360 tqaqacqatc tqqaqtacac atacatactc gaaatggact agccttactg aatctccagt 420 cgtcagcagc gtcaatggta attgtagtgt tgttatggaa ggtccccctg gaagtgtttt 480 agggactaaa gctggcgttg aaaccaagtt tcagagtatc actggatttt cttctaagtg 540 qtqctqcqqa tgattcqtca ggactctcqa tacqqaaqta aaatqacacq tgactattga 600 gctctcaagg ccaccttctc gaaatgcgat aagccgagca attgctcatc aacattccca 660 720 teetttagtt eactgittit tatagegiat acateetiet teaaettate tiatteiett 780 ctgcatatat cgcccgtccc aacctcattg ttaaaatttc tcctgagctt gatagttcca aggcaaggta tctggcggca tcttgctggc cgtgagcttc cgattccttg ctgtttaatg 840 900 tttactqttc qctqqtcatq ataccccgat ggattcagct ggtgggctgc ctattactgg cgctcatgtt gccgccgagc gctgcgaaga aagacaaacc cggcatatct ttccataaac 960 tccacgagaa gccgtattct atgttctatt tcgagaagtc tgatactgtt ttgttaaatt 1020 tggaggacgg agaagttcta cgttcgtttg acgctggcga aaactgggaa gtgattgagg 1080 acaatggcat gaagcacgga gtgacttcca tccaccagca tcctttcgac gaggataaag 1140 cttacgcgct gggagatgac gggaaacact ggataaccac ggataaagca aaaacatgga 1200 agtettttaa ggtteeagae eaggeatatt teaaaagtee acaaaeggge eetetaaegt 1260 tecaeggaeg ggatteeage aaagteattt tegaaacaag acegtgeeet teatgtgege 1320 cacgatcata ctatacaaca gacgacttcg atacaataga agtgctgaca gaaagcgcag 1380 gggcgtgcta ctgggcagat ggaaattctc aattcgcagc aggtcccagt atgccaacag 1440 gcatggaaga gcgcactgct tgtgtagatc aaggactcaa ggcgtcgaca aggattgcct 1500 ttcgattggt ctactctgac gactacttcc gcagccaagg ttatttagac gaaacttcag 1560 gatggccgac cagtatctgg tgtgaccagt atcgcgcaag tcaagagctt catcgtcgcg 1620 gctgtcgaat ctcaaggaac cactgagcgt gctctatatg taacaacaga tattgaaaag 1680 tggcatcggg cggaattcgg agaccatagg ctggaacaag acgcgtacac tgtgctggag 1740 agcagtgatt atagcettea ggttgaegtt etaacaaate egtteagegg catgggtgta 1800 cttttcactt ctaactcgga tggcacctat tttactcgca acattgaaca cactaatcgc 1860 ggcccaaggg gctacgttga tttcgagaaa ttagctgcta tccaagggat agtattggta 1920

aatactgtca gaaatccgga cgatgtcgag gccggtgcat ccaaagaggt tgtcagtcag 1980 ataagetteg atgaeggaag gaetttteag eetetaaaat caactgatgg geagegaate 2040 catctccatt cagttaattc ggacacaaac cttggacgag ttttttccag tcccgcccct 2100 ggattggtaa tgggagtggt aataccggtg attacctcgg taagcgctca gatgggcatt 2160 tgtatgtcag cgatgatgca ggccttactt ggcgccttgc tcttaaaggg ccgcacaagt 2220 atgaatttgg tgatcaaggg gcagtgctag tggcaattag cgaagcaccc aaagttaaaa 2280 agattgaata ctctcttgac catggaaaag agtggaagtc agtcgatctt cctcatgagg 2340 tegatggtga aacatetaet etaaceaega eeeetgatte aacgagettg aagtteatee 2400 tacttgggca ctcgaaagga gaaccctctg tttatgcaat tgactttgag gatttgcatg 2460 aacgaaaatg cgaagatgaa gactttgata accattggcc tgctcgattg gatgaacatg 2520 gagaaccaga ttgcctgatg ggccagaaac aatttttcag acgcaggaag gctaatgctg 2580 actgcttcgt tgcggagcat tcaacagttc tatgtcgaaa ttcgagccgt gcaaatgtac 2640 tgttgaggac ttcgagtgcc agtctacacg gactgaggat ggcaaagact gtgttccacc 2700 gaagtetttt accccccag atggagtetg tataaaccca gatgatacga ccatgattec 2760 gtcgggctgg aggttgattc ccggcgacgt ttgtgttcgc gatgatgggg ttaacctcga 2820 caaagatgtt gaaataccct gcaaagatgt caacaatagg ccgaagagca aagaaattac 2880 ctctaccatg aagatgttca gctcgggctt gtccgcttac aggtacctcg aacgtcaagt 2940 gtcgaatctt ggggaagatg agacggtcct gatgctcagc cgcaatcagg aattattcgt 3000 gtctcatgac catggccaaa cctggcagca agaactaaaa ggggccagca ttatgaaaat 3060 cgtccctcac ccttacaaca gtgataccgc ctatatcctt actgacagcg aggaggtgtt 3120 ttacaccata aaccgaggcg cgacgtttgg gtcttttaga gcgaagacgc ttccggacta 3180 cgaaaatggt ccaattctga ggttccatcc tttaaagaga gactggttac tctgggttgg 3240 tacagaatgc gactctggca gctgccactc caacgcctat tttagtgatg atcgagggga 3300 ctcttggaag accattttgc gccatgccaa aaaatgcgag ttcgagtata aggaaaatcg 3360 tccagacagc ttgtacctcg tattctgcga gcaatatgaa aatgaggacg acaagaaacg 3420 gctgcaattg atgtctacaa ctgacgagag gttctccgac tgggaaactg ttgaagaaaa 3480 tettgtggaa tatgccacca gggetgaata catcatactt getteccaca cagataaaga 3540

tggggcttgg aaggctaggg ttagtgtcga cggtacaaca tttgccgatc tgaagtttcc 3600 qcccaatqtc qtgccagctc aaaatctata cacccttgtt gacgcctctg agcacgccat 3660 cttcctqtat gtcggaggga gtaataatac cggctcattg ataaaaagta acagcaacgg 3720 cacaacatat qtccttaqtt tggatgccgt gaaccaaaac gactggggat atgttgattt 3780 cqaqaqaatq caqqctttqq agggtgtcat aattgcgaat attgtcagca atgttgacga 3840 gctttccgac ggagcaccca agaggctgag gacaatgatc actcacaatg atggtggtga 3900 gtggacatta ttagcaccgc caaccaagga cgccaatggc aagaagttcc cctgttctgt 3960 tgttgagggg aaaggcactg aagattgtgc gcttcacctt cacggataca ccgagcgcgc 4020 agateegega gatacatttt eeteeggtte egegattgge ttgatgatgg gettgggeaa 4080 cgtgggggat cggctaacca gcaaagatga agcagacacc ttcctgacca tggacggtgg 4140 gatcacctgg aagtccgtca agaaaggtag atatatgtgg gaatatggcg actcagggtc 4200 cqtaattqtq atcqtatctq aacagaagtc aacaaaagtc ctgcattaca gcaccgacga 4260 gggcgccacc tggcaggact attattttc ggatgaggaa attgaggtta ttgatatctc 4320 cactgtaccc tcagatacct caaagaaatt cattctatgg ggcaaaaaaat cggacgagct 4380 tgttaccgtc aatgtcgact tcagcgggct ttatgatagg gactgtgaat tcgacgacaa 4440 gggtggagat gtcagtgacg attatcagct ctggaccccg aagcatccat tccaggagga 4500 aaattqtttq ttcqqqcatq ttqaqcaata tcqtcqcaaq aaaccttcag ctgaatgttg 4560 gaataattgg cggggaccgc atctgcacag tatccaaaga aattgcactt gcactacagc 4620 tgattacqaa tggtgcgtct acattctaat gatgtttctt ttcttaccat gctaattgga 4680 tagtgactat aactacgaac gtcaaaatga cggcacatgc aagcttgtgc ctggtttgaa 4740 accacatgat ccagttggct attgcaaagc ccatccagat gcgatcgagt attgtgagcc 4800 tactqqatac cqtcqcattc ccccqacccc gtgtcaaggt ggctataact tggaaatcaa 4860 aaccqcaaaq ccttgccctg ggaagcaaca agagtcg 4897

<400> 2784

<210> 2784 <211> 1325 <212> DNA <213> Aspergillus nidulans

ttgttaatcc acatgagagc gctccaatgc agtggcattt gacttgtgag ccatctgcgc 60 cgggtcaggg gtacaccgac agttccttga tgtttccgcg ttccacattg atatacagag 120 ctaggcggct ttcgggtccg tccgctgagc cagcgtcatt gccagactct ttagggagac 180 gctgcgaagg cgacgagata aatctgcaag aatcacatta ttatcacagc tgctcagagt 240 tgattctttt tactgaccaa tgtatgaagc aagcaatact tgacgcagtt ggtgatacct 300 gcaagcctca tccgcatccc caccttttct ccttttcatt tcttttccgg tgtggatctg 360 420 gtgttagagc cccgaagcct tgaccatcac ggaaggacca gcacgagcta tctcgcaatg 480 aqtaaatqaa cqtcaatgag atccagagag tgccgtgagt gggtactggc acagttcata tcttccaact tggggtgtga tccttggagc gttctcgacc tatggatttc tctgtcttct 540 tcagacgatg gggctagcag atgaagaatg tctgctcaga aaacagtaat gatccctcgg 600 atccaggtac cggcgctacc tcgaccccca aggctcactt gtacctgggc tgccaggcgg 660 gagccgcgcc actgacagtg gccgggcgat acggcgggaa gagtcgaggc gctaaaacag 720 780 cgacaactga caggttcaac teeggtggca cagcaacage gttgeegeeg ttggattgga 840 agccatctgg gaggataaat tctatagggg atcgctgaat cttccagaat gccgcccggc 900 ttqqaaqaga acgccttgcg ggtttgtgca agagtctctt gacacgtgac cgaaggggca ctttttgtta agtcgaccct tttctttctc accattccca gctaactgtc cagggtgcca gcttgtcatt ttgccgcatg ctttacgatg ttcagaccac tatttccatg aaagatctcg 1020 aagggaactt atcctcttat ggattggctt cctcggccgg tctgacactt ttgcatgttg 1080 cgaaggggga gtcattttaa accccaaccg ttcttaaaag gtctggttaa gggaagcctc 1140 tetteetta teatecegae catettett geeetgtgee aatacatetg cetgtttete 1200 agtecttaat etactacett aetteatete ttggegtaaa tatetteagg eeettteagg 1260 acctctcact aaaccacatt ccttacttat catccttctt tcctatctcc cccctctatt 1320 1325 tcccc

2785

<400>

<210> 2785 <211> 1096 <212> DNA <213> Aspergillus nidulans

gtaaccacaa ttgcgtgaga tgacgacttg gccagcttcg gttacccatg tacaacgagg 60 120 qaaacaaatq ccqaaqcqcq qataccacca cccgaggggc gaacaggaac aacgtacctt tcccacagcg gcctccccga gaagtaccag tttgacgctg ctgctcggtt ttggcgcatt 180 tgcgggcgtt gattcagaca ttgtggacga agcccaacga agagacggtt atatcgatca 240 ggtcgtcttg cagcaaccgc tgggttatca atcgtagata cgagtcggtg acttcagata 300 360 420 ggtctgtatt cagtgctcgg gatcaagcag gggttgtttg acaggcagca gacaaatgga qaqqcqcaqa qcacacacca qtacctggat aggtggaaag agcggtggac tgatggagat 540 atgacagtct gctctgcaga attttagatg ccttgcaaca taggtaaggc agacagacta qatcttgaga gctcgctgtt tgttggttct ccgacagcag gtctcgtttc gtcagagagt 600 660 cggtcgatgc gattacatta gcaccgccag tccaaccgtc gtaatcaggc ggagacgtgg 720 acagctagtg acgctaagcc tattcaaatc tagcgcatta aggcagtcac gggaagtcac ggggactcta gcagggatcc agttagtagt tcttgcgagt cccagcggca aacaaagaac 780 cgttggatca agaaaaagtc cctcattctc atgctctcgg cttattgttt gcttgcagtc 840 cattgacaga tctattggtt tgactgtcgc ttgcatcaaa aagtaaaaca gactgtgcct 900 gcgcaaagta ctcggcctgg accgaccact ccatgtctcc aggacagcgc aatcgcaggg 960 aatcagagta tcgtccaggc tccgataaac gagagaatgc aaagcaatct tagacaccgc 1020 tttagtcaat gacgagtccc aatagaaagt atcgctgttg acacccaatg cagtctaatt 1080 1096 tgattgggcc cagcca

<210> 2786 <211> 3238

<212> DNA

<213> Aspergillus nidulans

<400> 2786

gttgttgaca ataatagata caggcttgct gatggggcag aggccaatgc ctgtgattag 60 ggagctgggt tcattgctgt tactgacagt attaatgtgc tggttatctg cattgtgatt 120 atcagtagtc tcaataatag gcttctgctg attttggtca ccattgctgt tgtggtcgct 180 gtccgcgtcg ctgtctgtgt cctggctgtt gttgctgttg gtatcagtgt tgttgttgtt 240

300 qttqttqttg ttgttgttgt gggagttgtt ggtgtctgct gtgggctttg tgatcacaag 360 ctcatccaca ctgtccaagg gagcagggcg ctgaggcaga gccgtcatca ggctggcctg caqcacacqc tecegetect gttactgatt geggtggtgt etectetttg actttgeatt 420 480 gacaatggtt ggtgtcaggc cgggggggct cggagggctc gtgaggtcgg tcgagcagcg 540 gcgaatcagg gtctgggggg cagagatagc catttcggtg caacaaggtt ggtgggagga 600 caaaggtgat ggttggagag gtgattgagc agccaaaagg gaggatagtg caaggtagat 660 qatcagagaa gattgagcaa gcagtgcgat caatgggagc ctgtaatgca agcaagcaac aacagcgata gaacaagtaa tgtgcaagat aagagtaata ggcagaggga ataagtaaca 720 cagcaagaga gaagagcaag aggaaaggaa aagagcaagc atgaagggag attatgtaat atatattqta qtaaatcaag caagctgtgt tataatgcaa tactgaagcc acaccatagc 900 aacacccaca tccctagcaa cagtattgta ataagcttat ttactacaca actaacaagc tgtgtacgcg ccagcgagga tgagcaatat acaatacttc tgatcatgca aaggtggttc ctgacggtgc aagagcacaa tgctaacatc aatgctaccg tacaacaacg cgacgacggc 1020 aaagtgacaa caacatgaca ataacagagc tctgactccg gacaaacatg ctgcaaaata 1080 tggacagcat tgcattgctg tcagctactg gctgattaaa ctgcagaggt tctgcttatc 1140 aatgatgtga catattgtca tgctcgccgg cgtgacatga tcacaatgct ggcaacatga 1200 agagaagatt ataattatca aggcatagct cggtcggcag cattgtacgt acgtcataaa 1260 tacttgcata aactggcatc agcagattca gaatgttgtg cacaatgctg ggggagcgcc 1320 ggggtgacgc cggcgtgttg tgaacaaggc atggctgagg gttgtcacag ttgcaacatg 1380 cagacaggag gtattggcca gcagatcagc atcttattta gcttagggta taatatgcaa 1440 gcagacaatg ccggctcaga caagctttgt acaagtatta tgagattagg cattgatgat 1500 caatgctaag atgccggcgt cagatcgatc cagtgcagat cctgccccac caaccatcag 1560 cctgcaacat gaacagctga agtacatctg ttacagtagg gccagttgca cagtcaggcc 1620 atcacacagt ccagcagttg caggccatgg gcgtcgcgct gccacagtaa tagagatgcc 1680 aaaggtgaca gatgcatgct gcacaaggat acacacatca ccacccaaca ttgccaggtt 1740 agtaaagcca tccttggatc atcatgaata ctgtacacca ttatcaggag acttcgacgc 1800 aatattaggg attatattaa tgcaaaggga gttgcgctgc tacagagagg taggtgacca 1860 gttattgcca gctggcaagt agttgtagta tgatcggccg cacaatgatc cactctgata 1920 ttgatcagga ccagccaccc tgccatcctt ctgctagcca gagcactagt ataataacag 1980 caccatatta tcatgatagc agagcccaca cagtgaatag aggctgatac aaagtagata 2040 taactgctgc agtacacgcc cagcccgtgc agagctagtg tttgacaagg tcccagctgg 2100 cgcagcgccg atacagcgcc ctccaggaac ccatctaaag ccggccagaa cttgtaggaa 2160 ctggtaccaa ggccgctgga gccggccagg ccagtaactg atagaggccc tccagaggct 2220 gctgcagcgc gctgccagca caggccgggg aagggccggg ttcagcccat cagtcgcccc 2280 aaatatatat accgcccata gcacgagcga acacctgcaa ggggccacag caaaccgtca 2340 gcacccatac agggccggga tcaagctaga gccagtacca gcacgaagac caagaaggca 2400 tgtcaccagc gcagcgcgg ggaccaggag ggccagccaa ttatcaaaat caagtcaggg 2460 ggtgccagca aggattcagt atcaagccag catggagcta gacatgtgcc aggaacaagc 2520 ttgaggaaag cccgcacagg gctggtagca agtcagcaca tgcccatagc cagcgtggcg 2580 ccggggagga gcaaggggg aggcagcaaa gtcatgcccg aggcgctacg ccagggcatt 2640 gggggctccg cgcccgggga gagcccgcag aggcatactg acaggtcatt gcaatgcaag 2700 aaaagtgcca gcgccagcac agagcacgta cactgccagg acatactagt aatatcacca 2760 agccagagca ctgccaggat catgctgaca acctgccagc atagcaccag tacagaaccc 2820 aagaaggcac atcacctata caacccaggg gagtgcaagg gaaatactat ggcatataga 2880 ataccagcac agtatcaggg agaagctggg attagaacag aacagggtca gggccggtgc 2940 aacgccagct accagcagaa gggcagagca ccagcatcac accagggaag tacatcgata 3000 ccaacgcctc tattgtatcc acaaattggg ctactatatc acttatgagg aggtctctga 3060 cttaatccca ccactcgtca gacagctgtg gcaattcctc tcaccactga gtcctaagtt 3120 tcatgtggac gccgttcgct gtttatggaa tctgcactca gtccagttat ccggggacct 3180 gctccatact tgacagtctc aatgtcggct tctggcacca tcagagccgt ccccgata 3238

<210> 2787

<211> 2151

<212> DNA

<213> Aspergillus nidulans

<400> 2787

cgaattaacc ttactaaagg gatcactgtg actatgttgt gcaggtgtct ccactgcggc 60 120 cgaatctacc tctggtactt ccgtgtatct cggagcaccc cgtgcgatca ttaacaccat tttcgaatgc ttgagcaatg cgatagcctg agagccgaag acactatgaa gacacttgat 180 240 tcttgattga tacgtccatt ttcaggaaca gcaaagccgg ggcttttatt tatcgaaatg ggcatatcaa attcgaccga gaaaatttga gactaaccac tataggaaaa ctaaggcgtt 300 cttgcggagg acgcggacga actgataagt gttcatagtg ctctagcgaa ctcagtgcct 360 420 cgtctcgtct cgtgatcaag ggttcgaaca tcacctgact gactacagag atgacataca taaaggatac atgggggtca aacttgcgga taaacttaca taaactctgg ggtcgaggct 480 tgaccggcga agagttggac cattttctcg ggcgaagggg agatccggag gcaagttcac 540 attccacccg gcaattcgac gttttcaacc tggaccgccc gaaaggtggg gtgttaagcc 600 660 gcgggctgaa gatcctcggg gttacgtata taccctgaac tttagatcac aggagcagtt tccacatgaa gcatttttga agagcaggtg tcctgactgc ctgtaggagc tgtagcaatt 720 agtgtttagc aacaagagtg ggtgagtttt gagtgtgttg actagacagg gctcttcagc 780 840 acgattgcct gatccgcagc acgggtccgt cgggactctg gagcccccca cacgtgacca 900 cccggtctgg tctttggctc tccgcaagac caaaagagtc attgctgttc gactttacca aatcccatta gcttcaccat ttctcagcca ggactcagga atgacttttt ttatctgagc agecgacteg acteatitti cateeteeeg gtgttgacag tgeeettete tgeeateace 1020 tgcaagttgt gctccggctg ctaaatacgt cggcgacaac ctcggtagta gtagttccag 1080 agetetecga atecgaeett acgateettg cagteataag etecegetge etetgtecag 1140 attctcactc ctgcaaatct cattatatct tcattttctc cgcttctact cgatttatat 1200 cgcgcaagct gggatattga gtgtggcgac cacttgagca gattcacttt cggcaaaaat 1260 gtggaagccg tcggagcgcc tgatggacac catcaggcat tacgccagct ttccagcaac 1320 tggtgtttcg ctccgacaga tggttcagtt tggagacaga ccttcaactg gtgagcacac 1380 ttgattcctg agaataattt tatcagtttc cttgtactgc tcacagtggc taaccttacg 1440 ctttccccga tataggaact ctgtttcgcg cctcccaatt tctgtcagaa gaactcccaa 1500 tccgcctagc gcaccgtgtc caggatcttg gagagettcc cgatggactc agtgaaatgc 1560 cctccatcaa gaaggtccag gattggtatg cacagtcgtt cgaggtatga ctcaccaacc 1620 atcatgcttg cggttcatcc tgacacatga tctgaaggaa ataattaacc tgccccgacc 1680 aactctcacc caagaagtaa aggcgcgcct gctgcgcccg aacagaacga tgaccggcgg 1740 gtcgaagatt ctcgccgaaa caacacaaaa tccaagtgtc cgcgagggac agtatcgctc 1800 cgctatgaca aacggtaatg gaaatggcaa ggctgctgct gctgcacgaa gatattttgt 1860 cccttcggat gaccagggaa actggcctcc cgagttaaat gattacaacg aacggtttgc 1920 aaagactcta caacaaatta agcggcgaca cgacagtgtt gtgactacag tggcccaagg 1980 tattctggaa tggaaacgaa agcggcagta cctgcaaatc gactcgacaa tccaatcatt 2040 tctcgatcgc ttctacatgt ctcgcatagg tatacgaatg ttaattggcc aacacattgc 2100 tctcacggaa caaacgcacg tgcgccatcc gaattatgtc gggatcatat g 2151 <210> 2788 <211> 605 <212> DNA Aspergillus nidulans <213>

2788 <400>

aatgctgagg agagccttgt gtagtcgcta gattaacgat agcagtacaa ttagcacgct 60 tctggattgt tttgctgcct cactttccct gactcttgct tggaagagca cttgagacag 120 caaattgtgc caatacggca cactttagga tagaactaag tctcattctt gttgaagctt gggcaaaatt agacacgttc ggctctcagt cagtcaatgc ctggcttgtc tggagacgaa attgtagcgt aggaatttca atgtactctc aaggccgttt tatagaggta ctctccatgg 360 gggtgcaagg aaacatttcc ctattgactg cggacaaagt aaacacggat tttgtggcgt tacgcctagc cttgcataat ccgtgcataa cctgtcagat aaagcagcgg ccttccttta 420 tcgcattgca tgaccacgcc gccatacaag caattagtcg ttctgcgccc tacaatgcgt 480 tcatctcttc tggaaatgac aacggtttag gatccccaag tccgcatggc cctctccact 540 600 cgcataacca atgaggcagt aaagggccga caattgttgt gaaaagccac accgtctggc 605 agtcc

<210> 2789 <211> 1642 <212> DNA <213> Aspergillus nidulans <223> unsure at all n locations <400> 2789

60 ccaggataat ggggtatcca aaaactaaaa tggtccactc ctgtaggaaa ataagaatgg ataaaccaga ataaatccta aaaaggaggt tgcaaacacg cgcaccagaa gtggacagtc 120 180 attattgggg cgttttctat aagccgtccc tgacgcatgc atcttaaaaa ggaatagtag 240 tgcataaggt aaaaccaagc cgccgtaaac tagattgtaa ggctttgttt aagcgacgtc agtcgctggt caataccaat gaatcgccat tttgaaaact tcgcgaaacc aaacccaagt 300 ctttcgagcc aaagagctag tcctccacaa cgccgaaact ccccacgatc tgaacgattg cccaacctcg ttgtttaagg tcatccaacc accgcacaac tccgaggggg tcaaaagagc 420 tgacgttagc aatgtgatac tcaacacgct ggccgcttct ggtttggacg agaagacttc 480 540 tacccggctt gtcggacggc atgtgaagcc cgcagaaccc gggcgtttgc gtgaccggaa caagagaacc atctacaaca cattctccta ggcgctcagt caaccagaca gctcgctcgt 600 tccttgccaa tgctgcatat cgttctcgtt cgttttgaag actttgttgc aggtctgatg 660 720 cccattttgc caattgaatt cgggcacgct tctcctcgtg tctagaatga tctgacaccc gagccatcgc ataactaggt tctataccat acgcactgga tgcaaatgat aaagcctcgt 780 840 cttgtagagg gtttcttcgg cgggacaaga tatccctttg ccgttgtgca agcttcttgg cagcagagtg ccgaatccag gccatggtct cgcgatcgaa gaggctctgg actaaagctg 900 taaggtcaga ggcaactagt ggttgcatat agtccggatt catcagcgtg ctagcatcca 960 tgatggaatc atcatttgac ttggcggacg aaactgcgaa aggttgttca tctatatccg 1020 aagcattaag gtgaaaagtc cttaaagaag cagcctgagc tttctcgtta aaggagtttc 1080 tgagattaat gatttgatga cgggtcagta agtctgactt ggctatgagg ggtataacgt 1140 tggtccaggt gctgagtttg ctgatgcact cgacatcaga atgaagctta tctatgtaca 1200 tgtcagtgaa agtcagctta ctcactgcca aaaacatacc gtgcgatatg aggtatagga 1260 cagcgtccac ctgtgaccct ccattaccag ctaacatgtt ctggaaatcg gcatttgttg 1320 attcgagggc tgacacagca cgagagagct gttgactgat atatttaata acggtgtcaa 1380 tttgtccagc ttggctcaat cggtgccctt ggacatcgac gaagcaaata ttgcgctcaa 1440 ggacgacttc gcctgagctc tttcgccttc gaagaacacg agagtcttct aggtctgacc 1500 accaagtagg ataaggcttt gaactagcat atatttcaga aacgagcgca ggtacctggg 1560

ttaattgagt	cgaagtgtgc	gacgttcggc	cgcggcgtga	aagcgacagg	antgtggaag	1620
gttcatcaaa	aggatcaaca	tg				1642
<210> <211> <212> <213>	2790 1017 DNA Aspergillus	s nidulans				
<400>	2790					
gcccgattta	tctccaatca	aaaagcaggg	aactgaagcg	tgcgatgttc	gtattcctta	60
ggctgacgct	ggctagccct	aactcgaaca	gtgccgccgc	gccccgggca	ccttgcagcg	120
tcaatctgcc	ttgcgccttg	tgccccgaat	gatgttaggc	attcagtcat	tccttcctcg	180
gattacacca	gtacaggtag	tcgcttatct	ggcgtcaggg	ggaagaagtg	gccgacgcat	240
tggtcctatt	ttctgtgctg	ttacacttgg	tagttatggc	tgattccact	gctgctatgg	300
cgacttcaac	gctgaagaag	aagcatgcct	ctatttctct	acaccaagag	aatatgaatg	360
tggatcggat	ggaaagggtg	aaggaagagt	aagtcctgtg	gattcgtgat	ttcgctctgt	420
atattgacgc	tacagaccac	atctaagtac	taccattacc	aagcaatccg	cgatatcgat	480
gtccacaaag	acatccagga	caggagtata	tgagaccgaa	gaacccaggt	ccaatgctct	540
tgacaagaat	agcgatactc	ggatggctac	catagaatcc	ctcctggctg	agaatgatgt	600
cctccaaacc	cagatcacgc	agctaaaaac	cgcccttcat	gacgcccaga	accatatatt	660
tagtctgcaa	ccacacatcc	aaacccttcc	aaatgccgat	gcgatcacat	tattccaatc	720
cctcgtctcc	tctgtcgaga	actgggtgga	caactatctc	gcggatagtc	tcgaggagaa	780
ggaagtggcc	gccgacgcgt	tgaatatcaa	tgatatccga	aatctgatga	atttaatccc	: 840
tccagaggga	atggcggcgt	tcaataccgg	gaatacagac	gtggatatca	. atccagcggt	900
gatattgaaa	gttctggttg	agagtatctt	caaccaagaa	tttttcaccg	ccgttcccaa	960
ggcctgagat	ggagtttggg	atggaaggtg	agagagcaat	gcggggttgg	agcccaa	1017
<210> <211> <212> <213>	2791 5070 DNA Aspergillu 2791	ıs nidulans				

agacttacaa gcttttcaaa gagtggatat ttgcagcctt agaattagga taaataggga 60 agtataacaa caaaaaaaat tgattcccag ctccataagc gccttgcttg caagcgacat 120 aaaaacgaga tctacgatat aaggctataa atctatttcc accaataaaa cgagcttttg 180 ttggacatag actgtatgcc agtgaaaacg aagatatagg tatgacatac catctaacga 240 aaattgcgag actcgataga ggtttaattg tggaggtcca gcatggtacc gcgggcagaa aaacaccggc cacttgatca atcctcaaac ttgaatgact tgccgccaga gatgtcaata 360 420 gggccaccgc ggtacgagcc acgettette ttgttettet cettggtgaa geeettgeca 480 cgtgtgaccg aaagatcctt gtaagccttt tccgcgtacg cgtacggcac gtactgattg gaggggtggt tatgagggag ttcgctgaga gcggctagag gtgtaggacg ggtgccggtg 540 600 tggtttttct tgccgttacc attgccattt ctgggagctg ggctggcact ggaggagact gaggetteeg atgtagegge gggettttgg gtggetteag ceteegagtt etggagggtg 660 cggctggtgc tggaggactc ttctccagag gacgacgagg agtccgagga gccgctggag 720 cttgagtcgg agggcggcag gggtgtctcg gtggcagcct tgagagcctt cttgtcggct 780 ttcttggcgg cgtccgattc ggattcagac gaagaatcag acgaagaatc agatgaggaa tcagatgagg aatccgagga ggaatccgag gaatcggaag aagagcttga agaggagctg 900 tgagaagcat cggactcgga ctcggactcg gactcggaac ttgacgaaga gtctgagtct gaatcagagt ctgagctgga atcggatgag ctctcactac tagatgaaga ggactcttca 1020 gccttcgatg tcaacttggt tttcttcgcc tttggagttt cttcggagtc agagccagag 1080 gaagaagcgc tcgattccgc tttgcgctta acgcccttcg cggcagggcc gggagcgagg 1140 gctgcctcat cctcgtcctc atcatcagcg tcactatcgg aggagctcga agatgaggaa 1200 gaagaggaag acgacgaaga ggccgaggag gaagaggagg acgaggacgt tgacgaggac 1260 ctcctgcgct gaaccttcgg tgcttcagac atctccacat cagagtcgga cgaatcagag 1320 tcagaggaac tgtcggcatc actgtcactg cttgctgagc tgctagaact tggaacattc 1380 ttgcggttca gttgagactc ccaactctgg aagatctcta aaagagaagg aacatcggac 1440 tttttgcttg cactaatcga cttttttgcc agctctttgg taaaggcggc gctcgtggag 1500 gaaaacccat gttcggatag gaaagctgaa atcgccgaga tcagattcgc aggcagtata 1560 gtatctttcg tggccttcgc ctgcttcgtt agggagttgt cagtcgtccg acgcagatac 1620 taagttcacc tagatgaccg cataccttct tttccccctt cacagagctc tttttactgt 1680 gagcagccat tttagggagc tgatgagcgc tgtgcaggtc aattcgtcct taagcctctg 1740 tggatagaga aagttgataa agaaaaaaaa tggcagaaaa aaaaaaaatt cacagcacta 1800 gggcggtctc tcagggaata gtgtattatt ggctgaagct ttatctgaaa tctcaagtca 1860 cctgatacga agaacgaact tactaagcga ccgttgaagg actcgatttg aactatctac 1920 ttttcttgaa ttgtgtgtaa tagagagaat ttatggcaag atattataac ccattcttct 1980 atgatatett gaaataeagg tttgatteag gtteggettt agataeaatg aataegttet 2040 cattacatgg taatacctca gtgcaacttg agtacatggt gaaggttgag ctcttatgta 2100 cggtgctgtt acagccacga gctccgccgc ccgctccatc cccatcgata atgagctaat 2160 aattgacccg ctggagtcgc teettegttt tgcacgggca tegtetgata tgcaateetg 2220 accccgctaa agcctctaag actgtgatct tagctggaat aggattcaaa cttgattgcc 2280 tccatccgcc ctgcgtgctc cgcctacgtt tcttcggttt ctcgatcatg ttcacctggc 2340 ttcgaatacc tcctgagtaa gcaggctgtt ggcagttcga actataagca tgaatggtca 2400 tgatcgcccg aggggacctc taggagatcc tgtacctcaa agagatcctc gccggcgcgc 2460 tgagagtcgc gctggtgggc atggggggcc cggtgacgga gcgtcaaggg ccgagaaatt 2520 cgaggacgaa aagcggagga ttgttcaaag ttgcttttca aagaaggata gcgatggtgc 2580 ctgtatgttt aagccaactt tgagctgaac gcttcataca cctgctcgac gactgtttcg 2640 caaatcaggc ctcctgaaac gtcatggagc tgacagccct accacttctg gtcaagaata 2700 tggctgacat ttcgttgatt taccagtggt cgagtcctac attacacacg tacggatcat 2760 ggaagatggc gcttatcctt cgtccccgcc cccgcctaat tcttcccctg aaaacaagaa 2820 ggcgagagtc ataatcgtcg ctgtgagacg gtccggaagg gtacgcatgc acaaagctag 2880 ggagaacaat gacggctctt tctcaattgg caaaacatgg atgctggatg acctctccgc 2940 cattaaatca tataatgcga tcgtgccgtc tagccctcag gaggaactgc aaaaacaatg 3000 ggcatcgaac gttggctttc tggtaactgt gggaaagcct tactactggc acgccaaatc 3060 cccgaaagag aaggatttct ttattggcag tttggtgaaa atctataaaa aatataccgg 3120 cggcaaaatg ccggatctta taggctttga tgagcgtgag ctccagcttc ttctgggacc 3180 gcactattct ggcggaaagg gaccatcttc tggctcgtcg aatactgaag gatcttttgt 3240 accccgcgt ccaccttcgt ctcagggtaa ccgtcctcag tcccctcatt gggctcgcgc 3300 acggagccgc gattcgccca aacgaagacc aaacgaggaa gatctaccaa tacgtgctca 3360 gcgcagccgg gaacagatga gcagaccctc taccgcgcag tcgggcaaaa gtggtccccc 3420 tecatttgea eegeeceaac atectecaee agtgeteeca gttgaecaag gggateggee 3480 acctccgcgt gcaatggagc ggctcgccgg cgatccaaag acaccgaaga tcgctccggt 3540 atcaccgttg gaacctaaga ttagggaaat tcctagcagc ttgagaacgg cacactcaag 3600 ggagaatatt agtaaagagg ctgaggaagt caacttatcc agcgtccaga cggagccccg 3660 tecacegteg teacgaageg ggaaaatggt acetgaacet egteetateg taegtagega 3720 gaactcgagc tccagtatac ccgaggctag acgactcaat gatgacattg ttccgggcct 3780 tgctccaagc gagctgcgag tgaaagaacc aaagcgaggt tctgaaacgc catcgtccac 3840 atccaaggga caaccgacgt cacttgcagg agaccaattg agcagctcaa acaatctgca 3900 acttgccgat gtaccaccag ggctgttggc aggtttaccc gcaagtaaca atgccactag 3960 tgccaagcct gtcgagacac cgcaacaagt ttcggagaga gaagagccag aagaacctgt 4020 cgcggagagc aaggcacctt catctcctat tagcccccca gaagcccttc aggagaacga 4080 tgaagatgac cccgacgctc atcggcctgg cctcggacct atgattaaaa agaagtcaaa 4140 caaagatgtg gcgggcgcgt tccgcaaagc tgccaatgca tatggggcgt tcaaaccacg 4200 aagcggaggc gccggcgcaa gacttttagc tgccgcgaag aaacaggctg cctcagaggg 4260 acctgatggg atcaccagtg tcgtgcctgc gccatccctt gttcgaagag tagaagaacc 4320 ggcgaagacg acgactgaag agcgccctga ggaaacggct actgtgcctc cggtgtcaga 4380 gaccccagaa atcccgtcga cggatgcgcc gcctgtacct gcgccgcctg tacctgcgcc 4440 aaccgtaccg gaaccaaaca tacaggagcc tcccagggtt gagattacgg aagctgttgc 4500 tgatgctacc gtagcacctt cactagatgc ccctaaaaat atgccagaag cagtagctgt 4560 ccgagcagat gaaaggtcac gttccgtatc tccctctcgc gggatcgtcg gcgcaggcgt 4620 catgaagata acactgtcaa atattgtcaa gcactcgggc tcgatccaaa gtccttggag 4680 atcggcgagt ggaatttgat gatattctga ccgacctttg ctggaaacgg cggctcttag 4740 acgagaagaa atttgagacc ttaaacagac gttcccgaga gattggcgcg tggagctaca 4800 agettgtttg taacettgae accagaaage aageggeeca gttgttaaet tattgeagga 4860 atttgagagg gagagttgca cctacccgta tttcgccaac tcatgggttt ccaagctttt 4920 ttttccggtg taaaataaac tttcgagctt ttttgacccc ttaggtagcc aacccccaat 4980 tttttgggaa acctggggtt ttttacacta ttaaggggtg tttgggggga cttatttggg 5040 gaaaaaactt ttttttta ataaaaagag 5070

<210> 2792

<211> 1684

<212> DNA

<213> Aspergillus nidulans

<400> 2792

catggaacac accgcaactc acgcggaggc acatcgagca ttatcggcga cgccgtcgtc 60 120 cgcggtgacc ttttccgctc gtcatcctcg caatcgcagt cgcaatcgca gtcacagtca caatctggta gcggtgccgg caacaacaac atcgccatca gtatcggccg atacacgttc 180 atctcacgga gcgcaatcct ccgcccgccc tctcgtctct cgcgtggtgt ccacacgtac acaacgctgc atatcgggtc tcatgttttt gtaggggagc ggagtatcgt cgaggccgcg 300 aaggtggaag ataatgtgac gattgggaag gattgcgtga ttgggtcgat ggcgattctg 360 aaggaaaggt gtcaggtact agacgggtgc gttgtgccgg ggggcatggt ggtgccgagt 420 cattgtgtgg ttggtgggca gccggcgcgg attgtgggag atacgccaat tgcgtacggg 480 gttgaggggc tggagggggg attgagtcgg gagagatatc gaagtatccg ataggtactg 540 tacttggagt cggcctcggt tgggtggagt ttgggttatt ggttttggat attatacccc 600 ctttgttcgc ggatagctgg cctatcgctc aaaaatagtt gagatgtatc tcaggcgcta 660 atatgtacaa aaagcttctc tgagagaata aatgctaacc catcttctgc acttcaagct cccgctttag ccggtcctca ccctcctggt aggggatacc tgcatcttcg cgcgccatat cattgagcca acgctcgttc ggcttgatta ctccccctt ggagagcttc gaagcaagat acaaccagtt cagcgagtta cccaccgtgc tcacctcgtc acacacatgg gccagcggga actcatgcat cttcttccac agcacgtcgt cggtacacag gtcgaataaa tgcttggcca cagcatccgt atcgccgaca tctaccaaga acccgttacc tttgtcgatt acctgcaacg 1020 ggataccgcc ggctctggtg gcaataaccg gccgaccctt atgaatagct tcggaaacct 1080 tgacttcgaa cccctcgcgg gtagaaagct ggagagccac tttggctttg gacatgagtg 1140 cgttgaggac ttggtcagat gggccaaggc ggacgacaca gatctggtcg gcgaggtcgg 1200 gaatagagtc ctcaatatat ctgacggcca ggtcgtaaat gatcgagcca tccgggtcat 1260 cgacggagcc gtggccacag atcaagagct tgggtatagg cttatccggg caatagtcct 1320 gcatacgctg gtggaatttc tcgtaggact cgattacgtg cgggatgcct ttggatgggt 1380 cgaagcgtgc aatctggaca atatactcgt cttctctcgt tagtgtagtt ttctcaaaga 1440 tacctgcgtg aactcacctg caggatagtc aatgaccggc attcctgaat ttcgcacca 1500 ggagttgaag attcgtccgt aataggcgat atcttcgtt ctcatgttc tgttcagtcc 1560 gtccagccag tctgtcgacg ccggcatgta gcccacctt tcacggggaa cgatctttgg 1620 tacgaaagat ttaacaggat ggctaacgaa aatgtcggcc ttctgaatg ccttcacat 1680 ggtg

<210> 2793 <211> 2915 <212> DNA <213> Aspergillus nidulans

<400> 2793

gcctccgtct tgagtcagat caccccggcg ctagctccct gaagtcacgc atagttcgcc 60 tctggtatct ccttttgttc cgacatatgc ccagacgtcg cattacccgt cgcatgcaag 120 ttcctctcga cctcaacttc ccgatttcgg acgtcattcg cccctagtat ctccctcatt 180 ccccatgtac agtcatgttc aagatacaca ttcctggtct cgttcggcat ctcctcgacc 240 acagetteca gagateaege ateaetegee tttgteteee teagteeeca tgeacaaeca 300 cagtcaactg tcgcatcagt cgtcccgaga gatctctcct ctgcagctta cggaacgcga agacteteca ecgeetecte egeegeegee teacagagte geagtecaae gteageette 420 480 cccaggcccg gccgttccac gccaattgga tatgaacgat cgctatgtgg tcttcacaag 540 gactccgtct ccagccggcc attcagacgc gaacgggcaa acgccctcac cattgcgaga 600 cgcaatggaa gatgtgatga cttcgctcga agatatgggg atgccacgag actcacgttc 660 gccgtctccg cagcctgaat tcgataatcc ctggtcaccg gctgcttttg actcgttgcg tgaaagccgt cacccacaaa gaaacaatcg gccattaaca tcattgggat ttgaaggaga 720 780 aaaggaattc taccatagcg atgccgtgca tagaaacagt gtctacacgc atgatccttt

tattgagggc ccgccgcaga tcaacaacta cgtacaacgg atggaaagcc gactccgcca gatgcaggaa caaggacgtc gaggctccga agacatacag cctccggttg aaaacagtga agaggatgat gacatgcctc caccaccgcc cccaagacat ggatcgtatc atggacggca 960 caattctata cccgctcact tgccgtcctt acgaagccgg cggtctggac atgacctcag 1020 gaatgatatg ttgaatcgaa gcttcaccaa atcgtcgaat acgacgaact cctcgagtgg 1080 cgtgcacagc aatgccacca accaaacttc aagcacggac agaacgagcc agagtctgat 1140 gagcggaccc tccgccggag gttttagcgc aacaagtgct ggaagctacg caaggagggg 1200 tattgcagca ggcgaaaggc ctagcacggc agtagatgcg gtccggtcga gaggtttcag 1260 cgatctcacg cgaatgccac gtcctgaatc gcctatgagc ggcatatcct accattctag 1320 tcataacact tcccgacagg gcgcttcttc tgccatacct tggtcaacat cggccactac 1380 gccggaagaa ccgaacagtg tgtttggagg actggccaca ccaaaggcga agaagcaagg 1440 gttcttcaag aaaatactcg agtcagcaaa gaccggcgcc gcaaacgcca gaagtagcat 1500 tgccgttgga caaagcggag ggtctttttc tccgaccaag gggagagcca tctcaccaat 1560 caggicatcg cactogoatc gagacactgc tgcgcgcgag atgggcacgg gaaataaccc 1620 catggactgg gtacaagtgc ggcgcgatgt gaaccgagca tcctccccca gtcgaaacga 1680 gagaattgag agagcagaga ggtgtcagat gatggaccat ccggtcatat atgcagtgga 1740 agaactatat gagaccgcgg aaggggaaga gagtatcgac ggcctaccca ttagcgagcc 1800 cactgatttt ggtaacgtca atcttacact cgtcgacaag agcgcccgtt tcgtcaacag 1860 tcttcctcca atgactaatc cattgagcct tgcgcaagga tacgtctgcc gcccatacaa 1920 gagtgatgtc caaaggctgc gcgctatatt tacctgggtg agcgagaaga ttgcgtggga 1980 cgagccaata gaagatgccg acattgatct gaagcgtgtt ctccaaacca agagaggctg 2040 cgcccaagaa gtcgcctatc tagttcgtga gatgtgcgct gcagtgggca tacatgccga 2100 cgcaattgaa ggttttctca agccaccagg tgaggtgttc gatttggaca gtctttcgcg 2160 tecgaateat tggtggaatg eegtgetegt tgatggtgae tggegettea tggattgete 2220 tctcgctaat ccaacgaacc caataagaaa ccaattcgtg accacgaata cgacggtggc 2280 cgagtcttgg tatttcttag cccgacctct cgagctctgc tatacacatg tgccgcttga 2340 geetgagggg cageatattt gteeceetat eteteeggat gteeteeteg caetteecac 2400 agtttgtccg acatattca aaatgggct gcaattcca gattatgaca ccagcgtatí 2460 tcggatagaa ggactggaag tccttcaggt tcgtatttt gtccagcag acgtagaatg 2520 tgctgcggag gtcgaggcgc ctggattcgc tcgtgatgcc gacggggact tctttgagag 2580 tggagaaatc gtgcggaaac gagcgcttgt ccagccagat tgggtcaatg gtcaaaaacg 2640 cataaccatt aaggctgttt tacccggcga cgaagggcaa ggtatggtca aagtttatgc 2700 cggccgaaag gggctcatgc actccagccg agacatacct cacccgcttg cctttgcact 2760 cccaatcatc cacaccggag aaaatcctcc atatgaattt gtccttcgcc atcccacccc 2820 tcacgctcaa cgccacgact tgtacattat tcaaccgcag tgtgctcagc tggctgtaac 2880 acacattggt atttgcggcc gcaacatcct tatcg : 2915

<210> 2794 <211> 2240 <212> DNA

<213> Aspergillus nidulans

<400> 2794

60 atagagaaaa taatttactc acaccaaaga gaagattaaa aaaaaaagtg tttacaaaaa aaggccgctt ttagggaaaa cagagggagg gcctcatccc ttttggcttc cggcccttaa 120 gcttgtagcg gggcctcact atatctggca agtttctgag agggaagggt ctctcttcta aggatttatc ctaaacagtc agaaatgatt aagcgctctc accgaaagac actacaatat 240 tttgttttag cgcttctgct tcttacaaat aatttggtag gttgggcctc agttcttccc 300 gcaatttctc cttcctggct tccctctcac tcttggaaaa aggctggttc accgccgcat tggtgtcgac ttgcggcatt cgcggctggc tgccagatgc ttctgctttc tttgtcgagg aacaaactta ggcatctcgc caaccggttt ccagctcgga gatcaaaaaa accgaatacc 480 actggggtag gagtcgtcaa tctgttgata ataatgaaaa gaatctagaa aatttcaggc 540 ggtggtggaa tactgccgca ccgccgggct gatagcgtca ccgccttctc tatctccgat 600 660 tctccgcccc ctccatgtgc cccaactgct atttgtatac aaagcacgca gtccccgctg gccataacac tccttcgaaa gagtctcaat atctcccaat cctcagatgg tcaataataa 720 tggcagaaac actcgggcta cacggcctta acttggacct tcctttcccc gcagctacca 780 agcgagtatc tgggaatatc aatggaatcc acacagatgt catgaccatc aagttcagtg

ataaaatcat gattacaata tcacaaaaaq gccgacttgg ccattgggtc agtaattgag ctccaqatac caaaaccacq ctgaccqgtc acagctccat gttccactgg aaaacaaaaa cccaqgcaca gaaggccagc atagaattcc agatcctgcg aatgatggtc ttcttccgtt 1020 gagtaatttg acggctacgt cgattcttgg gggtcgtgct ccgggacacg aaattgttgg 1080 tcagctatat gcccgtcaga tagcgagtgc cattgtcacc aagacaccaa acgagaaccg 1140 cttgctggtt gtcggactag gattagaaac agccgaagcc gaccgagacg tgttcttcgc 1200 tgtcatagac cttgtccttc agtgcatcta aggagcaaga gacagtgact tacagattta 1260 gatgcagaaa cgttcaccct gtatctttct tttctcccct tcgaccttca agttgtgaag 1320 tttgagacca taaatcaata ctaagaggta attgcgttcc tctacagtaa atctcttctc 1380 ttqaqqttca atctqccqaq qaatatqaat qcqccqctqa aqaqaqcctt gatcagaagt 1440 ttctcattga agcaaaccac cttccagtta tcattgacga ccacggtcgg attatagagg 1500 actgatecte tggatteagt ettecaggag atatataagg ateggegaeg etgeattget 1560 gtttcaaagt cactegatcc aagcacatta gaagegacac aaatgggttg tgccatccaa 1620 tcatccgata ttgtggctac gacccggttg ctcgtttaag ttgagttatc tggcatcaca 1680 agaggataat tgtgtgagat gcttgttagg tggtccgcgg aaaaggcacc aaatgttcta 1740 taaaacagtt tqcqqtaact cagqqaatqq tacaqqactt ttqaaqcctc atqqtaqatq 1800 gcttggaacc ctttaagaat agcctaggtc tccagcctcg gtgcgttttg agtctttcga 1860 tctccaaagt gctgccgcca tgtttgggca gctcttcata aatgcgaaat ctgacatcaa 1920 acgggagacg ataaagatag ctgctcgtgc ttttctcttc atctttgaga acacctctca 1980 cqaactttca agccacqaag acaatcqtat catqaaaqcq ggcttgctta ctacggtcct 2040 cgaagtgaca gatgcacccg cccaccacat cgtgggcctg aagaaacgca tatcgacgct 2100 aagtcaacat tagcagtaga tetttettge tggeetacag acaattetae tgggaatttt 2160 teggttetag aagagtatag egetgteeta aggeaggett ttttttggaa gettaceatg 2220 2240 catcetegeg aggtatetet

<210> 2795 <211> 1651

<212> DNA

<213> Aspergillus nidulans

tctagtaacg gccgcgtcta aagaaacaac cgagtcccga atagctgtgc ccatctggcg 60 120 aqaaqqcqaa qqqattqctt atgagggqct cattcaagcc ggcccactgc agctcgtcga tcacaaacac ctgaccctcc agctgcttct ctttgggcgg atacagtgcc aatctgtcct 180 tcacgccagg gacgaggtgt tccaagcttt cgtacagcct cgtgttctcg tgaccaagcg 240 300 qcaqcttctq qaqaqaqcca ttctqcctcc aaaaatcatq caccqctaqc gtcctctcat cetteateca cateageget cegataggtt catggageae egttttetge geegeaaegg 360 ctgcqtccqt taqcgcagag cggggcccaa tccagctcat cgcgctgttg tagttgcacc 420 480 acttataget gegatgaage acgtegtgeg teaatgteae teegtegteg accgteteee acattgccaa cgtagactcg ccgatgggtt tctgtgccgc gaccacgcgc atcacggtac 540 gcagetcage catetggaag tagtteegte tgteteegtt ggeeaggate gtgeegttge 600 gatacacgat cccgcqqatc tgcgccatgt caattgcccg gcatgtcttc tctgggggat 660 aggacgacgg gccgacttcg agccagacag ttaggccgag gccgcctagc agcgatacga 720 cggcgttgag aatgacgggc tgaaagtgct cagagaagtc ggcgagaaga atgccggtga 780 agaacgactg agcatcggct gggcgtttca agtgcgtctg gagcactttg acaatggcgg 840 aaatggcgcg catgctgttg tcgtcgccat tgtcgccgca gtcgccagaa tcagggctcc 900 960 cgtccgattc aaccagtttg cggatttgca gtctagcaag aatgtgcttt gctgtcgtgc ttggcaaaac gtcgctcaca ccagcctgca aggggtccag cacaactgcg tcccattggg 1020 aaaggagccg agcctggtct gaggtgggag ggttcgcgaa ggcaccgaga tacaccccga 1080 aggatetggg etegggtaet geggeggtgg gggtataeag aegaggtgte tetegtttta 1140 agegetegat aegeegeget acatttgaag gaagaceega aagtteatgt egtgtetgeg 1200 ttegteagtg teatetactg cattgtgeee atgetgteea gaatatatge gettaeeege 1260 cagtagtggt acaactgtcg gccaaccaga tacaggatat atacaccacc caagacgatt 1320 gtcgcaagca agcaggcggc cagtgtctat aaatatcagt ttatctgcta gatccaaaca 1380 ttgtgaacca gactgacctg ctgccaccac gtctgcgtca tgcgctccca tcccgtcgca 1440 tggaggccca ggtattcgat acccatggct tctaataggg aggtctcagg gccgagacga 1500 aacgagggac ggacaacaaa agaaggaagt aaggtgagaa ctctcacagc agagcgggga 1560 agagtgggtt atgtagtgat gagatcgcac agcagggtag cagcccgata acccagcttg 1620 cactggccag gatccgcact ggagcctcag a 1651

<210> 2796 <211> 1399 <212> DNA

<213> Aspergillus nidulans

<400> 2796

gtccaaaatg ggtgtttccc ccacaggctt tgatggttgg gaggccgagg aaaggttaag 60 120 gggctagggc tatataaagg gggggggaaa gggaataggg ggaaggggcg gtggggggatt 180 tgccagggtt acccaggtta gttgggttgg gcttgaaaaa ccagacattt cccccaaatt ggctcgaacc gggccttatt gtttgtagga tattttaggc cggctttgtt ggggggtccc 240 cccgttccct tcttttaggg aggcggggac tattccatgg atccttgcaa ggcatgcctc 300 gggttttttt ggggtttggg cttggggctt cgcaggcccc caaagggccc cgggggagta 360 cccacatgtt aaggttcggg gtttcccaaa gggcaggggc tcagcttatc catataagag 420 tgaggaaatt gggaaaaatt gggggtttgg agggcaggtt ttcatggcag tcacgggggt 480 ccgaaaaatt ctagacggtc tggggggcct tgtctatcta gtcacgatta ctgagcttgg 540 ctcggtcgag tataggccgt ttttaaaagc ccgaggggct gcctgtccgg gatccctcct 600 tttegegege ateeggtaag gggettgget etetegeaca aagteegate gtgtttgtga 660 gaagaccagt cagctatttt gggatccaac gctcgaaatc gacccgtgat tcttccagcc 720 agcataagtc ccgactggca agagtcaaag aggccgcgac ttccccttcc gctatctcgc 780 caggaaaagc atgcgatact gtcacccaag atccaaatat tacggttccc tcccctcatg 840 aaactaaacc gtcgtcgatc gtgtcaccga cgcagacatc ttcccgacat cactctaata 900 actettteta egeceagete caacgegagt egegteegtt tacagaeget gtggegeage tcatgctaaa ttctgtccca ttacatctct tcctagccaa gcctcagagt ggagaggtta 1020 tetggaccaa etecaaatte gatgettata ggeggaegaa eeteaagage aaaagtegag 1080 ggatccttgg cagaacatcc acgatagcga acgcgataat gtagctacga agtgggcaaa 1140 agcgctactt acaggctcac agttcacaga acgtgttcgc gtcaaaaggt tcaacgatga 1200 gtcggcctac cgctggttca ttttccgtgc caatcccctg ctgtcatcaa caggtgaagt 1260

cctatactgg attggatcct ttctcgacat tcatgagcag cacgtcactg agctgaaggc 1320
tgcccaggag cgagagaagt ttgcaattga tgccaagtat cgcgcgttct caaattcagt 1380
tccgcagata gtgtttgaa 1399

<210> 2797 <211> 1177 <212> DNA

<213> Aspergillus nidulans

<400> 2797

60 gggcgtcgct gttcaaggct gaacagagcg catcccaacc ctgactctat attttaaaca 120 ttggctgacg ctgtttgatt cgcgatttat tgaagacctg ccatgcgcga aaagtgagtt 180 congettece coectoeget congetgega contagect gecactheac greateret taagaaatcc gctaaccaca cctcttgatg attaggtccg ctgcgacgct gccagtctag 240 gtgtgccttg caccaactgt gtggcttttt ctatcgagtg cagaattccc acgccgaaac 300 gcaagaagag ccaggcgaag cccagagagg tcggcgagta ggtggcaacc gtatacccct 360 tcacgtctac catcgactga ccactttatc atcgaatagt agtaacggtg atggcgacga 420 taaatctcag agtcaagaga agcgcgaaga gtccctgccg atgcccggca aggatgcgtt 480 540 tggttatcag aacagcaaca ccagcaacac caacgccatg gcagtcaacg gtatgcctgt gacaacactc acggaagecc aageegeeca acaageeteg caaaattega cataegetea 600 atteatgaag eegaaatttg eeegegegee eataaaggaa getggaaggg ttgeataett 660 gggcgagtca tcgaatcttt cactcttggt tcaagaccgc catggaacga ccgacgtggt 720 ccattattca ctgcctacca acatacgagg ttctcgcgcg agagtctccg acttggataa 780 tettgagtta gatateetge accagegegg tgettteeta etteegeega agtegttgtg 840 cgacgagtta gtggacgctt acttcaaatg ggtcgcacct gtcgtgccca ttgtcaaccg 900 cagccggttc atgcgccaat atagagatcc caagaaccca ccttctttgc tccttttgca 960 ggccattctt ttggctggtt cgagggtctg caccaatccg cagctcatgg acgctaatgg 1020 ctcgaccact ccagctgcta tgacatttta caagcgagcg aaagctctat atgatgcgaa 1080 ttatgaggat gatagggtga ctattgtcca agctttagtg ctcctgggct ggtactggga 1140 1177 gggacctgaa ggtgggtgcc ctaagcagaa aatggtg

<210> 2798 <211> 4047 <212> DNA <213> Aspergillus nidulans

<400> 2798

tttaggtaaa gggtagtgtc tggggcggca cctaagcagt aacgagggcg ctgcgtctgc 60 attotogaca tgotoagata atgoaagtoo tgtacatoac gacgoogaco gtactacoac cacagagtet gatactgeaa etgaategee ategeegett teatteeeeg eetgegteee 180 categtacce gtegtggtag caatttacce caaagteeta egeaeggeet tigttetget gaacctgcac ttgcccgatt cccatctcat cagcgaattt cgcgcaacaa tcacctccct 300 tggccgtgaa tccgcaacgc tcggccttac cactagcctc ttcaatgaca tgctctattt 360 ccactggcgc gtcacgcatg atttccccga ggtcattgcg ttatgccgcg agatggaagt 420 cactggtgcg cagcccaaca tcggcacgat caatatactt gagggtatcg tgcgcgagcg 480 540 caatqaaqac ctcqtqaaqc qtcaqtcggq cqagacctcq gagcaqccat ggtgggattt ccccqataat cqqaqqqcta tgcgtaaatt gttaggggag gacgggatgc ttgagaggtt 600 caggaggcaa tatcgcgaag gcaaggagag aaagaagatt tggaagccgt acctctaatc 660 ctggaactta agggetttac ggtattttca tettgeaaaa aatteactat cataacttae 720 780 cgcgcgttag atctggcagg atgtagaaac tagagtaaaa tgagtatata tcaaatatat cgtcaccggc cgtacaagac ctatcttcaa gagaacgagt ctatcgagtt gtctactcgg 840 900 atatttgtaa agacttgggc tttataaatc tttactgttc cgtcaaccct aacgttatct ttccggaaat gagcgtagcg aaaatactaa ctccgaccgc ggcaaaagag tccttggaaa 960 taaattgtct aaccataagt caaatgctca tttcgtctat gccaacaatg ggaattcgtg 1020 ggctatttac acaacaacag aaaggatcta gagccaccca ctcgctgtct acaatcagca 1080 aagtgtccaa aagagacaat aaagagcatt gggatcactc atatggaccc tgaaaacgga 1140 tacctcacag ctcccttttt ttccgcttgc aagaataagt catgcaagaa aagggctctt 1200 ttatccctat ttgacactca catacaaaga cacagacata gacagaatag ccatcacaac 1260 agggtatcaa caccatgaga aaatgctttc aaaagagaaa gaggagtagt agaagtagga 1320 gagcgacaag gaaagaaaga gcgttaatcg tgaggagcat atatggcaga gatgcgaaac 1380

ggcaacggct gaggactgaa tgccctttag ccgagaacta gagcaaacat atacaccaga 1440 agatgcgaaa aacagcaagt gctaagccac catatgttat aagacagtta acggagacct 1500 gttctaggtt ggtctgtctt cctgtttatg cttttgagga cccacaatgg ttcaatcagc 1560 ggcggcgggg ggcgagtgcg gagcattggc tgtagaaatt gtaattatag gatggtgatc 1620 gtcatcagaa ttcattccgt agetcttcgc gtgactgctg ctggttggca tcgcggtctt 1680 tgcccttgcg cctggagggt gcaggcacga aatcgaagaa attccggtat ttactcgttg 1740 tctccctagt catactagac ctacgggact tggcagcatc gggaaattca agtgaatatg 1800 ttgaagagtt ttttgagctc cccgtgctat cccgaggttc agaccacctt ggtattgaaa 1860 aaggtactcg gctctggtcc caagtggcag aagaggaact cggaggggtc tcctcatcgg 1920 cttcaggagc ataatcagtt gaacgccgcg ggagggacgg ccgagaggca aagtatccga 1980 tggagttgcg gtggcttccg gtaaaagacg ccgctgatgg cacaacggtt tcggagatgg 2040 gcgctgaaga aggcgccgcg gccggagtag caggtttgga tgagctttct tcgtaaagtg 2100 tcacagaacg ctccagagaa tcaaccaatt cttcccactt aacttcgagg ttgccgctgg 2160 gacgeteege caacteegee etgettaage attetttagt tetetgttgt aageggatag 2220 caatctcatg gaatttcata actgcagggt ctaattcttc cagttgtgaa agtctgcctg 2280 gegeaactte tagecatatt etgateagat tggegaaget tegtgeatgg tegateagga 2340 aaggaaggct ggggaatccc tcgcgcgacg gtggcggaag acgaccgaga atctggatgg 2400 gagtggcata ggatggcgta acgatgggag tcgggcgatc ggccgggatt gcacaaatgg 2460 agtegacaaa tgtettgaac teatteeggt tgetgttaag gaatttgtte ateggeteea 2520 tecaeggete titgetteeg aatgitigtea tittggetag geeetgtagg gettitggeaa 2580 tcagtgttag ggtgcgttgg gcgcgcggtc ggggatgatc tagacgcgca tcagtaaggt 2640 gttacagccg tagagaaatt aatgtagatt tacctttcaa cagtccgaac agtttcggat 2700 tcaggattgc cggacaaaag aaccgcaaga agaggaatcc agatacactg ctgtacgtga 2760 ctgagcggag gaaatcgcca taacggtcat cagcacaagc tcgaatgtgt cgaaaaataa 2820 gtcttaactc cgccgggcat cgtgaggctg aactagctat ggacttccaa acactcgtag 2880 taaggetgae cagattttte cagttgeget egagategte tgeeegatgt ateegagaeg 2940 gatcaacttc gcattcagga tcggtttcat cgatttcgta aagacgttca ccaatcgttt 3000 ettetaggta tteettgeee ageegaegea tgtggaaate aagagetttg gtgagaageg 3060 agtttcctcg gaaaaggaga tttgcttcta gggttgcagt gcgtcctaga tcgcgaacta 3120 ggacctetet atettgaceg tgetetetgg tgtegttgga atggageege gatgtatace 3180 gaagtetgtt ggeegtggae teettgtgaa taccateaat eteatettea aegagegegg 3240 atatccattc gaccgtcgac cctgacactt gataaatatt tataagtgct tcagacagct 3300 gattcaattc cgaagacata atctcagcca tgttgacagt gaggccgtta ccaaacgagt 3360 ggagaatttc ggacattggt gcgtactcct gagacatgag cacaactgtc tcctccatcc 3420 gagettteat caacateteg cegacacatt gatetetate gtecagaate ggecaceact 3480 tttcggtttc cgtacctggt tctaggtcgt cgagtcggat atccaccctt ccacacatgg 3540 cgtcttgaga agatacctca acatcatcca atagacgcgt tggatttgtg tcctggctca 3600 aagcatatgt accatgcgcc actaacgacc aatcacgttg tgctgggttg agagttttca 3660 ccattatgga aacctgagac agaaccggcg gaagatcgtt gaaagtaaac tcttctcgcc 3720 agaagggatt ggatgtacgg tactttacag ccgttctcgc ccgaatctcg ccatctagaa 3780 ggacctccgt gtagtaatcg ttggttgcgg atgccgcggc cgcattaaag tgagaccgcg 3840 actgtttacg actcctaggc gtctcatcga cgcctttatt accgaacatc ttcgcttcag 3900 ttaccttgac ggttagcatc ctctcgattc ggaacatatc ggtaagggat gttgtgttgg 3960 cattgccaga gtcaactgag cctggtgtct ttacagtgtc atcctcgggc ggattcgccg 4020 4047 ggccatacag ttccggtgtg gtaaagg

<210> 2799 <211> 3867

<212> DNA

<213> Aspergillus nidulans

<400> 2799

acteceaceg teacegacat cagtacgtte geecgattet ataatgattt teeegeggtt 60

ttettggaaa gagegaaage aggatagggg eggaggacea tggaggageg atggaataat 120

ageaaattge catgagaaag aattgtgatt getaacggag getetttgat catagteate 180

egtgeeacee acacteagga ggttettgga gageagggte geegeateeg tgageteace 240

teeetgatte agaagegett caagtteece gagaacteeg ttteeeteta tgeegeeaag 300

gtccagaacc gcggtctctc cgctgtcgct cagtgcgaat ccctccgcta caagctcctc aacggtctgg ccgtccgtcg tgcctgctac ggtgttctcc gctttatcat ggagagcggt 420 gctaagggtt gtgaggttgt cgtttccgga aagctccgtg ctgcccgtgc caagtccatg 480 aaattcactg tacgtttgat acggcctctg aggttaccag tggaaatgca gctttcgaat 540 gaagaattga agtgtgatga catgatgcgc aacgcgcgga ggacacattc ggaattgcga 600 tttttcactg gcttttttgt gtgtaaaaca gctcactaac atctccttct ctgtttagga 660 cggtttcatg attcactccg gtcaacccgc taaggagttc atcgactcgg ccactcgtca 720 cgttctcctc cgccagggtg tccttggtat caaggtcaag atcatgcgcg gctccgaccc 780 tgagggcaag gccggtcctc agaagaccct tcctgactct gtcaccatca ttgagcccaa 900 ggaggaacag cccgttctcc agcctatcag ccaggactac ggtgccaagg ctatcgccgc 960 ccagcaggct gctgagcagc agcgtctggc tgaacaacag gccgcggaag gccaggaggg cggtgcagct gagacttacg cgcaggagta atttggtcat ttcttcgttc ctgtcatcta 1020 ggaagcgatt aggctttgta aaattacagc ttcgaaaaga ctcaaaatat tgatcaaaat 1140 taaaagggca gctaggaaaa taagtagaac ttagttactt cgaaaggtgc ttaagatcag 1200 tatatccgta tgcggactcg aggaatagta ggagcgccag cagctttgtt ctagaacaat 1260 tttatcatac ttagtggata ctgctgcacc agctcttgtt atgtgtgttg tagatcggac 1320 ttcttcaatt agaactggca gagtactaaa tgtcgcattg ccaaaaaata cgtcacctag 1380 ageggatagg ategggetgg aactgtttta cettttttat teatteetet ttaeteaage 1440 taaggtcaga tcaaaccaaa catcatagga tattgagtgc catgagataa ggtgtatgct 1500 atctatgcaa gtctaaatca ccatttcccg cagattgagt cttcaaaccc ataatctcat 1560 aggaatgttt cgatattgat ttcaagcgtg ctgacggggt atttcagacc gtagttctcc 1620 agcacagtgg gatgcagaat accaaaagta ccgatggtgt ggtctttgcc ggcaatgcga 1680 acgtggatag aggccgagtg accgtggaaa taagttgggt ctgtatcgtt atatcagtga 1740 ctagagggac ctttgagtct tgtaaatgag gaagacttac cgtccagctc ttcgatccag 1800 tactgcgagt ccttgactgc ggcgttctcc aggccctctt cgccgatgat gaaagcggac 1860 ttcagcattg acatgatgcg gtcaagcaaa ccgtgtacga cctcgaagcc gctagttttg 1920

ctgtaccatg cggcagcaaa gtgtctttcg tttcgactct tacgctccat cgatagatcc 1980 ttgaaggcga catcgctgac ctcgaagatc ttcatgggca ctgagtgaga cttgttctcg 2040 cggatagtct tcaaaagacc gggaagaaga cttgtgcgca cgacctggaa ctcctgtgtc 2100 ttggggttcg ccagcttgac ggctgtgttg ccgtcgtcct tgcggttaag ccaggcaaag 2160 ttctcgtcat gggagcacaa gatcagaggc agcacctcgg accaacccgc cattgcggcc 2220 tctgtgcgaa tgatgtcgga aagcttgttg atcggtaacg gctgagcaac cgtgcctgac 2280 ttgcttggga aggaccgggg gagattgtta aagccgtagg caatcgcaac atcctccatg 2340 atatctgctt gatgaaggat atctgcacgt gttggggggaa tgtgaacgtc gattaagtca 2400 ggagaagtac tagacggtgt cgcttcatat gccatcttcg tcaggagtct acaaatctcc 2460 teegeagaga getgeaagee acaacaetgg ttgatataeg agaettegge etgtgtagtt 2520 cgaggtgcaa tgtcaggagt gactctcgtc tcgttgttgt gctcagagat aatctggaca 2580 ggctcaaccc tgtttatagc gagatcagct cccgaaacct ttaaattgag cacaggaatg 2640 catgggttct tacgtgaagg gctcggatgt gtactgcgag aacatcgaaa ccatgatttt 2700 gttcacaatt tccacttttg tcttatcgag cgctgtaatc tcaataaaaa cattcttagt 2760 gtttagcgta atcttcgagt gctctccgtt gataattggg gggagagagc agacggttct 2820 gttggcgtcg tagatgactg gtaaaccggg gaatcgcgga tgatgtggag atatctgcct 2880 agatgcttgt ctttctgtag cagtattagc atccggacca gctcagtaca cagtgggcca 2940 tacatcgtag aaggccatga gctcctctcc gtccatctcc tttgtttggt taagaggcac 3000 aaagcgaatg tctttaggcg gcagagcctc atagctgaac gggcccttga tagtgtccaa 3060 gtcatgagta ccaatggaga cgagtgtcct ttgcctcgcc aaattctggt ggagtttgtc 3120 ttgcagagcg atgaaagatt cgtaacgagc cttatcaaag gtgacatttc ggaggatggc 3180 gcccgacacc aagggtctga tcttcgaagt ctagatttgg ctagtcagca aagtggtgct 3240 atctagagag cagtaactca agagtcaacc cacgtcctcc ttcacaatga tcttttggag 3300 ctctccgctt gggggctcaa ccaatctgta tttaggaaga ggtttccgtc ccaggaatat 3360 gttgagcatg agggcaattc cctcgaaaca cagcaagtca tatctggata taactgctta 3420 gcacatttcg tctggagttt cagaatatgg tgcgtaccgg ttggcgggga tttcaatttt 3480 gagttggggt ggttcctgca cgccatcgac aatcggacgg tccgaattcg ttgtctaggt 3540 taaattagcg agagtateet aagttgggaa tgaatagegt atgaatacat ettegtegag 3600 eteaatgeet ataattegae ttggteageg aaaceegeae eagaategaa agtaaetegg 3660 aggggtaeet aeegaaeteg aageaeagtt eategaatte eteagtggta tatetgaaag 3720 eetttagtea tgeacaatae eagtteteaa atetgeatag ttgaacatae tetetgeega 3780 geteettgaa aagegeggee ttgtegaeeg aaatggtagg eatgatggag gggtteeaat 3840 egeageegat gagteagata eegtteg

<210> 2800 <211> 1162 <212> DNA <213> Aspergillus nidulans

<400> 2800

gcggtacaat ggccggaaga cccagcattc gtaaagtgag caatcccgag ggcgtgcttc 60 togggattta aatggtatot otgggcaaca gactoacatg catoaatgca ggctaatogg 120 ctgtacaagt actcttctgt ccggtcttgc cggagggcca ccgtcaggtg agccttcatg 180 acaaggcaat agtgcatgaa ctggacaata tgatcaggcc ttagatcatt cgatgtatgt 240 300 atggcccacc aagacaaacg ggtctgataa ggatgatcta ccgcctctcg aataattaga 360 aggeggggaa atgaaageta etggggegga cetteactag egetgatgte ttacaggtee gcgtatcttg ggcgagacat ccatcaacca ttcatgtata ccgacgcctg aacaacgcca 420 ttgactatta getcategge gtttettage tgatacegte tagtatatgg tgggaggttt 480 540 attaacaacc cggacaaacg gtcgaccgtg cagattagat tccagagctg catcttctca ttccgctctg cctcttccgc aggcccgttg ggctttttta ttcgagcgag ctgtacggcc 600 ttgggtagac ccattagctc cgcaagcgcg atgagatgtc gcaattttag ccagcccttc 660 tgggcgtttc cacgacccat ttgcctgttc cagacgtttc agatattgcg agaaaaaaga 720 780 aatcacaaga cgagcttaca agcgaatgaa gtggatgcac attccgagcc cttgaaatgt cccgaccaac ctatcatgag ccaggaccag actctcaacg gcgtctgaca cggtqcqcqc 840 gaaatctatc cgacgatggt atcccttcga tggactgtcc gggctctcgc ctccctgcgg 900 cacctgctgc geggtgatag ccagagtcaa tagccacgaa gccagagcaa taatgtccac acceggteca cacatetett egtaacgate gaggatttee tgeetegage tgggeactga 1020

cggttggggc aacatggcat ggaccatctg cagccagtca taagtgcaaa ccagcatttc 1080 cgccgtctgt tetttagtgg ggatcagett etgeageget gggcgactet eteggegagg 1140 tgcgeggacg etteacteta eg 1162

<210> 2801 <211> 1466 <212> DNA

<213> Aspergillus nidulans

<400> 2801

gggaaaaagc gacgagggga tagatatcaa tcaggcgtga gagtgcagca taaattgaaa 60 gaagtgtaag cagggtatgg tgatcaaatg ggcagggcaa accaagggga gaataaggtg 120 acaatattcc tgagccgagt tcgtaagggc atgccaggcg agggggcccc acttttgaga 180 cagagaattc caaaaaaagc ggaagggtcc tccgcatcca accggccgtt ttttgggttg 240 aaatatccgg gaaaacctgt aaaccatcca tggccggcga tttgagggcc taataactgg 300 360 agggttccag tcccaggacg gtccaattgg atttaggaag cctcatcccc accacaacat 420 tctttgaaaa ggaatccgaa aaccccaaat cacatgttat aggcgattcg tcatactttg ctgtcagacc agccgttttt ttgccagatt tgataaaccc ctcctggaat tccgcagcgg 480 acgcattccc cttggccgag aatagcttcg agaagtatct gtcgaagttg atcaagtcga 540 tegetacett tteaegetee aagaegtatg tetecaacaa tgatggegga gegageeeet 600 traggarate tecagettic caeccepatat tetatroetic ctecaaecte acettratec 660 720 cctgtccggc cttcggggag tgggtgtggc acgcatcccc gccgaggaag atgcggtagt 780 tcttqtqqaa qaaatctqcq tqtcqctqqc cqatcqcqta cqcaqaccac caqaccgtct ctgtaaactc tatcttatac tggctgagga tatttttggc tgcctgctgc aggtcttcaa 840 gettgacete tttageette gtgecagetg geagetegat atagaacege gteaagttge 900 960 ggttttcgcc ctctcggggg ataatcagta gactgcccgc cttggaccga atggaggctt ttttgcggat atcagggaaa tcggtacgtg ggatcatgtc catcacgccc cagactgcat 1020 ccgtgctatc accaatcata ttgtaaccga gttgcttgcg aacagtgctg tgcgccccat 1080 cgcaacccta gcttagagtc agtccgtcga aaagcgcgat ctccggctcg agaaacttac 1140 caaaacatac ttcgcctcaa atgcttgtac ctccccatcc ttctccgcgg tgaccttgac 1200 tgggtattta teccecteat cecetagete caegecette acateceate egtatteaat 1260 ctectggeeg ttaaacetet teattgeate gataaacaat ceattgatee gegeetggtt 1320 caggataaca tgegggeaat gegacageee tggetgta teegeegtee teeetgtteg 1380 tgagatacta ceatgteetg ageegtetga ageagaetea gteceattet eegeecaaaa 1440 taecaettee ageacatggt aegett

<210> 2802 <211> 959 <212> DNA

<213> Aspergillus nidulans

<400> 2802

aagttcaaga actgtgagct aggagtcgga cgccgacata cgctgtatcc catgttcgga 60 gttggcatcg taagtccctt aacccacatt cgaattaatc tattctgata tcctagttca 120 catctgacgg cgagacttgg tcacgctctc gagctctcct ccgtccccag ttcactcggg 180 accagatcag cgacctggat ctagaagaga gtcacgtaca gcaagccatg cgcgcaatga 240 acgttgaccc agccacaggc tggacctcct ccattgacat ccaagccatc atgttccggc 300 taaccatcqa ctcqqcaaca gagttccttt tcggcgagag cgctggcagt caggcagag 360 420 ctcttcgcaa cgggggcacc ctgcccctta atcacttctc tggcgacttt gacctcggcc 480 agtggtacgt tgcacaacgc tctcqqttcq aaaagttcta ctqgctggtc gataatcggg agagtcgagc agttgtgaag cgagtgcatg aatatgtcga tcggtttgtg catgctgtac 540 600 taaccacage ggaagacaga attgagaaga gtcagagttc aagctacgtc ttcctcgaag ctctcgctgc atcaaccaag gaccccattg agctccgctc ccagctcctc aatatcctcc 660 tegeeggeeg egacaceact geeteettge taagetggte tateetaatg etagegeggt 720 atceggaagt atteaccaaa ctgegetetg teattetege tgatttegge teetacacat 780 cctcccggga caagatcaca ttcgcctccc ttaaatcctg tcgctacctg caatacttcc 840 900 tcaacgaggt cctacgtctc taccccgcgg tacccataaa ccgccgcgtg gcaacatcgc cacgacccta cctaaaggcg gcgggtcggc tgggggacaa acaattctac ttcgtgcgg 959

<210> 2803 <211> 1415 <212> DNA

<213> Aspergillus nidulans

<400> 2803

60 tgctgtggct atctataaac ggtggtcagg aatggctgta ggtggcggat aatatgtgtc cgtcctggct ggtcagagag atatatactg ggtcttcaaa aacaagcact attatttcga 120 gaaatgggtg gtttctcggc cgaacacatc ctaggataca acgagtaggg aaaaagggcc 180 tgagggtgaa gaacagggat gactataagt gtaaattacc acatacagac ggtttctgtt 240 300 gactcaaggg gtcttgtagc gttaggatga agggtgggcc ggctaaattc acacggggag actocacaco cogoacatag cotgagttgt ogttggogga taatottoog cotaacggga 360 420 agtataagtg ttctataacc ctattggatg catttagccg cgctcttttg ggcgtaccgg 480 agatgcacct ggacatgatc gggctgatcc agaagaggcg aagtgacatt ggggatgtgc ggtggcctta agaaggtgcc catccactga agaagtgtag acactactga agtgtaggcc 540 600 taccatgagt tggggggcgt tcacaggttc accgtcacta gacaaacgca gcatggcaaa 660 tccacctcga acgcccctaa gccagctgct gccgacgctt atccttggtg gagcggactg tagctaccaa cacacgcaga gcccgaacgt cgagcagacg agagaggtgg tgggccgcgc 720 ttttgaactg ggggtgcgag ccatcgacac gtgtacgtac tatgagccgt cagaggcgct 780 gctaggcgag gcgctctcgc acccagactt caccaccaga tatcgcagga cggactacat gcttatgacc aaggttcgcc gcgtaagcgc gacgaaatcc gactactcgc cagactggat 900 cagatecteg gtegegegga acceteageg gatacacaeg aggtateteg aegtggtatt ctgtcacgat aacgctcttc gtcatggagg aaagggactt taggccatcc tggtggctat 1020 agaggtgggc gactccggca cagggcttga cattggggtg cagggtttcc aataacacqc 1080 ttggcagagt ggttgccgcc cgcgtaattt tacqgcqact gtggatgtat ccqaaatqtg 1140 ccaatggcgt cataacaccc gcttagaagg aaggtttagg attaagaggc attttaattt 1200 ttttaatgcg cccttgtaac gttcctcggt gagcagccat tgttctggga tgttttaccg 1260 gggccttagg ggccactcgg cttttttctc agggcgttgc tttttttatt ctaacaggca 1320 ctgacatgcc tgtgtcatat gatttaccca ttttgtatat tatgtttttc atatttattt 1380 tatattcaat ttagatgctg ttttctcatc tcatc 1415 <210> 2804 <211> 1663 <212> DNA <213> Aspergillus nidulans

<400> 2804

actcgcacta atccactgga ttggatctga catgtcgcag tgcttcaggt attgctcttc 60 aatgtgcata ttcacagttt gtattacatt tgggcagtta tctggagtgg gtccggaaat 120 tgcaccactg gtattagggc atgtatatgc cactcgccga agggcgtagc agatatcgca 180 ccggatgagg aagaaagtca tgtcggtaaa cccaactctt ggtttgggcg gctctttcgc 240 gtcgggagaa aggtctgcgt cgttgatatt caaggggagt ctagtgtcaa acatctggtc 300 atgaatttga acgtccgtcc catgatcctc agatgatcga aggtcaagta gaatgacatg ccaccatage etgeggegea teteggette gaatggette aggtegaagt tgttgeeate 420 ccgatgcaag ccgagtcctt gcgctagacg aagtacaaga gcagacatgg accagacaaa 480 tttagtatcg tcatctcgac ggacagcatt tagaaagatc accgcagcct gcatcagggt caagetttgg gtgttcataa ggccggcttt agaaagtgct tgctccacag caaaccgata 600 acggctaacc aaggtgtcac gggcttcccc taaccgaatc atgcactgct cagccgacat 660 gctgacgatg gccgcaaaat acatagcaag caccaacgcc tcgttattct tgtcgagagt 720 780 ttccggagtt ccggcagcaa cagcgaagac ccgctgggcc gctggcccat agaccacagg caataacggc ttgacattct cagcataaat gtcccatagg gctggaacct tgctgggagg 840 cggatggaaa ttctcgaggg aatgtgcaag agaataaaat ccaaaaagca ttccgtcatg 900 cattgtagag taactagggt gttcgggaga ggtataatca tcgccgtcgg aggatgaatg gtcaagaata tcctgcagtt cttcgatcta gtccacttag cagcttctca acaaacatac 1020 aaaagacagc tgagataaaa ccaacctcgt ccccgagact tgcccaaaac cgattactca 1080 cgtaccggct ccgattatct tcgataacga gtcttccaaa ctcgtgctcc aagggaggct 1140 gttagtcggg agtccgctta ctggacatcg ctggacctcg ggctcggact cattctgagc 1200 aggctgagaa ggctcaggca gctcgccgct cgagcgatca ctatgccgct gaagcggaaa 1260 cggctgagtg ttggtatttg caatagctgt ctcaactata ttctcaagct gtcgcagccg 1320 cgacagcagc tctgcgtttt cagcaggagg ccgtttcaac ctgcgcgggg ctcggcctgg 1380 aggaggaaag atacactcga cccctgccct gacgcagtta gagcagggag atcttttgtt 1440 gcagcggacc ttccttcgac ggcaggtgac gcagcttctt atggttaaag aatcgtgacg 1500 agaggccgga ttatgagaag ctggaggggc attctcattt ccattgtcca gagataaggg 1560 qqttqqttqa qgctttccag agtcagctgc aggctgaggc tgcggtgagg acgacatgac 1620 1.663 actggaaatc tagggttgac cgtgtcacat cgtcgatgta agg <210> 2805 <211> 923 <212> DNA <213> Aspergillus nidulans <400> 2805 tacaacataa caaaggtgat acggtgcgaa tcgtatgttt cagaaagcgg ccaccggcaa 60 120 cgctgtttgt ccagaggccg agatggcaaa agaagaaata aataaatata gtccaagaag aggtgaagat gtaagaggaa aatgagaagg cttcacatga tgatgaggac aacgacagcg 180 240 accaaaacag cgaagaagga acccttgagg actcgctcag aaggggctgc attttcgccg 300 teggtgetgt categgtace ttgactgaag gegeeteetg aagaateaga getegaegag cctccgtttc cggtcgagga tccggcgatg ttaccagtac ctccctggtt ctgaggaacc 360 gtggagttgg agatggagcc agtagagttg ccactgctgt cggttttgtt ggaaccgagg 420 tecatqttqa qqeeqqtqqe qeecaqaqaa qcaaqcaeqq tattqttqte ggtgatetea acqqaqcttt ccaagccctt gtcgtccttg aagtcgtaag agacatcgcc gctgaccttg 540 gcgtccgaag gagggtcata gcattccacg gtgatgtcgc tgtagtaggc tgcgtagtag 600 ccctggttct tgatatcctc agagtcccaa tcgatctcac ctccagccca ctcaatggtt 660 ccctgagcat tgctagcttg accggcgggc cagagggaca gctgcattcg ggacggggtc 720 tgggggtact cgtagcggtc ggcagtctca ttgaatgtag attccttggt aagagttcga 780 840 acaacctcgc cgtcaaccaa ccagtcaatc ttctcaggag tccagtcgat ctcgtaggtg tgccaatccg cataagtatt cccaccgtcc accttggact tgccgccgtt atcgtctaca 900 923 gaaggtcagt aacaaggttg gca

<210> 2806 <211> 2172 <212> DNA

<213> Aspergillus nidulans

ttctcggggc ttcaggagtc tgttactggt aatcttttcc gtctgctcgt cgtagctttt 60 ccgtagtgcc aaaattcgtt gcgcttcttc cagctgaaca cgtaactcca cagtgctgtt cegaacggcc tgcategtgg aaagaatteg ctetttetea getacatace getegegtte cttttcatta ctcgtgagca gaaactgtat gcgtgcgata ctgccctcaa aggccgcaaa 240 gtccagggat gcatcttcac gaaactggcg ccattcctca agcttctttt gcttttctgc 300 360 ctccgcagac gccgtagcat cctcgtcggc tccctcgggc ggaggcgtag ggagcgtcgc gttcgaaata attatcgatt cgggattcag aaggcgcttc gagattcttt tgaaaggttt 420 ctcctcgacg ttcagcaggc gggtcttgtg gagggcatct ggatggctga aagttaggtc 480 tgaaacaaat atgagcaggc aagaaccgac cttcgtccgc ctgatcaagc agtccgtaag 540 600 acgtcatgat ggatgtgctt atccgctacc ctgaataatt agcaattgat ggggggcacc gcgtgtttcg cttgctcggc caccgagagg gcttgggtgt ggtttaaatg gagcggtagc 660 ggtcagttgc agttgcggtt ggagcaacac gctaggcgga aggtgactcc ccgtctggtc 720 tgaatactcc catgogggtt gctctctcga actatcactg caaatctgct actattgctg 780 ctactgtcat taccccatct actcctaatc tacgtttagc atactttccc aaaccccgtc 840 900 ggcatctgtt ggctctattg gagcccagct tttcggctga cttcttggat cggcccgata ctgggatccc tcttctgcgt ccactgtaat catcttggct tttcgaactc gtctactatt 960 gaaatccgcg catgccaggt cctatttcta aaacgatgcg aaccaggtcg actccttttt 1020 cgaaccagga acctcgaata gaactccact gatgggaagg tctgttggta tcgactcgtc 1080 geceteegtt ttgegeegtt tteeetgate gagatgaegg agatgtatte gggteteeat 1140 gtgggccagc ggtttgcatc attggaagac tttaaagctc tggtacggag tatatctgtg 1200 cggcaacatt gggaacttcg cgtgacgcgg agcaacaaga agagtgtggt gataggctgc 1260 cggtcctcgc ccaattgctt ctttcgtgtc gtttgtcgtg caaacaggaa cgcaacatat 1320 atcagcagte tteaggaeag teatagetgt egaegaaatg egaeetegae gaeeaagaee 1380 ccggctcgct cggaagcctc ccatgtgcgg ttcctgctca gtgagatacc gaaactattt 1440 gacatgcgaa acaaaatcaa ggcgcaggat attgttgacg cggtgaaacg gtatcacgga 1500 tacgatatat ccactaggca ggcccaacgt gccctaatca gacttcagca gaggggttct 1560

cagcagcaaa gcgatgcagc caactcgtca agtggggagg accgacagga gtctcagcca 1620
ccgcctgtag aagggcagag tgagggttca gcttatgctg gcattccggg tcagagatgg 1680
atgcctgagt ctgttccgcc gaatctagtt gataatcccc agtcacaaaa cgaagatcca 1740
ccaaatccta ccttttccgc tacaccttta cagggacagc cgatacagca acatccccag 1800
cagttacaaa atcctcaaag gatacagtcc acggttcaaa cgcaacaacc actacctcct 1860
cctacaccgg ttctgcaagc gccagcggtt ccacagcatg agccgacgtc cctcaaccat 1920
cccctacaccg cccaagtaac ctcacaacaa ccttcctatt ctctaccaac accaatacaa 1980
cctactcctc gacaggcagg gctcaccaag tctccgacac aaactcagcc ccaacctact 2040
caaggccatc cttccgcacc gcaactagtt cttacaaatt tcaagatcga attctcctgc 2100
accacgtgtg gtgctctcaa ccagagcttc tttcctaatc aaggaaacgt gactggcgg 2160
cattacattc ct

<210> 2807 <211> 1038 <212> DNA

<213> Aspergillus nidulans

<400> 2807

aaccacatta tcaqtaaqat cactqtqctt qqaqqaqqqc acacccttcc atcttaaqcq 60 tagaggccgc catccaccat gggcacgtgt cgagcctatg atgcctcagt gagccacatg 120 tgattgtccc agcgtattac ttctaggtgc attctcatat agaatatgcc gccagaaaat 180 cagctgccct cagtctgacg atcttaagag gttggccgaa acaagtataa atcacatgtg 240 toqaaatgac tacqtcqttt atatacaqtc acctqtqaqt gaqcactqta qcqcaqatta 300 gccaaggacg ggtgctgagg ctctaaacca gatattgtga tgctcattgt taacgatgtg 360 tgaatatcca aaaatatcca aatgtcgcta tgtcatgcaa gagaaatagg tcaatatcga 420 caaaagaaca gaqagtatqg acaqagtaag atcaaagatc gatcqqqtca qaqqgtactg 480 egtecactic ateticeage teateticag tgagaactee aattecactg teaateegee 540 tgcgatgctt tcctcgacca atctctacgt ccataaaccg ggtcatgctg acaggggtaa 600 ttggctcgct gccaatgccc ttatcatccg actccagttc atctgacttt agctcccaat 660 tggcgctccg taccttagcc tggcgacgct cagcgttgac tgcagccttc atcgatgcga 720

acgcccgtgt ctgttccgcg aaccattat ccaacaggcc atcettget tcaatctcca 780 gtcgcatttg ctctttgaga cctgcattgt agcgattgag tttctcagct tctgtcttgg 840 ctgcttccag tgctgtgttg agttccgcaa tacggacatt caacaagccg gtctcccgtt 900 cgtggtctgt aacgttttc tccaagttct cgacagcttg ttggcgctca cgctcaatgc 960 tttccatttt ggctgtagg tcacagaccc gtattctgtt ctgctcaata atctcctct 1020 gctcgcgaat ctgctttt

<210> 2808 <211> 2291

<212> DNA

<213> Aspergillus nidulans

<400> 2808

cttcctgggt agacaggtga cggaagggga agttggaagg aacatgttat ttggagctgt 60 atgcgggcgt gggtttccct aatcactttt acattgatta cgccctctac aaacactact ttccaatgat ggctctggga cggtataaaa ggctgattgg agctgtatat gatggtattt agtactatgg gtttccgatg tttactcaga ctggacatgt gcgtgtctta cgagtactat 240 gagtattaat ctcaaaggca aatttactgt ctctctcgcg cccactacag gcaaactact 300 tagtctgctc tcttttcgga acgtgaatta agtaatattg agatgatgtg cctgaaggga 360 agcaagaaag cacaggtagc tggagtccgt gcaagagata ttccgctagc ccgggatatt 420 480 gatcggcatg cagacatgtc caccccatta aacctagtga tgatgttcgt agcacttggg ctgtagggag tgtaaacatg cctcctcccg aagcagctgg aggtttgcgg ctgagacgag 540 agggttcgcc gccgcaggga ctggagccca taggctcgtc aacgttgacc ggccgtttga 600 gctgttgtct gcaatccgat tgggtcatgt tggacttggt gatggcatcg aagtcattgc 660 cagtgagcag ttttcctggg gctgttttgt ttcgttcagt tcattctctc tccccttgtg 720 tttctgatat ctgcccgtgc tgtcttccag gtcttgtagg acaaggaact cccgcgaaca 780 agcgcacgct tctcactttt gactgtggag accgtggcag taggtgttac ttcagagccg 840 agcaatgtca cagtettatt etgeattteg ateeggeteg ggeeetatgg gagaacgage 900 tttcatccaa gatcagttat tctgctagtc aaccatttcc atgtaatttg agtgagagtc tagctaactc tagctggctt gacttttgta acaaaagcag acagccaact gtgcttacag 1020 teettttgta ggeattgtgt aggteattte tgtggatgae teeggttgag aeggettgaa 1080 gaaggacata tatgggagtg ttaatctata aattttttaa agttgtataa ttaccgtaac 1140 atccataatt tccatgattt cccatgtttt tacttatttt tatttttaat atataattat 1200 tttgaaaatt tgtatgtata cgaacaactt accgccgctg gtctcctcca aacccaatat 1260 ctacagtata ctgacatcga ttctctctat atacttggcc ccatacgcaa acccgcattt 1320 gccactttgt cctggaagct tgggtcatcc acggtgtggc tgctaaaatt ttcccgcctg 1380 acccataata aagaacggtg caacccccgt ctcttgctga ggagccgttt caaagccgct 1440 ggttcagtag catcccatta tatttcaggc aactgccctt cgtccccagt agtggtatag 1500 gtcagtgatc tatacagaac agaggatcag atcattttag aggagagacg cgtgcggttc 1560 tccaggactg gatctgccgc cacgcgaatc agcccaccgt actttagaca aaagtattct 1620 gatacgtcgt cctgagcgta ggaactccac tgttccacga aacaaccact aggacgggtt 1680 tcatagggca gttcctgact gtaggccccg ccagggccct cttggagggc cgaatacccc 1740 tggcaaacgt tttaacgggg tgtcgagcat tgactctttc tacagtcttc aacataacca 1800 gegetgeeat ggeataatgg etceeacact ggggeagetg eecteagaac ttateettet 1860 categocaaa catetegaeg teeegtetae caattteetg etacagaett geetgegett 1920 taacaggett ttgggcccgg tgctctacaa actcgcccgc cggtatcgga gtgtgcctgg 1980 cgctggcacc cccttgatct gggctgttaa gaccaaccgt ctcaatgtga tggaaaggtt 2040 gctttacggg aaaccatggc cagctgataa cgagaatggg acgacggctc tgcacgaggc 2100 cgtctatgcg caaaacgagg acgcccttcg tatgctgctc agggctggag ccgacgtctt 2160 cgccctcaat gctaacagag aagcggcatt gcacgcggcc atcaagtgcg aatacgtact 2220 cgccgcgagg ttgatcatcg gtgtataccg actgttatgc cgtgggaaag ctacgcgtgg 2280 2291 cactggaccg a

<210>	2809	
<211>	1358	
<212> <213>	DNA Aspergillus	nidulano
<213>	Aspergritus	IIIUULAIIS
<400>	2809	

cccgagttct ttttaatagt gtcttccaag catgtcacca agcgcctcaa tgactccgca 60

ggaacttgca agaatctttc aacaccctga tttctcggtt cagcatccga ttgcggcggc aqcaqtqcqt gtqagctatg cggtttcgta ctgccagggc atagagcagt ggaccgggca 180 gtctctggta tgtccatgga atccggagat ataggctctt ctggttccgg tgacggtgga 240 aggeteggtt getgggtget tgaatgetet teggaaggea gageageata caacgatttt 300 ttggtcacat aaggcgagga ctgcttggtc tcgaccagat caaacaagct accaatactc 360 tcaacgtctg actccgcgac agacacagct ctgtcgggag ctgttaaatg tgaatcctcc 420 tgcttctttt gtctaaacgc agggacttca tctctcaaaa tcgctcgagg gacgaagttt 480 qaqatqtatc qqtcaqattq tactqtctta ctagagacaq gaggtgagca agccctgcga 540 gtaggetete teaaaggeaa gaagteagae geetettegt eactetttet ettetteet 600 cacttattag taaaqttcat cctaqqaqca gcqtcttcag tctggcgccg gtgtagctca 660 720 tcaaactcct tcctaatttc ggacgatagc gcgttagagt cgaagtcttc agtcaaatcg attgtgtcaa tatcctgaaa cgaagacggt atgtctagct tccgtttcgg ccgtacgggt 780 qqtatcqctt qctctttqcq atctcgaaaq gatggaatcq tactgggaag ttctacgtag 840 tgtcgtgcat cagtcgatct aatatctctc attatgttgg cggaggagca attgtacctt 900 caaccatttt atttcgagga gtctggctga cttcctgtct tacggacgaa cttttggagg 960 ccttgcgagc cgagttatgt aactcttcgg cgctgagcat ccgtggtttg cttgctgata 1020 accegtgate taacattagg egeggeatat etttgtegga ttegatatet ateacattge 1080 ccgcagggtc attgatcgcc gattcgagaa taggctgcga atccttgatg ctgagctctt 1140 ggtggctctc aatcaaattc aagattggga ccggattgtt ttgagagccg gtcggattga 1200 catgggtgtc ccacgcgagc ggtgtcagaa ctggatatag cgacgggcct tgatccaaga 1260 gccattaaaa atgggtcttc aaattgcttc tagtcataga ggcgtgtatc tgtgggcatc 1320 1358 ctttagcaaa tatcgagggg ggtcagacga gctcgttt

<210> 2810 <211> 1424 <212> DNA <213> Aspergillus nidulans

unsure at all n locations

<400> 2810

<223>

60 ccgattagtt gtgactatgg acaatgactc gtttgaaagc accgcagagg ataaggcgca tcgaagttac ctcgtcatca gaacattgca caaaccgagg atcaaaagcc atctgaggta 120 gagatatete tatttagaca aaacacegaa tagaetgeta taatacaatg gacacattat 180 qaqacataaa tcactqcttq acctccqact tattcaaagc tgccttggcc ctttgcctct 240 cccqttccat qgcctqccqa tacqcctctc tqcqqqcatq gttacqctct tcccgcttcc 300 360 aatcctcctc ttccttqcqq cqtctctcat aqtcctcqgc cagcttacgg tccttctcgc tgagcctggg cggttcagcg agtgaaccat cggcgttctt ttttgggccc tggccgctca 420 gctcctgcat tttctgggtg gtctccttgg tgagcttctc cttggattcc ttgatgttgt 480 540 tgatggcacg gtcaatgaat ctgatcttag gttgctcagc ggcaatcttc ttcgcctcgt 600 tgagettgge gtttteaege tetaatgett eagtgateaa geggaeggee gtgttgggtt cggctgggtt cgaacctgat ggttgcacag ggttcagctt ctcgatgacg gtcatgccag 660 720 tggccttacg aaaggttgcg tttgcgaacg cgtaggcctg gagcagaccg aggaaaccgg 780 tggtgaggaa gtacgcttgc aacgcagcag ggaagaaagc tacgaagaag aaagagaacg caggaatgcc gtacatcata cccttccgga ttgtcgccat gtcgccagac atgctgcttc 840 900 ccgtttcacc tcctttctat acaggggcga attagcaatg gactcagacg tatgtggggg gccacgtacc ctaatactta gatgaaggac agtacagcag agaatgggga ggatataggt 960 cqqatcaqcq actqtqaaat cattgatcca cqcqaactgt tccgcagcca agccgggcac 1020 aggcaaaccg gccataccct cgataacacg gaagcaaccg aaaccgatag ggagctggaa 1080 tactaacggc atgaacgtat tgcgcggtac gataccaaga ttggcgttgg tcttagccat 1140 ctccgctctc cacttttgtg cctcaacctg gtttccagaa cgagcagcat tcaacatttt 1200 ctctttaatt ggcgcaagaa taggttgcgc gttggccagc cttgcactgg tatctcctgc 1260 gcgccaaaaa agaggtgcca tcgcgaggcg ctagcagata gccgtttcga tcctcttagc 1320 atgtcatgcc agcaaatagt tactcttgat cggacagttc cagtacctcg agttagcagt 1380 cggagcgcca ccgcactgca gtcagtagat ccgaagctng ggtc 1424

<210> 2811 <211> 785

<212> DNA

<213> Aspergillus nidulans

2811

34.

60 atogtggcaa atoogtttgc tgtacaggtc gtcgaatgta tgcttgggcc gagacccgcg ctacqcttct acagtgcgaa cacagcattt caagccaaag accggcagcc agtccatata 120 gatgtggatt tcaactttcc aatgattccg tggggttacg ctatcaacat caacctcgtc 1.80 gaaacgacgc ctgagaatgg ggcgaccgag gtctggttgg gcagtcatac tggtacgagc 240 300 agggatgtgc ttgatcccaa acatgggcac gagcggatca gggagaagct actcgaagaa cgccggaaga tgggaagagg tggaatccag ccggaaaggt tgccaaaggg gagtctggtc 360 atcagagata tgaggctttg gcatgcaggt atgccgaatc agacgcagga accgaggatc 420 atgctggtga ctattctgtt ttcccattgg taccggaatg accagaaaat catcttaccg 480 540 gagagtgtaa agggggagat tgacagatgg cggggcgtcg atgcgtgcgt ccagtgggta gaggaagggt atgactatct gcagggaagc catgatcatg attttacgtt aaggccatag 600 gcattccttt cagaaccttt cgtggctatt ctgagtcgag tgggaatcat aactgcagtc 660 720 tecatagggt cqtcatcqtc cacctggacc taatacagat qcctgaacqg actcqccqqq 780 aaatatqqqq atcaqctqaq atgttaatqq aactgcccac tcctagacgt ttgcgtaaat tagct 785

<210> 2812 <211> 2119 <212> DNA

<213> Aspergillus nidulans

<400> 2812

gggccgtaag aaataagaat tttagtattt aaggaaggaa tgagatataa ggatgagtat 60 gatattaaag tgtgaagata ttaagagata atataagacg attgaaatag taaagactaa 120 gccacaggat aacaagagta gaaaaaaaag cagaaaaaag ggatataaag gaggatagaa 180 taagcaagat ataacaatag agggaggagc taagacggac gaatatgaca cagtgatatg 240 ggtgattgca aaaaactgta ataaaagaaa aaggataaga caaataacgc agtatagact 300 tatgcgaaga tgtaatagcg ataaaggaag atttggagac agaaaattag gaatgaaaac 360 aagttacgca tcatgaagtc cagtattta agaggcatct gggaacaccc cacaatgaac 420 ttaagtcctt tccgtgcaca atgggtccag tccaattaag cagcataata tgtaggtcga 480

aaagtgtcaa tagtcaggcc cacgagagct tcagctctag atcagttgta agcggtaaat ggctctttat aatcccgaca ttaggttcaa agtagtggac aaatcaatca agcgtccccg 600 tatatacatg ccgatccggg aacctacgac cccagtccct ttctaacctc ctctctgacc 660 ttccgctcat acgcagccct ccgttccctc cacatcttcg cagcctccac atttgctggg 720 ctttcatcat tcggctccgc tagcatactc attactggga tgagaatctt ctccactctt 780 tgtataggcg accagcgctc cgaggcatgt tcatagtggt tcggatcatc gccgggtggg 840 tgtagaatgc agatgcacac tgtgccatcg ggatagactg cccaacggaa cattagccga 900 960 taaatctccc ctttcgttca aacgaaaaga aacatagagg tcacaactca ccattcgcat gccaccttcc cccgccgaca aacttcattg tcggtggact taaagggtaa tccttagggc 1020 atttgagctc agcagcaaaa accccacctt cgtaaggggt gccttcgggt ccctgtatca 1080 aggetteeca gtgaaacatg teatetteag agacaggeee egeggtaate eeateeggeg 1140 ggtttgttga tagtgtttta tattcgcgga aaaggcgatt ctgcgtcatg gatgacattg 1200 tggcggtact aggtgtatag atagtaatct attacttgtg caggtctgtg gaaggataca 1260 caaagagcaa cgtgatggtg gtgcggagaa gtcggagtag tggggaagga ggagggttga 1320 cttgatcgaa aggactggac cgaacaggag aaaggcgcga aatgcagtct ataagaatga 1380 aaaatcggga ttagaagtgg acctatccgg tgtgaaccct gtggcaagaa ctcgatggca 1440 accetgagga gaaaaggatt aagatetgat ategtaaggg tegaggteat tgeeactege 1500 cgtgtttatt cgggagagca tattgatgcc ttaggcaatg ttcacttttc cagaagtttc 1560 agcgtcacct agatctagaa tagataaaaa agtcgtgtcc cttgaaaaatc gctaatagca 1620 gctcgttcag atgattatag tacattgcct cactgtctat tttgaaaata tagtaatcta 1680 gaagaagtca gaccaatcat tcccatcttc cccgtcacca ccctcgtttc cgtcattgtc 1740 tgaccagtgg tettetgaag accagetgte atteettet tetggtgtee acteatetee 1800 gtacggccca gttggagcat ttcctgacga attctgctcc atatgcggtt gcggttgtga 1860 ttgcggttgg ctggccgtac tagcttgctg ttgaccttgg gccgttgcac ctctggacat 1920 cgcatcatag cctgcgattg tacctgcgcc aatggcaccc gcagcagcgc cctcagccat 1980 acctccagcg gcgcctctcc caacggtccc ggcggcagct tcgcctacag ccccagcctc 2040 gecegeggea ceaecagegg caccaceage tgagagatea eegecaagte egggaaacea 2100

<210> <211> <212> <213>	2813 933 DNA Aspergillus nidulans		
<400>	2813		
tacttcaagt	t togactacaa tatogatgto actoagggga oggatatoag cactto	ccagt 6	60
ccaggagcag	g cgcaactcga gcataaccgg gcatacttga cgtgggtaaa tgaact	tcttg 12	20
gatagatato	c ctggectggt ggttgagaat tgttegtetg geggaeaaag gatgga	actac 18	30
gccatgctgt	t ctacacatcc catccagagt agcagtgatc agcaggatcc tgtaaa	aatac 24	40
gcggctattt	t ctgcagcgct accaactgcc gttacgccag agcagggcgc cgtctg	gggta 30	00
tatccgcagc	c ctgaatggga tgacgagacg aatgctatga gtgttgtgaa tgcgct	tgcta 36	60
ggacgtgttc	c atctcagtgg aaggctggat ctgctgagtg agcaacaggt cagtc	ttgtt 42	20
aacgagggca	a tggatatcta taggagtata agaggggatt tgccgaatgc gacggo	cgttc 48	30
tggcccctcg	g gtttgcctgg ctggcacgac ggatggattg tactagggat ggcgg	tggac 54	40
gggggtgaga	a ggttctatat ggctgtttgg agaagagggg gcttggacac agtag	tcctc 6(00
ccagcacctt	t tgctgagggc gcgcgacctt aaggctgagc tgctttatcc aaaggc	cgttt 66	60
gcgacccatt	t ttgagtggaa tgtagcagag ggttctctca gggttggatt ggcato	caacg 72	20
ctttgcgctc	c ggttattcaa gttaacggtt tcctaagtta gcatgtaagt ctttco	caaaa 78	30
gtctcatgtt	t aggtgaaata caatcgcctt tgaaaatcgc tctctgtagg ctataa	atctt 84	40
gaccttgtga	a ataggattet tetaagttea gtagtatget aaaaatataa aggeaa	atgta 90	00
ggatacaagg	g ggctactgga gattacagga gtt	93	33
<210> <211> <212> <213> <400>	2814 1427 DNA Aspergillus nidulans		
	attttatete tettttegte caccattttg caccageeet etett	gaaca 6	60
	g taatatagee eettgtgtte geageacage ttagagaggt egtaat	3	20
goulouguady	g caucacagee correspond yearcage crayayayye cytaa	Jugge 14	

aagataggtt gccagctaaa gtaaactata taaattatat aagcagttct gccagtttgc 180 240 taatacgcca atctcctata atgcccatgc gtttacactg caatagtggc cagccagtgt 300 cttctatcag ttgcccatgg ttgcacccat agcctgatag tcccatcatc agatgcagag ccaatctqct taccqtctqa aqaqcqqtqa ctacataaqa ccagaaaccg ccagaagacg 360 420 ctaagagggt ccaagtcgcg atcattactc gaccaattcg ttcacgcggc cagatccagc 480 ccctggcggt ccatcgtgca ggcagtgtca attatgcgta tttacagaac agcaagagca gaagctgact ttgggagtgg ggggacaggg tatggttgga gtataatata ctcgtggata 540 ttgtcaccaa gcagacaagt tgaacaagtt gggatccatt atatcagcat gggcttcttt 600 agatcaacct caaagggttt atttatatct tgaagacgag acataaagag cggatagagc 660 aactgaggaa ttttttgatg ccaatatctc tccaggatag atctgctgtg gttcaattgt 720 gatgaactga agaatactgc gtgatttatg aaaagaggtt tccacaggac gagctattta 780 cacacgatag ttcttggtat acggagatcg ggcttttcta ggtttcaatt tagagcgaaa 840 900 tgagatatca acaagccaga agaatacagg agcggctata cggcaccggc ttgctaaagc tttattggac ctaaacgagc tcttaaagta acatgatttt ggcacagttg aagagattta 960 aatcgggaaa tcaacggcct gccatctcgg ctgagccgat caacatattc tattcttcat 1020 cccactaaaa taattctaca tgaagagaat gtctagatca actaactcag atggggaacg 1080 atggcagcca tttgctgatt ctatcataag gcctggccgt tgtctgcgaa tcatacactg 1140 gcgaatctgc tgggctatac actgaccgat ggacagcggc gagtacagcc tgtacggcga 1200 acgaccagge ettatatgtt attecateca gtatgaccat agaceteett gagtgetact 1260 attacaacgc attetetgat gettggacta taggtttact gtgcgggggc cetecaacag 1320 ggacctgttg ccaattgcac ggatgacgga tcccgctgat tcttttgcat cgtccgacac 1380 aatctcacat ttagtggaca cagccgttcc ctatgcaggc ataaccc 1427

<210> 2815 <211> 719

<212> DNA

<213> Aspergillus nidulans

<400> 2815

teceggttee aaggtggtaa ataaaataag tegtaggeag agtgtagate tegeettata 60

120 teteaactge accagaette acctetgeet teetacetet etetecatee cateaceege 180 catgeeeget cetteaacca ceeteetgat egagggttee tteteegaac tegeegagga 240 atttqctqcq tacctcqatq ccctcaacaa gcccgacgat accaccgttc agaccgaggt 300 cgccccgctg ctgcaacccc tccgcgagca ggaacagaat gatacccagc ttgatcagag 360 caagegggat gaggtgetga agaagetggt eteggeegee aetgtgetea acaeggegee 420 ggagaagggt gcgcccgtca ctatatgaaa ttgctggaat cggattgcat actgattgtt 480 ttqaqccaqa qattacaccc qcttacaacc tcctgatcca cctcgtccag caggcctccq 540 accetqueat qtteetetet egeatetget catacetege caageccate ceeteetete 600 ctcagttcqq tqcctctctt tccatcqcca tcctgtccac catcttcaac acactcgccc 660 ctaccgacte cagecgatte caegttetet tggccattgt caeegtgate egecagtet 719

<210> 2816 <211> 1808 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2816

caatctccat atttcgggcg cagcttgaag atgagttgag gaaagaaagg tataaaataa 60 taattgagtg tgtgactgtg aaccagcgcg gactccacaa atgtgagtgc agtaagtgtc 120 ctgcataaag agttagagag agacttccac agctagaaag gaacatacct ggcaacagga 180 240 gggagagccc agaagtcatc cattgctgta aaataagtac tcaaaggacc ataatcgagg ttqqaaaaqt aqtcqaaatc actcaaqttq qcqacacctc attctqtqtc cqattaqcaa 300 cctgagattt gcgggagtca actatagatg ttcaaaaaaag aaaggaaaaa aagacagact 360 ctacttaggt caaaggtgga tatttaagcg actgtctggc ctcttggtac atcattcttc 420 cgttccgcta gagcctcgtt gacccacagt acatagcgca ccagcacaaa tgcacaagtt 480 ctattcgtac tgcattcagc acgttttctt caaagtatat gccaatatac gcggatacat 540 agtcggatat aaaataaact aatgactgag atggccgttg aatattagtt tctaaagatc 600 660 720 gactgaaagc acttgcagca gctaccgcaa ggcacccaat tcaagtacgg cggcagtacc

tgagtctcaa gcatattcat tctccaacgc tgcctacgcg agcagtgccc ctcacagacg tacccccatc tttcccctca atccatacat cccaagagcc gtctccagta gactttggtt 840 900 teccacatat egetatgtee tetteaaegt agageggage atgattettg taggtaatat cgctgacaga aaaacctctt ccatgcagat aatgccgaag ggctgtaaga agcagtgtta 960 acgtcagagg accatgaaca agaaggtctc gatagccttc gacatcgcta gtgtatcttc 1020 tgtcgagatg gatcgagtga gcattgaaag tgagtgccga aaaacgaaag agcaaggctc 1080 tggttggctt catctgatag cggaatttcg ggtccgcggg agctttgtga ggngcagtga 1140 gggttagcga tgctactgcg ctccatgaca ccagttaact ctacacacat ttaatagtct 1200 gggggcttga gagaacttcg ccttgtcttc gtccagctga ttgacagtct tgtctcgcat 1260 gaataccaaa tccctgttct cgacgattga tgcgtccgct ttcatgtctt caccatcact 1320 ccatattcgg ttcctgatct ctttttcggt ctcattttcc tgcacagtgc ctatttgtct 1380 ctcgatcttg actattattt tctcgtccnc aggtcgccct ttaacgatga catcacggat 1440 accttcaata catacggcgc gacccccgtt gagcgatagc ttattgttga ctgcgagcct 1500 aactctaccg ccagcccata ggcgcctatt gaagggtggc ccaggagcat gcagaatgtc 1560 ggttccatcg gccagaagct ggcagagggt atcttgtgga gggaaataga caatatggtg 1620 agccgaaggc aagtaggagg ggccctcgac tgttgcaaga gtttgcgaat gaggaaaaac 1680 atcaagette gaaaacaagt etttgaagga caggaceace acatgtgeeg gttgaggttg 1740 gaggtaaaca aaagtcaatg gaagttatat gcatgacgat acttggtcca cgcgccgt 1800 1808 gttcatat

<210>	2817
<211>	1193
/212~	DMA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2817

catgttctgg tctctcatat gccttgaagc tactggaagt gcatgcttca ttacaaagta 60 atagcgaact ggtccaggaa ccctttgcct tgctggcgcc acgaacccgg ttccatagat 120 cttggcaagt gggcgatcat atcttgcaac ctgcaggaac agcgcatgaa cagtgacggt 180

ggggtaagcc gatctatcta cggaatactc gccttgagtt gggtccggat atcggcttgc tgtgatttgg tggataactc gctagcaggc ccaggtagcg ggatcagacc aaggcgccgc 300 aggggacaaa gcaatagccg atcccagaaa cgcagcaggg tgctgacatc aaagctcgct 360 tagtaggcgt acagagaaaa catccagttc tttcgtcact·tgtcgtaaag ccatggcttg 420 ggcgtaggcc cctcaagcct gaaagcaggg atccttatca gtaagactgc tccagagacg 480 agaagatctg atatcaaata agatccatta accaagctga aaactctaga ctatttcagc 540 attgtggcca ctaatcaacg ttaaggatca cagctgatta tggaggagct tttgcagctc 600 actggacgtc cggagtagcg atgatcatac gagctagtca ccgagaaaaa ggaacgaacc 660 attagttcaa tccactgcca ctgacatctg agcatccatg cggcaaatgc ggagaatgca 720 ccaaaggggg gcagatatag ataacctcgg cctcgaagct ctgagaaata aaaactgata 780 actgataagc cgtcatgctg aagcatccaa cagcagctgc tgctgaccga cgatctggtt 840 gacageteae aaacaattte tegteateeg egattatgae eegagategt egecaaagtt 900 gtggtcttat tgggttttag aactttgttc atgttttcct tgcccacatt gagtacgggg 960 catcttgcac gctgaaaata tagttggcgt tcattgtgat tgactttcaa cttcatggtt 1020 attcgatcaa taggagtatt ttacaggctc cactgaaaga tatgagatca tttacgtaaa 1080 tgaagccata cactgtatgc tggttatcag caagagtcaa ggcggattga accaagggta 1140 1193 cagaatccgt cggtcgaccg gantggtttt aagggacggc aacaacagac tca

<210> 2818 <211> 1519 <212> DNA

<213> Aspergillus nidulans

<400> 2818

aaattgcetc cactggggtg tacaaacttt atggggaaaa tecageegeg gaageteteg 60 getacgtgee caagaatgea ttetttatta aatgegetgg etgegagate tetgtgttta 120 ettetgtaga gaageateet tecaggttgg agggtttgea aceggaeett gaetegeega 180 aacgegtgaa acgetgetag gaatettgge egteegagag atettgaagt tggtgtaegt 240 eatgagatat tteatageag caattaegae ataeteett agtegeatgt atettgaeee 300 aataecaagg ttgaecaacg tatateatet getagtagte egteecaata taceegtata 360

cggcagcgta ttctctaggc tgatcacccg aacaaccgag gtggcaacca aggcagggag 420 ggtataaagc acccaccca tgcaatgcat cgcattgcat gatgattgca tgcagattga 480 ttgcaacccc gagtaaaaag catgttttcg accccgtcca gtaccgaaga atgacaacgt 540 ctgatttcgc agctcagcca gatacccttg tccgagcagg ggttcagttt aggcctgcgc 600 cgcgactact ctgtgctccg ttgatctgga ggaggcctag cgttctgtaa ggtatgatga 660 tagtgggctt gggaggtcat atcaagccgt agtattagta cgaccaacac cctgtagcat 720 gattaagcga catagattca gccattcaga actgtcagaa ggttaatgat ccgcttccca 780 tettetgacg atcacactat catecateae tgegettgea ttegeattgt eggegeatea 840 catcaagccc gatccccgaa gttattccgt gctaatgaat caggcaagat tcctgttcct 900 tcaacatgaa agcatccatg gcttccagca tcggacaaat cgacctgcta ccaactaccg 960 actaccgact taggtggtat gatatcgaag ggatattaca ccacaatgga ccgggttaat 1020 caaccgcaca ctccgtccta ctatattcta cacataaatt gggatatatc agtatgtcac 1080 aggacatggg catgagggcg tggagaacaa actccaggtt tgatacttga ttctgctgca 1140 tatactgcca ttctataata tcttgaaaac aaggggagtg ggggaccctg ccatacaagg 1200 gagccctaga tgctcctcta ggggtgtagc agattccgaa aatccggaca ctgccaccaa 1260 gacgcagcta aattacccgc ggtcaacagc caccgaccat acatagtaat ggcagacctg 1320 aattcttccg atgaatatca gtgcagccca acctccaaaa taacaaaaca gggcgattgt 1380 agacggcccc tgcccctgga cgttgcgctt tggaaataaa cggaccgatc cgcttagccg 1440 ttttgcgtac ttagccgttt ttcgtatcca tggtacatac tgtatgatcc caggcatagg 1500 1519 tggataagcg gaagcggaa

<210> 2819 <211> 1326

<212> DNA

<213> Aspergillus nidulans

<400> 2819

ttcaagaacc ttgtgcgaga tctgagcagc agtcttgtac ttggttaggg tatcggggtt 60 gttcaaggtg tagtctacca gcgatcaaag ccatggttag ctgtgagcat tgcgacaatc 120 agataaatcg cagtaaatac aagagtgtat aatttagctc aggaagaatg cgttcagctt 180

ttgaggccac atcagtggcc gcaggtcaca gaggctctgt tctcatccag ttgatgacgc 300 cqacaaagca agcgggaaac ccacaaaacg cggacgtttt tcgcactaca gaatgagggg tactgcttgg gcagttgaca cttaccaacc tcgggggtct gagtctggtt ttcagccatt 360 420 gtgaataatt ccagtctacc tcacacagcg cgaggagaag acaagcaaca agcgcaaaat 480 cagtcgtgcg gaggagatgg agggagaaaa ttagacagcc tggtggacta cctatggagc 540 tggagctggg cggtcgtgtg cactggtgag taataatgaa ggcggggctt cctgccgtgg 600 gctcgcaatt acatacggtt tttcttgcca gccgtcgccc taagattccc ttcgccctac gcgcttgatt taccatgtac gtcatgcatg tcggtcccat tgctcctgtg actagaaatg 660 ctagcgtctg tttcagattg ggattctgct agttcgaatg ttcagagagc attcgatgat 720 780 cattgcatgg tcaaataccg aatggcatta ttcaggagaa tcatggtcat cagtgagctt ctgcgcccag ggtgatttct tgcgggcttt tagatgcgga tagaggattt tcataaactt 840 aagggagaag tgtcttttgc gggtttcctt tatccattgc aagggttctt aggagatctt 900 ggtgtttcca gactcggttt catttatagc gtacgttagc taccttgccc ttttttatat 960 gggaattcat ttgttaagtc cttttgcaat tttgtaaccc ataacatttg gctggttact 1020 tgtggtgctt ttggtatatc ctggtttgcc ttttgttagc ctttaatatg tctccattag 1080 acttctattg ccaatctttt atttctcctc tctttcgtat tttactatct ccttatcgaa 1140 ccttaaactt tcttttgttt ccttttctta agtctttgca atttaggggt atgacatatt 1200 ttgctaatca tacataatat tttgtcaatg ttttatattc tatttgtgta tctcctattt 1260 tatcctgctt ggttatatat tgtgtgttaa attttctatt tgctctcttt ctttatttta 1320 1326 taataa

<210> 2820 <211> 825

<212> DNA

<213> Aspergillus nidulans

<400> 2820

agttgccggg tgacagtaga gcaaagcatg aaccctctga aaatggaaag aggaaaaacc 60 ctcaattgat ggccggtaag tcaacccccg cggattacct agagtcttag gtgagagaaa 120 agacctttgg cccataatat gctcattgag ccaagtctca tgttcgagtt acaaccgaac 180

tatgqcatag tcgacgagaa tcctaaagcc aaatgtcacc tcctctcaga gcaattctgg caataacatt atgcggatat caatgtgcag ctcttcatga tatgcgctga ctatttcatg 300 ctaataggtc cagtcaattc ctttgtagcc attaattgct ccaaagtgct gatgggctct 360 atacaacatt cgcaatgtaa gacccggtcg aaatttgcca gaacttgtca aagtggccag 420 480 cagcataaag gcccgcatgg cccttccagc gacagttgtc accgagaacc acgaattcgg 540 gttgtccage teeggtcagt gttggcacaa gaegggegge etgetegagg cettecacat 600 cggtacccca cacaactaac tccaaccctt cgttaggcag gggtcgaagg aacatcgcac ccattgcccg ttcgtagtta atggtatact ggccacaact cctgcttgaa cccgggtcca 660 teggteeatg caggeeect ggaactgaaa ggeacatatg cagagteatg eggeegteag 720 780 aaacacgtat agggtatgac gaatatactg aacccgaagt tcattcccta acgagacggt gatagcattc ccgtgatgtt ctgcatcaaa tgaaccgcaa tgtct 825

<210> 2821 <211> 1805 <212> DNA

<213> Aspergillus nidulans

<400> 2821

acgctgagta cctctcacag gtatacaaag ctcaaggact caggaacctt ggctgctctt 60 ttctccagcg ttaacttcaa ttccacgcga cctttcctgg acgacgatct tcaggaggca 120 acagaagcgc tcaacatttc cacagcagag atagaaaagc aaactgatgt tttgacaacc 180 240 cagtatgaga ttttgagtcg acggcataaa tgcaacagca atcgagtatt ccaacaaaac 300 agggaggtgg aaagggtacg acggaagcat gaggcagaaa ggcagaatac agctgctacg gtaactgtct ccggatcctg atgatcatat gccactgcta agaagtgcac agattagcga 360 420 attggcacac gaattagaag tcggtctcaa gaatgaagca gagaaatcaa ccacggacgg gaaaaaaata ctggccgctt tgacggcgcg gctgaaaagc aacgacagat tactatcaga 480 cctggaggct cttgcatcag gagtaaagtc ttctgacggt gaggtatcta tcatgaaacg 540 aacaacagaa ctgagcagta tcctctctcg atatattgcg gaagagatat actgcagact 600 tgatcgcttg tacctggaga aagtcctcaa cgatagcaat tcggccccag gcgccacgac 660 tgataaggat ttggagacag cggccagtct ggagcaggag atagattctc tctatcccga 720 aattgatatc ttggccgaaa tatcaaccaa gcaacaatat gttgagccta tactacggca actccaagaa tatcatggcc agtttcgcat cgcctgtcat aaaaaacttg accttgtaag 840 ctcctccgtt gtcttgtctg ccttgccgct taacctgacc ttcactgtag atatcaaaaa 900 ttattggaga catgacgact tctacagaaa accttatcac aagcctccaa gaccgcgaat 960 cactetgege cactettgag etttegeate tacatattgg teegaagtgg tgacateatt 1020 ctggactcga ctagctcaag acgagagaca atgagaaggt tttccacgca accaacagca 1080 ctgacagttc agcccggaac gcactctgct ccatgtccag actcaaagtg tttaagtggg 1140 ctctacgccg cttgggcctg tcaaccgagg ctgtcttcca ggaccccgaa gctgtaggag 1200 gagtccaagc cttaatcaag gcacgaaaaa acatgcttga tgggctgcac agttatggca 1260 ttgccagtga ctcaccactg acggccgaga tgctgccgac agaccgggca actaggcttc 1320 ttacttcagc gcttcaagcg gattccttgt tcacaacctc tctctcgagc gtggaacatg 1380 agaaaaacct ctcagagctc gagtccaggc tcagccgtat ccagaaaggc atcgagaggg 1440 tcaagcttga cgttgtctat cagagggaca aggaccagga aaagttcctg gaaaggtggg 1500 ggtagtgtaa gaattggtgc caaactggag ccttgctcga gtccatggcg tcagtgatag 1560 agtttgacat tttccggctt ggatcgagca gttcctgtac ccaacacgtc tgcctagcag 1620 aacaggette aatteeagte atateteaat egteacagge caacataate gatgettata 1680 atttgttggg ctgactgtgg ctggtgccgt ggcacgtgga cgttcctgtc aagtgtattg 1740 aatattggac catgacgaac aaacccgata tcgtccaagg caggagcttc agtgtaaatg 1800 1805 gagag

<210> 2822 <211> 7556

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2822

cagcttggaa ttctctatat aagtgtagtt cagcatccta ggcttcttta cattgtacaa 60
ttgcaagtag ctccttggga tagatcttgt agttgcattc agctggggaa ttccttttag 120
agaagtaggc acataggtgc aattcccctt ttttattata ttaagagaga actcctcctg 180
tattataacc tgaggagtca gtctctacta ctatacagta ggaagggtta aaggttgcta 240

ggacaggtcc agtaataaac ttttccttaa gcagatcaaa gctatcctgg cactccttag 360 tctacaagaa gggtgtccct ttctttgtca agttgtttag tgggtgtata atccctgaga agttagggat gaacctttgg tagaagttgc aaagcccagg aatccttaga cgccctttat 420 agtagtaggg gtttcctatt cctttattgc tttcaccttc tccaggtcta ttttgattcc 480 cttecetgee tqtattataa aqeecaaqta etttqtetee ttqcaeteaa attegeaett 540 cttaatatcc aaatataggc ctgcttcttc cagtttcttc aagactattt atacatgctt 600 660 ctggtgctgg cagaggtccc tattagtata gacaagcaca ttgttgatat aggctgagca gaatttatct agatattccc agagggtcca gttgatatat ttttggaagg tgctcggtgc 720 attagccaac ctaaaagggg tgactagcta ttcaaagagc ccgtatctca tatagaaggc 780 840 agteateeat teetggeett tggetatgta gatettatgg aaggeageag acacateeag cttagtaaac tatctggctt gtctaatttg gttcagtgtc tcatggatca ggggcaatgg 900 atagtagtcc ttcttggtaa tggcatttag agtatagtag tcaatacaga accgcagtcc tecteetggt tittgtacaa agagtaetgg ggetgeaget ggggaatgge tiacaeagat 1020 aaageettte tgtaatagtt cagagagtgt tttetggagg actattagtt etteetaggt 1080 tatgttgtaa agggggcccc aggggacttc aggatccttc ccactctcca cctgtacaag 1140 ctcaattttg tgatcaatcc tatctcccca gtgcagtggt agttcttctg ctttgtcttg 1200 tttgaagage ettaggtatt tetagtattg eettggtage tttgtacagg ggteaatatg 1260 tctctttggg gccagtacct tctatatatc tgctaataag actgcaaata tctcaatatc 1320 ttggccacgg caccitticc titgtataaa tcctcccatg gitgcggcgg atatcigtgc 1380 tatgttcagc tttggtaagg gcctctttgt agtactctat agacagactc cagtagtaca 1440 gaggtacage ctaccectet tageetetaa cettecatea tgttgeteca gecaggggag 1500 tcccaagatt aagtcatagc ccaggttatc aggtattaca tagaagtagg ctcctttttc 1560 tgtatgtgcc ctgatatcta gctgaacctg tataatctta ttaatctcct ctatattcct 1620 ggtcactccc ttgaaaggtt ttgggtagat agatatgata ggtatttaat atatcttgac 1680 aaacttgtta ctgattaccc cataggtcag gcagcctgta tctatcattg tacaagcatt 1740 ataggtatgg ttgactagta cctctactaa gaataggggg gtattcatgc gcgagctgtt 1800 gaaatcttgc caattaagta gtatttctct agctgtataa cccctctata cgcgactttg 1860

cacagaggtt atteatttte egacteaete tigetgtagt cattgattig giettgtiet 1920 tectggaeta tggecaectg ectagggtgt etggtaggtt ttatagggea etettataea 1980 aagtggtcag gatcaccaca gtataggtat ttgcccttag acaacctctt ttgcttctcc 2040 tetgeaggea cetgaetage tittettggg gicetggice ettitgiaca gagggeegeg 2100 acttectttt gtagggetge aatttgagta tgggtggett eccagtetat ttgateaggg 2160 gtcctagtcc aqtcagagcc tcctgctggt cttgtacaag caacatgcgt ggggacagca 2220 gtgcaagatc ctttttatat aagcctagcc actttctgga ggttgtggtt gattttgcgc 2280 agttgattat agtagttgtc atacgaatcc tcctgcctaa taccaaccat ggcttttagc 2340 aactcaacat taattgccqt gtccaacaaq qccttcttct ggttatcatc ccaattaatc 2400 cctccagcat taagaagttc ttcgtcaaat ttattcaaga actcttcaaa gtcacatttc 2460 cettgettta tigtatitae tigiacaaga geettietet gicagicagg gicaccaaag 2520 geettgteta gtaccgtgga gaattetgee catageaegg gagteteaga tttetggega 2580 gccaagagct atggtagtac acactggctg gcttttcctc ttaggcggct gtaggcatag 2640 taaacttgtt cctcctctgt agggtagcag gcggcgttga ttgcaaactt tatataaagg 2700 ttcatctgga aaggaggta gtccttaggg tcttctccag taaagggttt gacatccagg 2760 tgacaaggac agggatagct ttgtttgtag ggggtgggcg ttgcggatgt aactgtagtg 2820 gtaactggtg gatggtttct tagttgtgag ttctgtacgg cctgtagttc tgcctgtaag 2880 ctgttattct cttcttggag ctgttgtttc tgagtccgca tctctgtaca gagctcctgg 2940 agetgetgta gtaataatgt gatgetttet tetteeattg teatagtaaa aggteteete 3000 atactattat tgagattggt gagcgattcc taatgttaag ggacgtattt agatggatct 3060 tcctatctag acgtgccgta cgtacaggaa ggaattgcta aagaagaaag gagaaagaag 3120 gattgttgtt gtgaggaagt cttgtaggtg gctcaccgcc ttcaggacag cgcaggcctt 3180 ggcgangtca ctaaggtcta aggtccttgt ataggcaaag gacccataac ataagcatcc 3240 tccaactata tatactgtat attcctagta attgtttata acctttctcc ctaggatgtt 3300 ttttgatttc gcctcactgg cttgatatat aacaaaggtt tggaccctca gttttctgta 3360 ccttacatgc aagtttaaat atagaagatc atattacaag cctgattcgg aaagaatgcc 3420 tactccatta tcataatggt acagatatgg ctggaattct gcgagaattc agttttgatc 3480

aaaaacaacc ttatgatcaa tggattcggg aggtcttctt ctttgataaa gatgctaggc 3540 agtatattat tetatgetgt acagateaac aggeaagage ttttcaggaa geacagttta 3600 totaggttga totottatto aagatgatoo aaggcaagao caatgtttto agtottacag 3660 ggtggagtaa ggaatattag tataagttat gcctcttgca aacctatgcc tagcatatgc 3720 tqaaqatata ggtattttaa tatatgcata tgcctttatt aatattgagt ctcggaaggc 3780 ataccatgte atgttttgga agatetttga aatgettgea aaaattagte geeaggatgt 3840 gcactttata tatttctata atactcagca tggcatccgt gtgattacag cagatatgtg 3900 catgaagcaa ggaccaggac ttggtgatta tcttcataaa atctaccctg cattagaata 3960 ggatgaatat cttttacata tccttgtctt ctgccaggtc tatgtaaagc aaaacttttg 4020 caaaaagttt ggagatcatc ctgctaagga ggttgtctat cagttataga atacacccag 4080 tcqqqaaqaq ttctttaaaa agatggaggg tatccttgag ctcttttctt atgacaagct 4140 aagaaqatgg ctggagcata aatcaaqcaa gccctggatc ctgggtggat tatgtcctgg 4200 ctagtcaaaa atagactttc aatattagag gcttgttagc aagcatacca atatcagtaa 4260 gagtagetat ttettggata ataatactae aggeegaaag etttetetge ttggtagagt 4320 cctacagtat atattctttt ggcatatgct ggacagaagg ttaatttatg cctagcctcc 4380 aaacagtaac agaagaactc tatgctcggc tcgcgcattg caaggagact ggtattagtt 4440 ttcaccagta ctcaataaat cccataccaa gggttgccta gaatatgaga catcaagcaa 4500 ctcagaatca gaaatcagct gctatacaac aacaaaagct aaatatccta tataatgctt 4560 caaatccctt taacttgatc tatacaatgc cgcctgcggc tgagacagct gagactgcat 4620 tacttacaag tatatcaaca tctactatgc atatgccagg cagaagatca atattactct 4680 tatcagatat atctacattt caggaaggga gtataccaga tcttagccag cagtaactat 4740 tgcaagetee taageagett etatataagg aatetgeaga gagtataeta ageagaatet 4800 tagaggettg atagtatget aaacagetgt aacaagagaa taacaggaaa caagcagage 4860 tagatettet agtecageaa getaggeaaa gagaaetaga taeettatta gateaggeta 4920 gaggaggcca aacataaaat ctggtttcat ggctgatcct taagttatga tcatagctga 4980 gcaaatgtca gcaattatta cagagaagtc gactctatag tagtatgcta tttttgtagc 5040 tagagtaaat atcttatttc agatggctct ggcactgggc aaacttatgc aagtagtata 5100 gctgctctga attgcaaaaa ttcttagcat aggctcaaca gatgcaaggg atatgcactg 5160 ctqttaacta ggcctgctca ccctctttat cttctccatc tcttacatct ttattacctc 5220 tgttatcccc agcctcttta tcctccttac ttgtatcaga atccttttgc tcttcatctt 5280 ceteatettt tteteeattg ttgettgeat etggagtttt gteageegtg ttggeageet 5340 tettgttetg aactacatge agttaceata tacteagttt aagtaatata tataaactta 5400 cacctggcct tgagggagcc aggagctcta atagccgcga ggtgctggca acactgtgat 5460 ttattggggg tgggaggtgc ttcggctggt gccataggtc cttcctgcat actattagaa 5520 taaaqtaaaq catggtagga taatctatac atgacatttt ctacagggtg atattatttg 5580 cgcattgcac tgttgacgat ggaactttat accccagcgc cccgcaaaag ctggatcaaa 5640 ctgacttgaa gtatgttagg catatgctca gtatatatta aagtacttac ataatacgct 5700 cacaagcagt ggcataacag ttgaggaggc cattaactgg gccgcggcct ggttcaagaa 5760 taaagcaggc atcatgccaa caatgctcca ggacaaaatg cttcaaagta ctttgcatat 5820 gctcagtqtc acaggctatg gcctggatct tggttgtcgg ccatgccctc aacctggttc 5880 taaacaaggt tactgcaata tcagcgtaca gcttcggaat tgaggcctcg aagcttagga 5940 aaggagatee gteeteataa etteggaaaa gggateegte ggeatacagg teeggaaagt 6000 cagaaaggtt gataaaggga ggaggaagat atctgcgctt ctatcttttg tttctttctc 6060 taagettgtg atacttgttt atacaggaca gecagttgaa aataataetg cetaegeeeg 6120 ttacactcag cacctcccca gcaccagctc agttctctcc agtcatggta cctacttctc 6180 gccagcgact ctttcctcaa tagcaatgtt cttgcggctc aaagtatcaa ctacattgat 6240 tgttaacatg tgcgacaaca tgcttaagtc tgcttacttt ttgctttgtg cttagtacat 6300 acatgatgcc agtaggccga actcttgcta aagaccatgc catatatttg gtctcctgaa 6360 attgcagccc agcatctgct attatcaata tatacttggt atatatttat tacaacatta 6420 catgtattga gctattcact ttcgagatct tgttcaggtt gcttgctttg aagtacagac 6480 ctgtataagt catagtcagc ataatctaag caggtacaga gcacatgcgc actatggtga 6540 tatececagt etgaeaggtt egeegeatta aggaeetegg ggttetegaa gtetgtttte 6600 atgagategt gacegataag aggetgeata etggtagatt agttaagtat atgettaaet 6660 gaagcactcc agatgcgaaa acaaagaaga aaacacactg gggacatggt aatctgttgt 6720 tgtgaattat tataggagag caactaagaa catggacgaa gcagaaatat attgcgcgca 6780
aaacacacca ttgctatgcc ccacaacctt agcaaccaaa agtctgatgt ttgttgactt 6840
ttcatgatga ttctcagcac atattatggc taaatgcatt ctatttgtag tataaagtat 6900
agagaaatta ttattgttga atactctata tgatgtttgg ctatacagag ttcctgtgga 6960
taagataagc tgatcatggc tcagagaaca ggtgactgta gccgatcatg ggtcagaagt 7020
ctctgagcca cggtgggttc tgagccacgg cgtggttcag aaactaggct tggcgcttct 7080
gagccacgat ggcagaatcc tgaaccacgc cgagctgaga ccccccgtcg gctttacggg 7140
ggaattgagg gattggggtc acgtgtcaca gggccaggtc gtcgccagct ggctcgcccg 7200
tgacagctac gttggtgtag ttgatagtac ggcagactat tacgacaaa ctgcaacaac 7260
cataatttca ggtaagcgc agtagtta ctggcagaaa ctagatacat aataagcctg 7320
cttagtttca ctaccactgg ctggtagtta ctcgtcctga gcaccacgaa gaggtgcaag 7380
ccttgctcag ggtgctgtac acaacgcccg tacaactagg tatgctggt ctggtgttgg 7440
tgctctgctt gcaaacgaaa atttgtacgt accttatagc tggatgggat tattaggccc 7500
cccatcatcat tcatcattat catcatcatc atcatcatca tcatcatca tcatcatca cctccc

<210> 2823 <211> 725 <212> DNA

<213> Aspergillus nidulans

<400> 2823

ctgaaagatc cttgatcacc acaatggctt cctgcaccac gtagttgacc ttggtgttga 60

tcagatcgag caaagtattg acacacttct cacaagcgct ttcgatcttg attgcaacct 120

ggccaatcgc cttgaccgcg cggcggacga aatccatgtc cacctccagg gcgtactccc 180

tcagttctgc tagtagctgg tcgaagtttc ggtcgttggc tatccgcacc atgatttcga 240

gcttttgaaa cttgacataa ggtgggtcgt tgtacttgca gaaaaaaacg cggagctctt 300

tgttaaggat gtccggctgc ttttggagca aaagatcgat attgcgtaag gcgacatatt 360

gcacttcggg agcagatgat actaaggtca ctgaaacatt cattagcagt tcaatattaa 420

acaccagaga acactcggaa tacctagcgg aggggccatc ttcttgaggt agttttcga 480

tagctccgca ttgattattt tcatatgcaa gaagactgtt ttgacagcag cgagaaccac 540

actagggttt gcgtgctgga actggggtgc aactcgctcg cagatctgct ctgcttcgtt tacagcgctg gttctgtact cagacagtgt cgtgaggatt gtgactcggc cccactcagt 660 gcactcgttc aacgccatca ggagcttccg tagagagatt ggggttcctt gtagggcctg 720 725 aatct

<210> 2824 3492 <211> DNA <212> Aspergillus nidulans <213>

2824 <400>

acaccgcctt ggggtaactc aaccgcttta tttcggactc ccggtgtgga atttcattga 60 ccaaacgttt cttttgctca atatgacgct gagggctcat gccacgcctg agcacagtgt 120 taagctcaac atcgctctca atcatgtcca tgcgatcctc agacacaaga gcaggggaat 180 gtttcgcgag taatcgcagc tcttcaatgt gattttgccc cacggttgaa ctgagcgata 240 teccatggae ggeaacattg aaccaegeat etegaaacag ageagagatg taetggtett 300 gttcgagctg caaccctttt gaggagagta gagccagcgg cttcaaaagt gggctgatgt 360 cctcaggtgc tagatgtcct tcgtgctcat ctgtcgcatc acccttgttc actagacttt 420 ccaagagatg aacaaggtag agtctgtaaa gaggggaatc ccttctcaac gacatggaga 480 ggtaattcat cgcacctagg actgcattca caacattgcc atatcctttg gcgacaccat 540 cgcggaaaac acggtcatag aacttcaata gaagctgaaa ctcagcttga ccagtggtga 600 tggagagtgc cgctgtctcc ttgattatac aagcatccac tgctgtgttc agtttgctga 660 tcttttgcag aagcatcgac tgtgccaggg cactaatttg ttcatcatgg cagctggttg 720 caattgtcac tatagcatga acaatattcg gaacgttgtc cgtgatctcg agggaatctg 780 ccgaggcctg tcggaattga ataactgcct ctccggtgag gtaagacttg tcagagccag ggctcagcac attccccaag gagtatagag ttgttataac ggaatcttgg gagagaacac 900 cgagaatctg agaaagacat cgagcagcga caggccctat gcttcctgca tttataccac cctccattat gaaacgcagc agtgagcgac ttccagatga tgcgctgctg acagacatac 1020 gggagataat cgtaatgcac tttagagttg tcgtcgcaag ttcaatacac gacatctgct 1080 ttgggtctat aagggtatcc tcgagccatg acagaaaatc atcagtattt gcattttccg 1140 tcagaagcgc acaattgagg taccctgtta aggccagagc cttgacagaa aatgcaagtt 1200 gctgttgcca aggagagcca acttgcagat aatcggagcc gtcctctaga agttggatct 1260 cctcggcgat gatgccagtc aaacgattga taagggttat ctctgcttcg tcatgactcc 1320 tggcgatacc gacaccgtcc acatattcat ccaggagctc atcatccgac atattttgcg 1380 ctccaatgag agatgttatg caagatttga tgaaacgcat ataaccctct tgcagaagca 1440 tagcccctag cggacgaccg ttggtggcat aacgccgagt atatattttc caattccgaa 1500 gtgtattgtc tgaggcacca gcactgcgca ctatggatga ggcagtctcg ataaccacca 1560 taaaattctc tgaaaacatt gaccgaatat ggtcgaccat ccgcagcttt tcagtcgcag 1620 accaaaaggc actaaattta gcgggggctt ttaggaaacc aacgatcgaa gcgcaaatgg 1680 ccaatatact gacagactcg gcagggtcaa cttctgcaga gaattcgatc gcctcgacac 1740 atttatatac atattcgttc acggaatcaa agacgacttg gcgcaaagac gggtatttcg 1800 accccagatg aaggagagcg aatgtgaggt gatatgaaag cgcttcccac ggagacggac 1860 tgatatcgcg tagaaagggc gaaggacgga aaagctggcc atgggactct ggaaggtatt 1920 tggatagttg tgagactaat cgcgacgcgt gttcctcttt ggtgacggaa ggggcggcct 1980 tgcagagaga tatcaagaca cataactcgc gaatatcctt ttcgtttgtt agttaatgtc 2040 acttctactg gacgaaacga cgaaccatag gcatccgtga cataggagat tgactgtgca 2100 aaacgccatt gagagagcca ttcagtcgat ttgttaaatg ctggcattgt cgagtaagct 2160 ggtcaatctc ggactcgtgg ctgtcgtccg gcgtgctgct ggcggctaac tttgcgagtt 2220 tctccaaggc ggaagcccgg atatttggac tgaagctaca catcagtcag cgtttgatag 2280 cacaatcaga ggtctcccag aatgcgcact cgtccatttc atacgcttga gttaactttt 2340 aaaataaaat tgttcgtgag tggtgtcctt ccgcgcctct tgtcgtccag atgggccagg 2400 ggcagggatt ccaggggact cgaatgatat aggtaggtat ggagaaagat ccacgtgggg 2460 cgtcagcggc ggccctggtg ctccagcttc catacaagca agtaccgagt ggtacttgtt 2520 tecgataatt accaaageae tecaatetgt etataeetea etttgteaaa egaegggagt 2580 cgatttttag ggccagaatt actttctgtc cagagactag aagtaatggc atcatgctct 2640 gcattttgtt ggttcatttg cggcgaatca gcagttcaga ttccctggag ggatagttgc 2700 aatttaagca acaagacaga catagagtga tttcatgagc aatgtaccta catcacgcat 2760 ttgaaggata taaaagaatt gttttagate etttgaaget accagteett acaaagtaga 2820 ggeegegate tgteegtaat tagaacagga taegaaagaa eeatttttae gggeaattta 2880 egaaaggatg ttgtaeetaa ttatggaaet egaggatage gegttteeta agaeeetgge 2940 egaacagtaa gatteagatt ggeegacgaa etcaagettt tgggetttta ttteeaeegt 3000 tateetttta tttgaetaee acatteetee etgaeetttt eaageetgee etggtteagg 3060 ageaeeattg geageteete eegaeetttt tggeetataa actteaeete aageeegtte 3120 egaaetteetg etegeagga aatgtgagtt gtagagacaa taegatggta eeaagaagg 3180 ageaaagtte eetaaeege ageagggtag gaaaeeaete teeaagetgt atteagetge 3240 taattgeate eteateeta taggttaetg eagaeeaega ategeaagat eaaaagaage 3300 eccagaeggte tgagaggate agtteaeage aaeaategea gaeaeetgte ataeageta 3360 aeetaeeea teegtaaege ateatgaete taeggetaeg gaettaegaa aegaaatgae 3420 agetaeeeg ecaagteaag etetteegeg gteaeettet gaeetaggt eteeteetgg 3480 egataeeaaa ge

<210> 2825 <211> 965 <212> DNA

<213> Aspergillus nidulans

<400> 2825

acacactgta agttagggct accgactcac agaccttttt tccagaccga agccacaacg 60 tcaagcctga gctgactaga aactactgga tgtcgacata actaagttac tggcagatgc ccctagtcca gcttcaccca ctctaatgaa aatcccccgc cttaacgcgg gccatagaac 180 240 tggatctggc ggggcccaat ctatcccaga cctaatctac agcacctgta cctacctagt ggttatggac cgcgataggg aaacagtgcg aaataattat ataaagccta actgaaggaa 300 aagcaatttg cctaagcatc ccaaaacacc tttcatccta atcatccccg aatttgggag 360 actotgggag aatotgggag cototogagg ggtotttoaa gggogggoag otagotaaat 420 cttcctctgc gtctccccat acttcttcat ccttttcctc atatccttca tatagaactt 480 gactgggtat gtcctgattg ctctgggcaa aaatggatac gtcgcctttg tgatcgccat 540 cgtcgattta tacaaccgct tgcgcccctt actgcttttc agaccatact cctttctcag

gcgctcgggg agcaactccg ccgtaacaag acgcagcgtc ggcatcagtg ctttgaagta 720 gaacggaatc ttggggttat acaggagatc gtgcgcgacg ttctttgctt cgtcgcagat gtcgaatgtc gcgagctgct cgtcccagta gatccagaag gcctcgcggt cttttggcca 780 840 cattlctacg ggcacgcgca gagaggcgcc caggacaacg tattctctgt atgcctgttc 900 cgccgtttct tcgtccaaaa cgccgaatat agactcgtac aagtcaacgc caacgcgtac ataggtggcc gcaacccaga gctgcgcact gggatcatcg gcttcatagt ctgacccttt 960 965 gacgg <210> 2826 4587 <211> <212> Aspergillus nidulans <213> 2826 <400> atgtatatac cacacaccat ttaagagcag ccacataaaa acttactagg atccgagggc 60 gcgcctcggc gtttcctcca aacagggctg ggctgtcttc ttggattaca gtcggcatgg 120 tggttaatgt gtgcgtggct cttcagcgac ggcgaggatg ggattaagaa tccgcgatgg 180 cgacattcat atacaacctc ccccacctgc accggctgtc atacggtcca gcttccccat 240 gcttagacca ttcgcagcat cctggaacat gaaggaacca tgtgggagcc aggcaagagt 300 catgcaccgg ctaggctggt agcgccgtcg gcggggcacc ggcgaaattc tcggagagcc 360 gcttcagtgg accggtcgtg ttgccaaagc aggcttagat tcaggctagg caagagagaa 420 tctggagtat cctgggggtg atatcgtgca cattgcgtcg agcagcagct ggcccttttg 480 cgtactgcga gctccaaggg cctgggacgg aatatatcca ggcaaagggg ccctcaaaac ctccccgtat aagcttccct gctagcaggg accctcaaaa atgaccagcg aaggttcaac 600 660 gtggatgcgc caccccgcga tgatgtgctc ggacctagca gtggtgtaat aaccctagcg cggtctgctc ttcgccaacg attgcaaagg ctcgattgcg aatagctaca gcccaaagtg 780 ctcatcctgc ccatcggacc agatgggagt tattaacagg tatcagtgta tataaagacg 840 gacacggcgc atgccgtctt gtcctcatct cgacgtgact gcgtttcttt ccagcaaagg 900 aaccctaccc gcagcaatgg acgatatcga gcagagcggc aaaagctcgc tgtacagcca agcaaaggag gatgataagt cctccaaggc tctacctgcg gtcggacagg agaacctctc

ttcggtgact cctcctcatg agtcctatga ggggcatcac cggttcgatc ccactgcgac 1020 ctggacagag gaggaggaga ggagggtaat ttggaagacc gactttatgc tcatgacatg 1080 gctctgtttg atggcaagta ccgtggatga ctgcaggaac atctgctaat acgccaatcc 1140 agttettegg cetteagetg gacegtggta atetgteeaa tgeeetgace gacaatttet 1200 tggatgatct caacttgacc accgacgact acaacaacgt acgttataac gacgtgttct 1260 gttctatccc ttttttttt ttttttgttt ttttgcattt gtaagctcga ctaacggcga 1320 tegeagggaa ceaceateea acteetetgt tttetegeag eggagtteee egtgeaactt 1380 ctcattaaac gcttcggttt ccggcgagtg ttgcccatcc tgatgctgct ctggagcttg 1440 gtctcttgga cgcaggcttg gatgacagac cgagcatctt tctacgtgac cagagcgctg 1500 ataggcgcct tcgagggagg ttttatccca ggcacaatct tgcttgcaac gtacttctac 1560 aaaacaaagg agctttccat ccgattgtca ttcttctggt ctactctgaa tgtgagaacc 1620 ctttatctga gccatgcgtt catggagcgc tgacaatccc aggctgcccg tattatatcg 1680 tetttactgg eggetggaat tetegagatg agggggacca ggggacacae aggetggtte 1740 tggctattcc ttatcgacgg acttataaca ttcgtcatcg gcttgtttgc cctcttctat 1800 ctgccaagtt cacccacgag gacgaagagc atcctgtatc ccaaagcgtg gtacaccgag 1860 cgccaggagg tgatcatgat caacgtacgt tctccagaga ctgttgagcc aataaactga 1920 catttttagc gtcttctgcg tgatgatccg tccaaaggtc ttactcacct gcatgaacgt 1980 gctactctcc gcgacgtgct taacgcatgg aaggacaagt ccatgtgggg gctgtacttt 2040 ategggetga ttgcctacat tececaaage eeegtgeagg ggtacetgte eetgacaetg 2100 aagagactcg ggtttacgac cttcgagtcg aacatgctct caattccatc agctgtgctc 2160 cagatcatcc tgatgctcat cctgtcgaag agcagcgagt acttcgggga gcgcacattc 2220 cactgtgtga ttggcgagtt ctggtcgctg ccactgctgg ctactctcct cggtctgcct 2280 gatcatggat acaactgggg ccgctttacg gtcaccacga tgatctcagg atatccgtat 2340 ttccatccca tcgtgtcctc atggatatca gagaacacat ttgacgtgaa aaagcgagcc 2400 atcactgcgg ccacatataa cgtgattgtc caaattggct cagtcatatc atcgcgtaag 2460 tcgaggtatc cacccctgga aacagagctg accaaaacag agatctaccg cagttatgac 2520 tcaccgtact actaccaagg aaacaaggtc ttgatatcca tctgttccct ggcgcttgtt 2580 gtttttgtgg ttcagcgcga gtacctcagg cacctgaatc gcctgaagga gcggaaatgg 2640 gaggecatgt egecegaaga gaggategaa taccaageeg acettgetea aegggagaaa 2700 gacggaaaca agcgactaga tttccgcttc aagtactaga ttttggcaaa ggcgcagtcg 2760 taatgtctgt tcacttatgt tcgacgatcg gcccccatgt caggttaggg tgttcaggcg 2820 cggatactgg gaatctccgg aaaggttgtt cagaggcaga tacgtatcta agtaaagata 2880 atcttgacga taatcaagga tagcattatt gaacatcgga ccaagtggga gtagatccag 2940 cgaagtcgaa gtcgttggag tagtgacgac actgggatcg gttcgaagat cctgcacagt 3000 ggagtatatg agaggatcat agctggactg gctgtagtcc cctgggtccg tgatatcttg 3060 taggggctgg ccgtagggta gtggtatagt agccgcatca ctcgtcagcc ggattgtact 3120 gctatcatca ctggccggct gatctacggt tgtcagtaat ccactgggcc agtcgatggc 3180 gtccccagtt tcgttggact cattctgtga gaagtcagtc gcggtcacgc tatcctcggt 3240 acatgtcgct ctcgcggttt ttgattttcg attaggttta ttgttcccat tgctcggtgc 3300 tggtaagata ggtgctgagt gcatataatg tgccttggcg attttgccgt atagtatgtc 3360 caccaaagtg ctgttttctc cgccagtcaa cgccgagagg atggagtgaa gccgcgtgag 3420 gatgttactt ggccggcttt cttggtccca tcgactcgta tctggcacgg ctgcagtact 3480 ggtgacagcg tctgcgaggg aggtcgcaat ttcgtacagc ttcagctgct attcacgttg 3540 tcagctaggc actccatcca ttctttatat cgactcatag cgcttaccat gccaaggcca 3600 tgcgcctgga gcgccactcg aggcagccgg tagactacac tcaccagatc ttttcccacg 3660 atcaacggaa ataccggcga gagaaaacag tctgatgagg gttggcggcc ggtagacgag 3720 tgggacaggg ctttccatgc gagaatgcgc atccagtgtc tcgtcacgca gatatcggct 3780 ctctgaacgt cggataccct atccagggtg ccaaagccgt ccgggggattt atcctggaac 3840 atctcatcaa aggtggcagc tgtagcggcg ctggagctaa caggaggctc gagccctagg 3900 tggtagtctt cgacaatgtc gaacattcgg ctttgttcga atagtctgaa caatgtcagg 3960 agtttcagga atgcaggtag aacctcgtcg tccgcatcag tttccggcat agctgtgtcc 4020 gtttttagaa tgactggaag cttgtggagg atgcaaacac cactattata cttgcatcag 4080 aatcaagctg gcaagcaaag atatgcatgc cacttaccgt tccgtcacaa atagcaacca 4140 taacactcga cggcggatct tctgctcctc agccgcaagg ctagggtacg atgcttctct 4200 atgtaggtac atcatttgcg ccatagtaat agcctctctg aggtagagta ccgattcgct 4260 tececetggt tgttggttt catagtatac atgtaggaag aaggetgtte ggacattgte 4320 caggtteace egtgaacgat agteeaatet teteetggee teaaggeact cageeggag 4380 gacateaget gtgactgace gateegatgt egaaceacea ageegtaget gageeatagt 4440 ageagget atgetegteg egageeggaa eeteteatgg teettgttet eggggtettg 4500 ttgeaggttt geaateaagt eategaegt gageaateegge caaacegggt acatgeggae 4560 atggtaaata tagageaceg gegeaat 4587

<210> 2827 <211> 1004 <212> DNA

<213> Aspergillus nidulans

<400> 2827

caaggctggt cctgctgtcc agcacactat ccatggttgt cataatccct ggtaagccaa 60 acgaacgaac gagaacagtt cgaagaagac gttactttta tccgcagtgt ctggcaattc gtacatgcag tggtgacctt tcgcttccgc ggcagggaaa tggcgatgct ggagccgggg 180 ggcatggcgg gatcctgacc aaatcctgaa gagtcagata ctggacgaag taagggaaca 240 gccagccacc atttatecte tecaagtgae tgeegetgge gtatetgaeg taacgggeet 300 ggtatctcca aatacgttga tgggtgcatt gttggcttcc ccatcatcca atcggatgac 360 agccagccgg catcctgttc ctccaatgag acgcatattt tcctaattag ctcagtagat 420 gggcggtgga atgttgatca tcgccggatc tgtgctagca agaagtctat tggccggtgg 480 cttggctcca ttaaccggtg aactaatcta tactgagttc tcgttatgcg aaagggacag 540 gtccacgata gcggggttag ggatggctga ggtcagggac taagggtcta gaatgctgag 600 aatgtagtca gaatctatca agggttccta gcaatgaatc cttagtagag tctttaaatg 660 agccctccag tagagcaccc ttcagaggag cctacaagag gttccaagac cctcttggta 720 atattaatta tgaagacgaa aaataagatt cattcaagac cctcttgagt ttgccagagc 780 cttcttttct gtttattttg caagtgagat tatgccaata gaatcttttc agactatcgc 840 gtgcttttca aatgcagtcg tctgtctgaa taattcatgc tgactaaggc tgacaaatga 900 catgicgaaa caagcattia togitcaato gicagcatac aattagooca gggccccatt 960

<210>	2828	
<211>	1128	
<212>	DNA	
<213>	Aspergillus	nidulans

2828

<400>

cctgaatttc aagatccgag tcagactcgt agctatctga gctggaagag gccgagccct 60 teccatetge etttttggca ggtgetttet tagteacagg etgettettg ateccegett 120 gttttgtttt tgaaggcgcc ggtttagccg cgaatgtgct ggtacggatt tgatacctgc 180 cctggttaat agcttacggg gtgaggattg gcaaagacat accattaatg gcaggacttc 240 caaccgtcga aatatgatca gaagcgaggg aattattcac ttcaggttgg ggtaaaatcg 300 gctgcagatg tacattatcc gggaaataac tgaacattct aggggaaccc atcagtttga ggctcagaaa gtaagtaact agggaaagcg cgcactttgg atcctcagca ggatttacgt aaacaaactg gttttggttg ttgagcgagg agctctgatt catgggctgc ggggtactga tgaactgtgg gttgattgtc tgctccggag cacgttgagg ctgtgtaaat tcatttggaa 540 agctgagcga gggatgctga aactgtcagt aaaaaaaaat aataataaaa agaagagaaa 600 atcaagaact gatgtagcct ggatgatgct tactgtgggg tcgtcaggga atccgggggt 660 gatcgtatat tgcgataacg agttctgatg gagctgctgt ggctgatatg aagcaggtcg 720 agacgactgc tgagagggct gtggtgagtg tgtttgtggg aatgcatccg ggataggtat 780 840 gtgttgtgga gtatagaagt tgggggagaa cgagtaggac tgatagtgag cattatccgg cgcggcgacc gcccgggagt caaaagtcac ttgtccctga gcatattggg gaacctggcg 900 atcctgagaa gatatcccaa ggtcctgcgg tgttgggggg accatgggtt ggtgatgcag 960 cggattctgc tgccatgact gcggtgttgc tgactgatac agtccatggg ccgaatctcg 1020 gtgagaagat tgcgaatgca gagcaggatg gtcccagcta attcccaggg gctgatgttg 1080 1128 tgattgatgg ggtgtcaact gttgctgagg aggatgtgaa tgatggtg

<210> 2829 <211> 1754 <212> DNA <213> Aspergillus nidulans

atgaaactac cgaatccgct ggttatctgt gggctgcgcc gctcgaagct tcctgtcgac 60 atcggctgct acgttggagt cgggtgcgac gactatagtg aaaacgttgg atctcgtaat 120 gccactgcct tctcagcaac tggtacactc caggctttta acagtggccg catcatccat 180 tactttggtt ggagtggccc ctctgtcacg gttgacacgg cgtgctcatc agctgctgtt 240 gctattcacc tcgcgtgcca ggtaagtgcg ttccctagcc aaacaaacac tattacaatt 300 atgctaataa agtgtacctt gacctaggcc attcgaacga atgattgcgc tatcgctgta 360 gccggcggag tgaatataat gacagatccc cgatggtccc aaaacctggc tggggcatcg tttctgtcgc caaccggggc atctaaggca ttcgatgcag atgccaatgg atactgtcgt ggtgaaggtg ctgggctgct tgtgctgcgg cccctggaag cagctcttcg cgatggcgat 540 600 cccattcacg ccgtgattac tggaacatcc gtcaatcagg gagcaaactg ctcgccgata actgtcccgg attcaaactc gcaaagaagc ttatatttga aagccttgtc gctttctgga cttactccag acgttgttgg ctatgttgaa gcacatggca ctggtctgta acccactacc 720 tgttatcatt aaccatctgt agatatcgtt aacatattga caggcaccca agtcggagac 780 ccaattgagt ttgaaagtat ccggaaaaca ttctccgggc ctaatagggc cacaaagctt 840 tatgttgggt cgatcaagga caatattggg catactgaga cgtcttctgg tgttgcgggc atgctgaaga cgatcctgat gatacagaag cgcagaatcc ccaaacaagc taactttcgt cgcctgaatc ccagaattac attaaacgag aggaatcata tagaaatccc tactcaatca 1020 attgactggg aagctgaaaa acgcgtggct atggtgacta attatggggc ggccggtagc 1080 aatgctgcta tcgttctacg agaacctgcg tcaacacctg ctacctcaaa cagtgcccat 1140 cgggagaccc tgccctcgca tgttcctttt tacgtctctg ctcgaaccga agagtccctt 1200 cgctcgtact gtgaagctct tcagagcacc atccgtgagg tagcacagtc aggtactaac 1260 accgtgcagc atatcgcata caatttggca cggaagcaga accgagatat ggagcacttt 1320 gtcacatttc cagccgccgc tggggagcct tcagagctta tgacacgctt aggatctatc 1380 geeteegete atacgeaggt egaaagaegg teecegteet tteateetgt gattaattgt 1440 tttcgcggac agaccggaga tacagcgagc atcttaagaa atttatttga gaggtgcgag 1500 cttctgcgct ttcacgtggt agtctatctt tttcattttg gatacacgta aggcctttgc 1560 tgatctgttc ttttggggga agggaaaacc ctgtgccccg tagatctcc ttcctatttc 1620 cggttatggg gcccttccct aacaaagaat ggggaccctc tttggatggt ttcatcaaaa 1680 cccctccaa gggtggttat tttgtatgtg ggccccaag agggctaatt tggggcaaaa 1740 cccctccgt gggg

<210> 2830 <211> 3364 <212> DNA <213> Aspergillus nidulans

<400> 2830

ttcattgtcc gcgcccaggg tgaagctcga tcagctgaac tcattggaga cgccatcaag 60 aagagcaaga gctacatcga gcttcggagg attgagaacg ctcgacatat tgcccagatc atccaggaga acggaggaag gaacaaactc tacctggaca gccaaggtct cggcctgaat gtcaacgcgg gtgcggacgg cgaaagcaaa taatatcgaa tattgggggg aaaagtttca tggagggtct ccatggactg gtggatcttc taaacttcct tcccactcga gagttgtcgc gctttcaagt ggttcggggt ggaataaatc atttgtacaa atagtttttc aggtttccac 360 agcacaggcg aattgtgtct cttctctatc ataatttatg gttgtcatcg tcgacgagtc 420 480 atataccatg caaccttttt ttctagaaaa aaaaagtatc gtacattgag gtggcagcag ccctgcactt catgcaactc gtggctgcgg ggacacgagc ggcaagcgga aattttatat 540 ttcaagcggg gaaacataat tttatcttga tcacatacac cacaaatcaa gctcgcgcag 600 caacatattg tgcgtgattt aatctaaacc gtgcttactc tctcgtgtca caaaagcttg attgcctact ttttcagggt gcgtattgct cgctgtcaac ctccgtaccc tactcctctt 720 tagagggtcc tctgcgcgaa gccgcattca agataaagag cgcattagta gctatagctt 780 accgcgcccc agatggcgaa cccggtcacc gaaatcgacg tcgacctcaa cactcaagaa 840 gtectteteg cagegteaca geacgacace geaaagetee gaeggeteet eegtgeeaac 900 gatgcggccg ggaaccccgc caatgtcaag gaccctgaga caggttattc accgcttcac 960 gccgccattg cagcctgtga acctgacgag gaggaagacg tgaaatcaaa tggtgtccag 1020 acaaatgggg accgacaaac ccacgggcag gagagcacag ttgaggccgc cgtccagacc 1080 gtgaaacttc ttttgcagga gggcgctatc tggaacgacc tggatttaaa caatgagact 1140 cccggttgta ttgcgaggag gctgggactg actgagctat atgacatggt cgtggatgcg 1200 ggagttaggg cagagctgct gttgaacagg ttggatgggt atgagcaatt gtcggatgaa 1260 gaaatggaag aagatgggga acaagagcaa gagcaacagg acgccgccgt cgccgccgac 1320 gcaagcatta caaacacagc agaggacgag tccgtcccgc agctagttga taccacagct 1380 gcagcacete cacaaacage agatgeggae gecagtgtea caageteeeg etacetgaae 1440 tcagacctca cattccagca agaccgactt ctcgaccagg accaaaacgg cgtaatgatg 1500 gcctgggagt cggacatcat ggccaagtcc gcaaagcaac tcctcccgac accaggtctc 1560 cgcgtcctca acgtcggaca cggaatgggc atcgtcgacg gcttcatcca agagcagtcg 1620 ccgtcagcac accatattat tgaagcgcat ccagccgttg tcgcagaaat gaagcggaaa 1680 ggctggcacg aaaagccggg agtcgtgatt catgagggca agtggcagga tatacttccg 1740 ggcctcgtag ctgaaggcgt gatgtttgac gcgatctact acgacacctt cgcagagtct 1800 tatgcggatt tccgagagtt cttcacggag caggtgatcg gagtgttgga gcaagaggga 1860 aaatggagct tetteaatgg catgggegea gaeegaeaaa teagetaega tgtttateaa 1920 aaggtcgtag agatggatct cttcgaggcg ggattcgatg tcgagtggga ggagatcgat 1980 gtgccgaagc tcgaaggcga gtggaacggt gtccgtccgc cgtactggag tatagacaag 2040 tatcggttgc cgctgtgcaa gtacatggat tgagtgcata tagacaatat gcgggcgaat 2100 tttatgactt gagtacctgc gaggcgtcaa gagacaaata cgactacttt ataaatctgc 2160 cacttcttca attgtaattt tcagctatga tagcagccat aactgataaa aacgaatttc 2220 gatgcttcaa acaatcacaa tagtcgagtc gtcaaggaag gagtgaattg aacggaggat 2280 aacagttatg catttgtgcg ggcaccgagg gggcgagtgt atggtattta aacagagctc 2340 gtttcaagcg cccgtcactc ctcccaggta agataagaca aaatgatatg ctcagtacaa 2400 taattattcg tattatgttc taattcgatg cttagacacg cttcatgcta tgtacttcgt 2460 acgetegate tgaaaageee ttggteaggg atgegaatee atgeeeeaga atatagaaca 2520 ttgataatga caacaagcag cagggaaaat aatgcccgtc tcagtaaaac gccattcgct 2580 agaggggaat agagtcaatc atcacatcga gaattgtcga gataggccgt atgcgttata 2640 tacaagtgac ttgtaagaag gaaaaacttt ctataactgg atgaggtcaa cttctgagaa 2700 gtcaggtgga ctgcggctga agattgtacg gcactttcca tcaagtgcct ggtactcgtt 2760 actaatccag atatgcttge tgaagegetg ggtgeggtaa atetegtegt eactgactee 2820 gaggteatea egaggaatee agataaeggg aegtttggae egaagggeat egtgetggaa 2880 agetegetgg aegagttggt egegttegte gggagtaaga teeteaaget egtegtgaat 2940 geetgeaaae aaegeggage tgegagagtg teeegetaeg gggeettgtg etteggtget 3000 ttttteaage tttteeegea taegttgaat egagggaaea gegteegetg agtttgeaee 3060 aaagtattte gaeegteggt taggagaetg tgetgtttga aeggteeatg atgeeeaagg 3120 gaggeeceag ttegeetggg geteegggee aagteetgae ettgtgtte agteeaaage 3180 eegetaetta teeegeetaa ttttteaae eeaacteaeg agagtettee tageetgatt 3240 teeeeeeee eettetgag egegetaagg aagtetgeee teettgttt eteattata 3300 ttagaecaee ggeettteee geeaattta tetgeaaege atteteaeta ttgaaeteaa 3360 gggg

<210> 2831 <211> 1305 <212> DNA <213> Aspergillus nidulans

<400> 2831

tcatgagtgt cgggataaaa agaacaatcg cgcatagctg ggagcaagtc gagatcaaag 60 aatatcattg aggtcttgcg ttaccgccac agtcgacctg atggtccgac cgctctttgt 120 180 tacggctcaa ggtcgcagag gccacgatga gataaagttc gctgtggtat ttgtcctgag catgcggaat catcggaagt cggtgacgaa atttcactgg ccccatccat tccagagatg 240 gaggatgatg atgttgcaga gagcggactg ccgaaattgg gaaccagatc atccactgta 300 360 tcacggtcgc gagaaacaga tttccaaagc cccgacgagg gtctggacgt tgtccatgat tgtaagccca tacctgcttt cagcgactgc cccatgataa tggggcctga ggaaattgtc 420 gaacggtgcc gatacgaaga aatgggcgag gtcggtatac tacttgtcga aggagagcgg 480 agagaggtag gtgatcgggc ggaggtagta atggggcttg ttccggggcg cagatggtct 540 600 gttgaagcta cctcgaccag gttatagtgc tcgggccccg atgttctact gagcaagtcg 660 tacttctttg cccgctcgcc gttccgcgtc aaatccttca cgtaatcttt acgaacagcg agagtgagag aagctgtcgg gacgttcacc agcgctggct ctcctgacag ggcgccaatt

aaggegttge agecegeece atgagttaca agaatcaaga tagtategae egeegattee 780 tetgetteat tttgteecaa aaattggage tgtgaacgag teegaeggtg accaageggt 840 geggaageat catcateetg gtaccaegag atgataeggt tgatgeeget eetgaagegg 900 gtgageatgg taeteeatte ateceeatat teaeceeege tgeeceagtt etggggetea 960 egeatgetgt eecaetgata ateaaceagg acacagttgt eaegageatg ggteacataa 1020 eegtetggaa taggatttga gggegatate geataaeteg ggaegggegg tgeatatgee 1080 gegecagggt tggaagaac ateagtgtt atttteaaga ttttgeggee eeaegggta 1140 tetaeetgee taaaagaate ataaetaeeg gaacgattte gttgtgetgg eeegttggtg 1200 gtggetgaac ttgattegae tteaaattte eggteetett eateeggge ggaaaetggg 1260 etgeeceaace accaggaaag tggecaeggt eggagtaggt tgggt tgggt 1305

<210> 2832 <211> 1254 <212> DNA

<213> Aspergillus nidulans

<400> 2832

tcagccggcg cggcatgaga aaccccccag ccttcctttg catacgcctc gtcagtatca 60 atgtcgtctg taaagagttc gcggccgggt tctcgcttaa ggaatgaagt tcagttcagc ccagcagata aaaatgttga cctgtttcca tttactcgcg cacgcctcaa tgacgtcccg 180 240 tacagatete ageageeet egaegaaget eggetgaeae etgaegaeet aegaegaeag 300 atgttgagta tggtgtttgg ttgggacggc gacattgagg ggttgattaa ggatgagcgt aagtttgccg gtacccctta ggaagcttga ctgactcttt agtataccgc cacccccag 360 gcagccctgc agccattctc cttgcgcaat ggattgacga gtctgacact gaccacatgg 420 tatcgatgat cagtgctggc ccaacctcgc tcggtgactg gatgttactc gcattgagtc 480 540 agatgaacgg ccagtcccag gccaacaagg tcggccaggc ctttgtccag aaactgctcg agctcggcga tgtgcacact gcggctacga tcttaattgg gttaggtgac agagatgatg 600 660 caatcgaggt gtatgtctcg caaaattact acatggaggc cattctcatg acgtgcctgg tgatgccgac cgattggcag cgacaatcgt accttgttcg acgatggggc gagcatgttg 720 tcgctcactc ccaacaacaa ctcgctattc gctgcttcat gtgtactggg gtagagcctt

ctgatccctg ggcatctccg gcagttcatc aagcacactt caaagatatg attcccggta 840 ggtcgccagt cggatcgccg gagcctgcgt atcaaaaccc tgcaagtctc cttcacccga 900 caactactgc aggcaatcgt cagtcgctca agactccgtc gctcaagtta atcacttctt 960 tcgatggaca gccaaaccag cgtttccgat tccctggcct caaatctgac gatcgaacgc 1020 caaccaacgc ccctggaatc actccaattg cagattcagc ggccggatct tctgcccttt 1080 cacctggggg cttcgggtca tacaagctga acaatattca aagcctcaac aatgccatga 1140 attctcggac aggcacacca ggcttctcaa agcaacgtct gccgtcaatt ggagaaaccc 1200 cagtggatgt tcacccttca acattcctgt ttaaagagac aaaaaattag ttgc 1254

<210> 2833 <211> 4057

<212> DNA

<213> Aspergillus nidulans

<400> 2833

caatgtattg tttcggacgc accgattccc ttcatatcgt acaagactac ttggagtctc 60 aaacaaacag ctcggacaat accagcacag tatctcttcc gtgatgcatc gcgggcactt gatctggtgg cagtcctcgc agtacaggag ctgctccggc gggtacagcg agaaattcga 180 ccgcggcgcc cgcgggtcaa atgtctgttc gtcctcgtcc tcgtcatcag atatcaccgg 240 ctgtgggcgt ggcttcacag ggctggcctt atgcggcgac tctcttgacc tccgtttcct 300 360 ggagggatcg ggcacggagg cgtctgcgca cgggcaggag atgaacgtgt aagggaatgg acacgccatg ctgtagtagt tagtctagat atgagaaaca gagagtcgta gcctccaatt cttacctgac agtctgccgg gacccaatta aggggtgaag gatcaatgtg aggtgcaagt 480 540 ggcgtgtttg ctggagaaga gctccttatc gccaatcgac gtgctaaaga tttcctctcc gacgtcacaa ctcgcttccg cagaaatggc catctaacca ccaagcccgc tagaactcca 600 ttaagactta tcactattgc aatatatatc tcatctacac aaatgtcatc tctccgacac 660 720 ctccgccccg ttttccgcgc ctcatggacg gctcgccgca cctacgccag tcaaacccca ggcaatcctg tgctcgaaat cttcaaccgc aaggttaaac acctccagaa agaccgcgcc 780 gcacagaatg tcgaagagag tcgaaaagtc gactacctca gagatgaggt ggccatgcgg 840 900 ctatgtgaac gtcttcttgt acggcctcac ccatttctct atggagccta gctagttagc

tagcttagct agtcacttct gcagtagagg aggaagactg ataaagacta ggacataaaa 960 cgaagattcc ccaatgttct cgatctcggt gcaaacagct gcaacattgc gcgcgccctc 1020 acaactccca ttcccccct cgacgcagca gcagccccag acggagacgc agacgcggcc 1080 gccgcaggag caacgaccat aaccaccgag ggtgcgacaa tctccccagg tggagagcca 1140 gtcacccttg cagaccggat agaccacctc acctgcgtcg agacctcgtc ggccctcctg 1200 caccgcgacg cagacetece tttcaacaaa eteeteeta taaeeegcaa ggtcatteet 1260 gatctcgagt ctcttcccta cgaacccaac acctttgatg cagttctctc gtcgctttca 1320 atccactgga taaacgatct cccctcgttg ctggcacaag tgaattcgat cttgaagccg 1380 gactgtccgt tcatcgcggc gatgtttgga ggtgatacgc tctttgagct acgaacgtcg 1440 ttgcagctgg cggatttaga gcggagaggt ggtgtctcac ctcatgttag tccgcttgcg 1500 gatgtgagag atgtgggagg gttgttgacc aaggctgggt tcaagatgct tacggtcgat 1560 gtggaggata tcgtggtgga attcccggat acgtttgccc tcatggcgga tctgcaggcg 1620 atgggtgaga acaatgcgat tctgcagcgg gagcagggcc ctatttcgag agatgtgttg 1680 ctcgccaacg aggcgatcta ccggcagctg catatggagg aggggagtcg tggtattccg 1740 qcqacattcc ggctgatata catgatcggc tggaaagagg gggaaggaca gagcaagccg 1800 ttgccqaggg gaagtgggga ggtcaatctg aaggatattc ttggtggtgg tgatttcagg 1860 ccatagtcta tagcttctgt acagtatcac gaacaaacag ttgaatgaca acagagaaag 1920 ccgcttaaag actaaacagt cctccggtcc gtcatgacac gcacaatcga ccccgtcccc 1980 gtcaactcga ccagettete atgccagtte aaaagcacae teatttgttg eccaecate 2040 ccctcaccaa gattccgcgc ctggatctgc gagaaccccg tgctctgcgg cgacaccgac 2100 ttcctgggac tctgagcacc gttacttggc cctccagccg ccataccctt gtacctaaac 2160 cagegeatat aattageetg aacceteget teaegaatea aaaaagagae atggggagaa 2220 gcatacaagt acttcatcaa acaatccccc ctctccacac cgcccgggcc atccagcaca 2280 gettgcagaa ccctccccat ctcaccctgc cgaatcccct gcaggacatc aatgaccgtt 2340 gcaagatgga cctgcttcgc gccctcgtcg ccgcccaggg gcgccgtgtc aagcacgtga 2400 atcagcgccg cggcggggtc gcccgagcgc aggagttgcc gcacctgtgt tgctgtattt 2460 gtggcgtcgc tcgagccttg gggtggagga agggtggact ggagaagcgt ggtagaggga 2520

aatttgggtt gagtttgggt catgggcgac aatgtttatg gtgcgatagt ttagcgtgga 2580 cattttgatg atcgacttga tggttgcgtt gagatgttcg ctgtgccgta ttaaggagat 2640 tgagaggttc ggaagttagc tatataaatt ttagagctat ctgggggcgtc gatggttgta 2700 gacaggaggg ttaaggaagt ggttgtgttg cggtggagtt ggaggaggga gaagttgggt 2760 cgtcatcaat taagagaggc tcagtccagt tccacgcggg gaaagcaacc agcttatgac 2820 agctggcttt ctatgagcaa ggacgatcaa ttctcttgaa tatctcttct gattagaaaa 2880 aaatgcgatt atttgataag ttccagggtg ttcgctattg caagctacaa taatcaatgg 2940 tcaccttctg gtgtttgtgc ttgggaggag taattgcctt cttgcctaag gcactctctc 3000 ttaaccctac aactacggac ttcacatccc tacgggtaaa cagataacaa gtctagaaca 3060 ttgttcagct attcagatta gtgtatatgt ttcgttattg gcccagaaga tgaaacagaa 3120 aagaaaacct tcgctatgca aaatgcccaa aaatgaaccg gatgtatcgt ggtatctcga 3180 aacaccaagc cgcccatgag aacgccaaag tcaagtacgt atagactatg gtacatataa 3240 caaaaaaaat attgagcgta ttatctgctg gaaacatcgt caagggtcgt aaatgtaagt 3300 tggggcacgg agcgctgttc ctcgtcggga acacgctgtt cctttagata tgtcaaagcg 3360 ttcgcatcgt ctgacttgtt cttgttctgg cgtctgcgaa taattcgttt gattggtcgt 3420 ccaattgcag caaaagcgcg gccgagaggt tttaaaacga agccgatacc ggcagtcaca 3480 gtgtcgagga caataccaac aggtttgtcg gggatgcagc ggagtacaac agcccagggg 3540 atgcaaccaa atgcgcaagc gatacaaacg ccccactgca cgctggttat ctcgcggacg 3600 ttgaaggcct cgccgccaac gtagataatc atgacttggc cggcgaccat tatgcagttg 3660 atgccaatga accaatagtt gcgatgcatg ccttcgaaaa tgttgagttt attatcaagt 3720 cggcggttgt tgaattcatt gaatatctgc atccagacaa aggtgttgaa gacgatagta 3780 tegagetgge ggtggeggat gtetgggttg gaagacaggt agtetgacag gataetgtea 3840 ccggcgaaat agagcatgaa tgtgatgcca agctgataaa tggcctgacc gaggatcatc 3900 ttccacatgg tcaccgtgaa gagcgaggcg ctcttgggca cgggcttgcg gatgaggact 3960 cttgtctgtt ggcgcgtcag ttgcaaatga aagcgcagca aaggtgtcca tgatcagatt 4020 4057 cacccaaagc agcccaaggg cgctgagcac actctgt

<210> 2834 <211> 2454 <212> DNA <213> Aspergillus nidulans <400> 2834

taaaatttgg cggattgttc agaaaaaaat aaaaacgtgc atcttcctag aaagagtcgc 60 cccttcccgg acaaaaggag cgcgcacggt taattaaaca cctcccttgg aatcccaaat 120 180 attaccetge gecetetage cagaaacete tttegttaag eggteagaae aagettttgg cccacagaca tgcagttaac aattggcgta ccttcaaagc ggcgtgatgt tcgccaacac 240 300 cggagcaagt catttacaat gctaatgcgg aagttcgaaa tcgggggaacg gcgttctatg ccttctcaaa aaatgaggaa gtgcgcaaga agcaaatgga ggagttatta aatgcaaggg 360 tcaagacggt aaaggaaagg gaagcgagga gggaacggcg tcttgagcgg cagaggttaa 420 aagatgagag gaggaaggag attgaaaagc tgagggcgaa aaggcgcgcg gagatgtttc 480 tttctgggct tacggatgtt gatatcggag tttcggggta gcttcgcttt ttctgatgct 540 tggagtccgg ggttgtgttc agtattagca cctgatttga gatacccatt atagttttgt 600 tggccacttt tattttaact ctaattcaac catataatac taaataaccc agttgtacat 660 720 caaacgaaaa caatgctgag tcttgctcca gaataaggaa ccgtatcagt cataacgcgt 780 aaatcgtaag tcatgtttct gcagggcata tccaggccca ttattaagta gtcttctgtc 840 gttatgtcac cattattgcc agttgttgcc gagttgtaaa accaataatc agtattattt 900 ataataatct tcaagtgtag accgtaagcg gtagatcata tcctcccatc ggcgagttcc gccatgatat gtataaatcc ttcagcgtct attgattgtt agtgaaacaa aaccagagaa 1020 acgatcgaga tatgcaggta cggcttaccc tcacgattca tgaatttcag caggtgcccg 1080 cccttatgcg ttttcggggg agtgtagtca ggaaatgtaa aaatggtctg ggagagttct 1140 cggagtatga tgaattttgg gtcgcgctca actatacgga gccaccgggg ggttcggacg 1200 aggtccgtta tgaacgtcgt ccagacaggg gatctgtcat tgttagctct taatatttca 1260 gggaacgcgc gcgtagacac ctcttcattt cgcctttgtg gactgaggct tggagcctta 1320 ctgcaccggt gacagtgtcc tatatacgcg caaggcatgc acgaagccat catctattat 1380 tggtctactt aatcagcctc taatccaaaa tagcgggtga ctgacttacg atgctattag 1440 ctcctgttcg tggaaaagct catagtggcg aatctgcgac acaggccggg ctgaatcctg 1500 agagcgaagc gccaggaatg tgcagaagaa aagcaccatc actgcaaaag aatcagccat 1560 gtcactcaaa tatggtgact caaacgtact ttcaattgtg ctgaatttga ggttcgccca 1620 aaccaccaat teggageege teetgeggeg teggeatagg tteaggeatg aegggeegeg 1680 cctgttgatc tccagcaagt tcaatggaag gcaataataa tctccagact ggccgcatac 1740 aatgcgagca cggtggtcgt catcccgaac atagaaaagc acgcgaaagt tgccgccgaa 1800 agacctatgc ctgttagtcg agccatcgaa ggctcaaaac taaacagctc ttacaattca 1860 aggagttttg tgaagtcctc agcatcaagc cattcaaaca agtcgggctg tggatcccat 1920 agcaaatgca cctgccggat gtattagtat agtcttcgtc agctagatgc tgggtccgca 1980 cctatcgccc cttgctggaa gccgcgtctc cgtacgcggt tgaaagaaca cctgcgctgc 2040 ccagtgttcg ttcgctatat tagaacccaa tgaatgactg gccgcggagc tagtcacagg 2100 cgagcttggg acggcgggag ctcggggaag tgggatgtcg agaaaagacc ctgaggaagg 2160 tgaagtaggt actggtgaga gatgcaccgg ccgggctcgt tcataagacc tgcgagtgcg 2220 aggtttacga tcacccattg ggctgtttgg ggcggtgctg ttgctgcttg aggacgagga 2280 gctcacggac aatgcgccga gacgccgagc gagatggcca tcctgtttta ctaacagttc 2340 ttgaaactgt tcgcgcaggc gagacatgaa caagtagtcg ggtccagctc tactcatagc 2400 acatattagc tccaagacca attgagaatt ggggccactc actccttgat caag 2454

<210> 2835 <211> 1885

<212> DNA

<213> Aspergillus nidulans

<400> 2835

ttgetgggea gtgaggacac ggtegeggtg gtgegtggta geecagaaca teateteate 60 gegeacaaag atgetgaget gttgttegag eteatggegt ggetetgtea ageagegage 120 aatggeeatg attgegeagg caaagagace ttetgtggea attggteea tgagegtetg 180 gatgtttggt gtaaggegga aaggeacetg eteegggtta aagaagaacg eettgttegg 240 gttgataatg ggaatgagtt eagageecea gatgteacea gtegagegtg agateatgat 300 tttgttaggg taeeggttge eeatgtgeat eatataggte atgaatgeaa gageegeata 360

ttgataagcg aactggcgtc ggaaaagcca gaagtccgag aagtttggat agatcttctg gaagtagtcc agcaccatcg tcggaggaac ccatttttct tggatagccg tgagcatttc 480 ggttctgaga acctgctgct gttcggtggt acgctagaat catcagttgc cgttgaaatc 540 agtgtcagca atgcacttac attttgtttt gtctctgcca aagccctcat cttctccatt 600 gtgaaaagga caggctcgtc cttgttgatg ccaattcgtc ggcagtaatc ctcgtagatc ccttgcatgg agatatacga agggtcgtcg cgaaccaagc ggatatgagg agccaaagga accatgagag gcaggtggaa attgaggttt cgccgacgac tctccttgcg cttgcccaac 780 actccattga agatgcggaa caattgcaga attcgctcct cgcgccggca gtgtcgagcg 840 gcaggatgtt ggacagcaaa aggatgaaca ctgccgtcgt gaccgcgaat cttcagccga 900 cggtggcaga caccaatgcc gcggaccaaa tctatgtcag gcaagaagcg atcgatgcga 960 atgaagteet ggttettgte ettgtgetgt agatactgae etgggatete aaceteatea 1020 aacttgagga agcggaattc actgaggtgc ggggagtagg tttccaagaa ctgaatctgg 1080 ggtcgtcgat cgagtttttc ctcgaacttg tcccgccagc gtcggagttt ctgaatgtat 1140 tcgtacatgg ttggcttcct gacgacaaag tcggcctcaa aagatttccg aatatgagcg 1200 ggaaggatgg teteagegaa gegggttatg ttagetteeg tegeegeagg eagettgaag 1260 tectgggegt acgagecagg catgeggeca acataageca gaccategtt caacagegee 1320 acgatcaggc ggtacgcatc ctcatcgggc gggcacttga aattcttgtg gatttgatcc 1380 accatagtct gcattgacaa agcgagcaag ggaaacgcgg tcttaaggcc agacatgatc 1440 tcgtcagagt actcccaagg tttcttcagt ggttcctttt ccggctccgc tccagcggct 1500 ggattctgct gtgcaggctg aggttgctgt ccaggtacct ggagattctg ctgcccttgc 1560 ggttgttgcg gctgctgttg ttgtggaacc tggttttgag aagcgccttg ggtatgccca 1620 gggggcagag taggtttctg aacaggactt tgaccgttga catggccctg agattgccct 1680 tgctgctgag actgaggctg accttgacct ggaccttggg gctgagactg gccctggggt 1740 tgattctgta cagactgctg gccagctggg cgactgggag aagcctgtgt ttgagcgggc 1800 ggtgccacgt tagcagcttg cgttccattc actggtggcg taggcttatt ttgcggtgag 1860 1885 gcttgggccc cggcaccggc tagct

<210> 2836 <211> 5342 <212> DNA <213> Aspergillus nidulans

<400> 2836

aacctgtacc caacatacat gcgcttctct tttgagtgct cttcatgtgt ctcttcaagt 60 gtcttgcctc ttgcaccggc cgtgcaacca ggctctttgc atttgaactg cacctgcttg 120 atgacctgtg gtagttctct agcattaagt tttgcttaga ggtctgtcgt cggagcatct 240 tcctagaagc cacgcgatgc ggcctctgaa acccgtcgcg gtagactggc gagggctgga aatcgtccat gtattcgcac ggcccccctg aaagccggct cagcggggta tcggcccctg 300 accetgtece aagggageaa gacetgattg gggtagtggg getatgttgt ttgaatgeae 360 taagagaggt cggaaagtct gtatatgatg gtggtggagt aactgggcca acttgtgatg 420 gcgcaatagt ttgcggcgca atcgagtccc caagattcat ccatggcaac atgttattca 480 ttgacatgga cgaagacatc gaactcggga ctcgctcggg ttggtggaat attgaccgtg 540 ataggcaagg attggtcgta gactctggta ggtaagcagc tgcctggtga cggtagttgt 600 tgttggtgtt gcgcgccatg gttgggtact gatgcatgcc ttgatggtaa gcgagtcctt 660 gagcgacatg atcataagac ttgggtgctt ctgagggcat ccacagttgt tcaatattct 720 catcgtatcc agagagaaag tcgggcatag gcattcgttc ctgcccttcc atgctaccgt 780 atggaagtcc cagactctcc gtggacgcca tacctgctag gcgaaaggca ctgcgcatcg 840 aagcagaacc aggagttcgt tcgtacgtgt tgttggggag tgatcctgct ccgtgccaac 900 cgggtgattc cagggagccc tggctatata tacttgttgg agttggtgta ggagactcga gcggcgagaa gctcgaggtc atagacgggc actcgttgga gcccagggac gaacaatcaa 1020 cttcaacggt cagacgatcg gacaggctgg actgatttcg catgtcttcg agcgacgggg 1080 cgctgcgacg ctcttggagg ggtgctgtga cttgttcacc tgccagagca ccgttcagtt 1140 tacgttccct aagctttgca gaatctgctg cgatgattga atgagataga gagacagaag 1200 atgtgggata acaatgagcg ggatggcttc taaggccggt ggggtggagg ccagtggagg 1260 ccagtgaagg aatgaaagag ggctaatctc ggcagcagta aaagtctgtg cagaagaaga 1320 gcaaagcaaa agaatgaaga ccagagcggg tgtaagggaa acgattgagt gagtgaatga 1380 gcgagttggt cacgacatag aatgaaggtt gggcccccgg aatggaggag gagcggcgga 1440

tgaaataaac ccatgcgcag ggaatcaatg gaggcgggta gaaacagccc cgcggagatc 1500 gtcgtactca ctgagggcag tcattacttt tccccaaagg agaagtgcca gccagagtct 1560 aagagcaaag gctgaaggag gggcgcgttc gcgttcctgt ccaggtcccg agcaaaggcc 1620 aggaatgtag gctatcgagt tcctagagta cccgccagag ctgccctggt ctggacaact 1680 gtgaacagag ggctggacta gctgtttccc gggagaggcc tgtgtctctg gataaaaggc 1740 gttgaagggt tgcgcagaag ggaagaacga ggtcgagggg ttcaatagac ccgcccttaa 1800 acgcgatgtc cggatcctgg gtctcaaccc gcacgtagat cggaggcgtt ggaggaggat 1860 gcagtgggct gactggacag caaagtaatt cgtgtctcag ttgcagaggg acgtcgttct 1920 agatgatcag atgagggcca gcaaggggat ggaagtgaat caacggggat ggaccgatgt 1980 ctcaggcgga tctggatgat gatgcaggtt gtggtttagg tgtgaggatg acgatgatga 2040 tgatgatgat gatgatgtta atggagatgt tgggaggtca aagataatat accctggcac 2100 ttgaggcaga tcgatggctt gggtggtcaa gagactgcga ctgaagccca aagtggtaaa 2160 agggagtcac tgtatggaga gcagagcaga gagaaagtgg catccctcac gtctgccaac 2220 ctggagggcg agagggtgcg attattattt cgaatcttaa tctattttgc gttgccttga 2280 ttttaattet eetggttaat ttategeeaa tatteetttt teetgeettt etgeggtggg 2340 ectecatget ccaacagacg gccacaatgg ctgataccgg acctgcattt cttcatctcc 2400 cgaccactac gctttatttt tatcgccctg aggaatgcac gacctggaac acttccgagc 2460 catccatcca gagcccgaca gaaagcgaaa ctcagcaaaa aatgcttcga cgtaagagag 2520 tgcttgctcg gtatcagaag actcgcctgg aactaggtcc agtagatagt actgtatcat 2580 ttaggettee atgacgatee tggagaacta atetgaatea caateattat tgeegeecca 2640 tagagatgga tegteaceag gattgacega ecetgeteea egattgttaa eetgeaggge 2700 ctcaagtgat cggcaaagat tgacgaacag tgtggggttg ggcgtttttt gtttcgatga 2760 aacgtagcca gtgctagttc ctggatatag gggaacgccg gtgatgttcg aagatccgtt 2820 cagaaccage caaatcatet agactgetea gteggaacgt gatggeaaat accageagea 2880 ccatgcagag gcaaaccagc ccaagccaaa gtgggatacg gctggctcca ttcaatattg 2940 cctcctgtgc tgtggtcgaa tatgcataaa cacggccaat cggtctgcgc ttggtgccgc 3000 tcaaaagaag acgtgctctg accttcattt accgaaactt cagtctaccg aagtggactc 3060 gagagetatg egaegttgag tttttgeete atteetetee aagtaeggga tegteattet 3120 actcgactga tacggcaaag gctggcaacg gctgatggcc aatgcgacct ccaggtgctg 3180 gatgacgcat tctactggag accatcaatc gctagagctg ctgcatgact ctccagattt 3240 cgaagagatg tgtcgaggta gtctgaggac gtggacgacg gagggatctt gaggagctta 3300 tttcgcaaac aagtcgcgag tagtaaacaa actaggcacc gtccaataaa cccaattatc 3360 catggttccc actgcctgtc attccacggt tggagaaggc gtttgctgat tcaggtctgt 3420 gcgaacctgg ttccaactgc aggacaggtc cagggccgtc cagctagcct agattggagg 3480 actaggtcga ttccttcgac agctactcta aacggctggt gcttccagta cccggctgca 3540 catctcgatt ctaaccggtc gactcggccg cggccagtaa gatcctagtc gccgaattat 3600 ttcttctttc accgattgtt ttcttctgtt ggcacgctag gacggcactc aatctagaat 3660 cgtggtccac agggctgagg aacgatcgga gactaaaagc gtcgacgatc agaaatggat 3720 tgagtagtac ggaggacggg cttgaactta atcctcgacc ttccttgagg agcccgtccc 3780 ttgcccacat cctcgactct cgaggcctcg gcgctgattt ggtcacaagt ggctggtgct 3840 tattgtgcaa caagcgggag actgcagtcg ccgggcgaga gtcgctctcg cccctccccg 3900 teceegagte eteceeggeg taetteagaa etegeageag agaegeaaaa gtaeggeage 3960 cttcttcctc agcgatcggc ggtgtccact gtctggtatg gacgaatcaa ggctcgaacg 4020 gactaagact cttggccggc aatcatggct ggaatagagt aagcaggatc attatagtgt 4080 ggttgtctgc tgccgggctc tcgatgcaca tcatcagggc ttatttgtta gtcttgtcga 4140 ggattcggcc aatcaagcat ccattgtgtt gtttgactga gctgcttagg aagtcgaggc 4200 tcagaagccg cgactaacgc tgacgatcag ctttctcccc acttgggccg ggcacagctc 4260 ggaacgcttt gactcggctg gagactgggt ctgggaggac ttagaagggg atccattgct 4320 tctggaatgt ggatgctcaa agctcaatcg tcgatgcaag acgaagacgc tgcactcgcg 4380 tcaggatcga cggtgtggac ctgctgtcac ctcaccgccc tcgcctcttt caatggcctc 4440 tgcggtcatg gggagctgca tctacagtat cgaattctac accgtactgc tgctcttctg 4500 tegteetggt geatggetge tegetttgte cateegeeag tttaccaett cetetgttat 4560 tcactgaccg tctccagagg tacgttcagt taactcgact cctgactgat caagaactca 4620 catgageete gteetgageg tetgaeatgt cattgateea tegaaetteg aattgagtag 4680 agettggtgg cgcgageta cccagaggtg tagetgagga ccttectatt ctateccate 4740
aaatggtggg ttaaagggca atggcetaac tegataaaac gegtgteact gegeateatt 4800
cgtacctaac attgettegt ctgaggtetg aacecaggtt gatecceggtt agtgacata 4860
geggagttat ggtactgggc gegageacac ttteccacgg gttgteacta eggtgeggtt 4920
caacecetgg cttaaagtta acgtggttgg taagegaget gegeatgtaa gegagetgeg 4980
cacetgcata cagattteec atatttgac ettttaatea accacaacge etttatatta 5040
attattattt atttggacaa geatttette tatgeecaat tetaggeag gtactacatg 5100
gtattgeetg aaaagacgca ttatgagett eccegagete tggtggeeeg catggaceag 5160
gtattgeetg aaaagacgca taatgagett eccegagete tggtageeeg catggaceag 5220
gaccattate atgagetate catetatgeg taegageteg etttegett tgtatageat 5280
ttteageacg tagegeeeta teetettget ecaatagtat gecettttge attgaatttg 5340
ac 5342

<210> 2837 <211> 1500 <212> DNA <213> Aspergillus nidulans

<400> 2837

tctaggaacg taaataaact tgtgtgtatt atgttgagtg cacggtccgc atctcgttct 60 tcaatgacac atgaaatatt gatttcgctt gcacctaaga tgaacttagt tagtttcgca 120 ttatccaaga ccaagaataa taactgttac cttgagaaat catctcaata ttgacattgt 180 tctctcccag agtagagaac atgcgcccag ccactccaac catgttcttc atttgctttc 240 cgacaaggct aagaatagcc atcccaggaa ttatatcgac ggtaccatat ctctgtaaat 300 cactcaaagc tcccttcaaa tcttcgtcga tgatttgata ttcatccctc ccaacaccat 360 tcagaagcgg cctttctgag tgaagagcca ttgacacgtg gacttcgctg gtcgatatca 420 gatcaatcga cagcttccaa cggtcgagaa ccgagaatat tcctgcgaag aatccatgag 480 agagagaccg cttgttggaa tgaacattaa tgacgaggat gttgtgcttg atggtaacag 540 cggttgggcg cttagggcgt tgaagaaggc tagggctcct tgtacggaat agtctcggat 600 cgtggccggg cgtcgtcctt tccaactcat aggtggaatc tgggaatatc acggttccgt 660

cgcctttcgg attcataaca ttttttatcc ggatgggtat tttggcacgg ataacttgtt ccattgtgaa gggatggatc acctccgagc cataaaaagt caactccgcg gcttcagcgg 780 gtgttatcgc tggtagaaga cgggcggttg gcactttccg ggggtccgca gtgaaaatcc 840 catcaacctc tttccatact tgaagttccc cagcctgtac gccaacggcg accagagcag 900 cacaaagatc agtgtatcca cgcccgatct gatcgagaag gcctcccggt atcgttccaa 960 aatatcccgt gatgactgga actttatttt cgcaggcatg taccttgcga ccaagagcag 1020 ccgcaagatt gtcataaaac tcttggtcaa ggccttgacc tgaaatgtga aaatcaacga 1080 tttcagacag gtcgacgtac tccgagtcga ctcctcgatc ctgtaagaat gcggccatca 1140 ggcggcaact caacttetet eeggtgetta teaetttate cacacaaege geaetgattt 1200 cgccaagagt ctgagcagct tccaggacct tgaggacccg ttcgcattcg gcgttgatcg 1260 ctgaggtaag ctgcgtcctg agttcagcag aattgatctg gctctcgacg acgtcgacat 1320 gttccaaccg gacggcctcg acaaatgaaa gatattgttt ggactgagaa ttctctgcat 1380 cgcgtgcggc tcggagtaag ctgttcatag ttgtaaggcc aaattttggt tgataattta 1440 ctgcaactct ccatgagtcg cgctgcaacg tgtgactcac cgattcgggt gccttcaact 1500

<210> 2838 <211> 2292 <212> DNA

<213> Aspergillus nidulans

<400> 2838

ccgagagcac ccgccgtata taggctacga cgcgagctac tttctcccaa tcaatttcct 60 ctccatcagg ggtattatag ctcgccttcc acaagtttct ccatatggca gcccctagca cggcatcgcc cttgataaga ccctcatcgt atgcagcgag aacaccacgc cactgaatga 180 agagateett cagaaaettg tttetgatgg caeggettgt caateegtgt aaaaeateea 240 tgcgatactc agcattatgc gagaagtggt cgatcaaatg gcgcgagtac gtctgcaaac 300 tgtcacggga gggcaacgcc cgcagccgaa ccatcaaaag gtacatatgt aaaaatgtga 360 tttgtgacca tgtcgagaat gtcggaacaa ggcccaactc tggtattaaa gacgtcagcg 420 ccaatggctc gacgtcaaat aactgcatag gggaaagcag acctttatac caccatccct 480 ctccaacacc cagatcctcc ccagcttcgg tcttaggaac ctgagcccct ttttctttca 540

gctgcgggat cgtgtaatcc ccctgcttgg aacaagcctc gaataatctc tgggtcattc cgtaggcaat atattgttcg gccgcacccc cggggcgttg cgccatcggt acaatctttt 660 tcgcaagtcg gggcaagaaa ccagaagcat acctacagct ctgtgccttt gagccagaga 720 gctgtgcaga tgctcgtcgt cggaaggagg cattctggag ctctaaccgc ggtagtcggt 780 agtttacagc ttcacgcgag ttcgctgaca ttgtgcatag tgagcgttga gttgatgtga 840 acaatggtag aggcagttta gagaattgtg tctgcgttct cagtcagttg aaccaacgaa 900 attgtttctg ccgacagttg ctatagcttg tatcccgcaa cagctgctcg ggcggaaagg ggctatatgt acctgaaact tgatagattg atgagtgagg tattgggacc ccaatctatc 1020 aaagtatctg ggaggcattt ttgaatgact tagagactgc gccgtgagga atacttactg 1080 cttcagcgct attaccaagc ctgacctgag actagtacaa aattccggga tgatgtcgac 1140 cgtttgcact gtttgacgca tcggtttaag taatacatgc tctgattggc agatccaagt 1200 ctactgtgag gcctgctacc tcaaagtatg agcttttaca tgataaatgc gctacaagtg 1260 tgagtcaaga attccacttg attgcatatg cttgttttat gttgcgatgg ccatttgata 1320 tatcaccgcg ctgcgtgcat ggctcgcaga aatgctctca caggcctgaa acgctgtgct 1380 gagttgatag acgcccggct ggcggttcga actggatgct agtgagcagg tcgcggatat 1440 gcgtctggat atagttccct cggtctatca agatcttcga ggaacttgct cgcacctcta 1500 tgccaaacaa tattctctcg tacgaacagt ctctgctact caatctatcc gtcgagaacc 1560 acgcgttcta gtcgtcggtc aacaagggga agaagttcgg agagcctgtt agggtccctc 1620 atgatagcgg gtatatcatc ccgtgcgctt gctaacttct atgttgatga gttagccttg 1680 gaattccttg gctctcacag cgaacccacc tgtctgacga tgccgtaatc acactctttg 1740 gactgatact cccttataac ttctgatttc tcgaaatcga catataccct ggtgtcccga 1800 agtcggaaaa gaacgttgtc taatctcaag aagaaccgcg agagaagaag aagtctgtcc 1860 tgcataacgc gaattttaca agacagcata gtaataccat tatcggcgag ttcatcttcg 1920 tacaatatta cttcatcgaa gaaaagtatt gggtcagggc gtttcagcag ttcaatgggt 1980 atgggctttg aggtctcctc gaagtcgggg ccttgaatgg acaatacagt gccctcgtag 2040 tctgtactgt aggaccagac aaatgggatg atgacatctt tgataccttc atgagttgtc 2100 tctctgccaa tatatcagcc gtccccgaac cggtcacaac caaatgcgcg aacgcacctg 2160 gtttttgcc atcctttcga atgagcgagc taaagcattg attctaccgt atgatcaacg 2220 cggctaaggc tgtcaaagcg ttgaagtgaa agctccatcc actcttagca tgctgaaccg 2280 aaacaaaggt at 2292

<210> 2839 <211> 1453 <212> DNA

<213> Aspergillus nidulans

<400> 2839

gaggtatatc acatggcgca cattcggcgt gcattgtttg tttaagaaaa tgagttgata 60 tgtagtatta gactacattt ccccttcttc acttccacca ccctcatcat ccggctctgg 120 ttccggaggc ggcggcggag gaggttgctg actatgttca ggtggtggag gtggcgggtg 180 ctcatttctg gtagaggaag aatacgaggg tcttcgttgc tgataagcgt cctcgtcatc 240 300 tcgatcccgt tccctatatt tgtcggcggt ggcgcgtttg ggaggtacag agttttgttg cacgatctga tcgatgcgtt gctgaatggt atcgacgttt ttagtttctc tatttcggtg 360 cggcggcaat gttgttcgag gtgcggatgg gagtgggtgt tggtagcgtt gggattgatg 420 agcgtggtga ccgtttggcg ggcggtcgtg ggaaaaggat gaagacgctt gcggcgattg 480 tggtgatgtt gtaggagggt gtggatgcgt cccgccttgc ggcagtgacc ctgcggcaga 540 gcgaggttga tctgcgtctg aacctactcg gggccgtttt ggcgagcggg ccccgttctg 600 agaggcttcc tctttttca aggatgcggt gtcctgtgag ggttgctggc tgctttttga 660 720 actgtcctct ggctcccgcg agcgcttcct ggagcttggg tctggtggtg cgtcgagtga gccaccagga cgcggaatcc tggtcttttc agcaccttct ttccaagcta atggaacggg tgggtagtac tggctgtgtc tatgttgcga attgctttcg tatagctctg ccatccgggt 840 900 gcatgcgcgg cgaacctgtg ctatatcaac gtcgatctgc tcccaccagg atcggccgaa ttcatcatcc tcaaatccaa tatcacagtg gctagcggct gcataaaagg cagcagcagc gataacgcgg gctggaaact ggaggcaaag aaccgtgtac atggaatcgt tgagaaaagc 1020 ccaggatgaa ttgcgaatat gcttgttgtc gttgacgcgg aagaaacaga taaaatcgta 1080 gaggatccta tatggctgtt cgagctgcag atcgaagcat agcgcttcga gcagaatgtc 1140 ttcgtggtga aggatggtat cgcgccactt ccaaaactct ttggattgct catccacaac 1200 cagatccggc tttttctgtg caacccggca gacggctatc accagcttt tcatccttcg 1260 gacattcttc ttcacttttg tagctaaaaa aagggatgta gcggcaatgg ggtaccggtg 1320 gattcccggt cgctccggct tgtcggctat cgcatattgc atgaagaagc gatggaggta 1380 aactgcggct gtcgcgaggg taggctgcgg caacttcaac atgattcaa actgagtgat 1440 gaagttgact tct 1453

<210> 2840 <211> 1523 <212> DNA

<213> Aspergillus nidulans

<400> 2840

60 aacccccca aggggagata gagaagtcga ttgtgatttt agagagagga gaatacgaga attagccgat gtgggataga gcaaatgaga ggcatgagag ttagggagta tcgcaattga 120 aaagctgaag ccgaaattcg aaaggtgcat gaacccgcaa aagattcccc ggaattttgc agaataattt teeegtatga aagegetetg accaaacace ettetteaeg ggteggggee 240 tgaaaatcgc gcccgcaatt cgatcaaaga cccaacgggt gataaaatac cacggatcca 300 gagccaaaaa ccgcggcctg ggctggcaat atcggagagg tagtcttcgt gcaaggggtc 360 aatgagaaaa atgcccttgg tttcaaggag gtggcggctt gcaaagatac ggctgtatat 420 480 gcttcctatg cctgcagaga ggagaacgaa agggccctct tcaccggcca gggccagcgc ttcggagagt gcgtcggagg ccatacctgc agagaaggga gatggtgcgt tgtcggacca 540 agccataccc ggtctgtccc agtagcagta gcgtgggatg gcgccctttt gatagagctc 600 gttgataaag ggttgtagag tgtgctcgac ggggccttcg ccagcctcga ggaggactgt 660 ggaaggggag ttgctgtaag atgaattgcc aacacagtcg aggtggactt ggtagttgtg 720 cgcgctgacc cagtatttct ggccaggagc atgaagggtc gcgtcgcgcg cacggagggc 780 gagtgttatc ataaacagga tcgatatgat tgctataaga gccatgaaaa gagtctcagt 840 caggacagca agccattccc gtaaagtcca gcgggtttcc tcgcggcctg tcaggcgttc 900 ttcctcttcg cgtttacccc aagcaacgta gcggttctgg atgatgttgt agagtgccat gaggaatgcc catactacac tggcaattcc gacccagcct tcttcaacgc gaatagatgg 1020 tacggccact gttatacaca tatcgatgaa taagaatata gcaagcacga aaccccacac 1080 cgtcattggc tttgacgga ccgagaaaa gaggagcccg aacaggatgt atccaaccgt 1140 taacgtggta tatgcaaatg cgaaaaaacc tgatccgcg gtgtgcagtg ccggtgcact 1200 gacgaagagg gagacgagta gaaatgtcca ccagatgaag ctgactgcga ggaatgcgg 1260 cgaaaggccg cgcagagccc ggacactcca gaggttgtag ggggagacct ggtcgagaag 1320 ctacatcagt cacccgtaaa tcatgaagtc agaaatgtat gagcctacgg caggatcatc 1380 gggactcaca tactgctcg gctcgcgtgg caggagctg gttctctcat cgggagcacg 1440 gtgctctccc tcgattccc cctcatgacg ctcgcgtct cgcccaagca ttctgttgat 1500 gaaattgacc atggtctttg gta

<210> 2841 <211> 1523

<212> DNA

<213> Aspergillus nidulans

<400> 2841

aagatcgtaa ttcagcaccc actaccgcca tcccattcca tcggacaagg cctgcagtgc 60 ctgcgttgtt tctcaacttc tgccccgtac cctgcgacac gagaagacac ccaccagccc 120 ccatatccac tatggcctca ttgcgtccgg aaaccaggtt atcaaagaca gtagaatccg 180 240 cgaccacctc gcgcgccagt ctggaatcct gtgtttcgag atggaggctg ccgggctgct ggataatttc ccctcccttg ttatccgcgg aatcgcagac tatgcagact cccgtaagaa 300 cgatgcgtgg cagggatatg cagctgcgac agctgcggca tacgcgaaag agctattatg 360 ggtcatcccg atgcaagagg ttgaagatca gccgttggct gtggggtttc cttcaaagtg 420 atcttggctg ccggtgtcct ggttgaatgg tattgtacaa ctaatagagg ataacaaaaa 480 atacaatatg gaaggcatgc tggacaaggc catcatttat caatattaca acaggctgta 540 aattcgtaat tagtgtagaa ctaattatcc ttgtcctact catcacgcat agaccatgac 600 aaaaccctaa cctgagggtc aggtcgaggg tcagggtacg ggtttttggg taacccacgg 660 caagccgcca agaacccatt ttgcacatat ctccctagta gacaatatct tttgcataaa 720 agatgctgat cgcctgaaca cttggttcat acagcgtgtt tgtactgttt gcaagcccgc 780 840 aggttaccca aaatccgtac aggttgtaga cttagacccg tccccaaccc gatccatcac gagttttggc ttgaccgtga tgtataactc gcgtcatgtc aaggtctagt catgcattcc

ctgtgctgaa gaagggctat tggtatttt tgtggaaagc acatgcaatt taaagggaga 960
agggcagatt gaactgtatc aactacacga gcgtagccta ctaacctact atggagcgga 1020
tgtccttaat cattgactct atcctgctgg cgataaatgc ttttgtttca cttacacatt 1080
gagggtcaga tcctcaggtc agagagacca ggctgctata tcacatgacg ttatgcagcc 1140
agtagtctta tcgtgcactg gtacccagga ttagcattac atgatattc tatatcttgg 1200
tagattttta tatctcgtct gcagactttc tctctagctc ttattccag gtcactacct 1260
cctccagata ctttttaact cagatcaaag tatcatgcct gcaggcaaaa tccttgacca 1320
tccgaaaagg atatcattt ttatgtttat atcttgtcca ggatacagct tgcattgcac 1380
cctttttgat gcataccaaa tgcggcagta ttgccatccg ccaaacgaac ttcaatatt 1440
gagaactccc tgagcagatc aaaatgcaca taatgatata ttattgcctg aaccagggta 1500
tccacacagg gagagacatc atc

<210> 2842 <211> 1953 <212> DNA

<213> Aspergillus nidulans

<400> 2842

60 ccatgccttg tcagggacct ctgcgaacca tggctcctcc gcagccaact gtcaacatgg agccggcctg gctccattca ccaaagtggc tgggtcgagt agcaagccag aagaagcctt 120 ttgagcggag gatggggccg aagggacttt tgcgcttgtt ggcgaggatc agggattgat 180 cgggctggga gaagtcagtg atttcagtat cgctgtcttc ctctcctgat tctgaggtgt 240 tagcgttgga atactcatcc tcctcatcct tctcatcctc ctcgtcttct ccatcttctt 300 cgttatcgcc atggtcatga ctgtttaggg attgaaggag gatgaatttg tcgtggatga 360 gagagaacag tcgacgtgga tgaaatggcc gtctagccat gtagacgaag ttattgatcc 420 catacctgca gtcaataatc agcaaccatt cactcactct cccaaactaa aaatgtgggc 480 aacatactcc aaggtctccg gcctaggcgc aacccttttc ccaactccag tcgtaaggac 540 actcatctca tgcaaactcc tcaaccatcc cgccccgctc gcagccttga ggaaatcaaa 600 tctgcccgtc ccaataatct ctttcacatc aacacgacta tagctcgtct cgataagctt 660 cgcatccgga ttcagcattc caattaaccg cctgatcttg ttctttgtct gctcgtccac

agtctcgatc ttgttcatga tcagcacgtc agcgaactcg atttggtcga ccataagatc ggaaatcgtg cgttcatctt cagggatgat tgcgttggac ccgtatcggt cacttaggaa ctcggctgta tcgaagttgg agaggagatt gaaggtgtcg atcacggtga cggttgtgtc 900 qaqqcqqqcq aqqqtqtgca ggccaccgat tctggctcta tcgttatcca gcttattagc 960 atggcctcat gatcgcgctg cgagtggagc tcagggtgga taaacgcaca tctcttccaa 1020 aacttteeta tegtettegt eeaateeact egegeegeta ttaeeeteae eeteaacate 1080 ttgggcccct tcaacttcca gcatagcagc actaaactcc gccgtaaaag tctcagctac 1140 ctgcatcggc tcgctaatac ccgtactctc gatgacaacg taatcaactt ctttctgttt 1200 ggtaagccgt gccagctcgg cgagcaagtc cccgcgtaat gtacagcata tacacccgtt 1260 ctgcagctga atgagctttt ctttcgtttg ggagacttta tggtgcgtta tcagggctgc 1320 atcaatgttg agactgaata ggttgcttat cagctggctg tcttggaggg tcgggtagag 1380 tgaataaacg aaggcgtggg acttacgagc tcatgtcgtt aacaatcact gcaatgcgta 1440 gaccgtggga gggggatttc aatatatgtt caaggagggt tgtcttgccg cttccctggt 1500 agattgtggt gtcagtcttt gtactgcccg gcgtttctca cggattgggt gcgataggct 1560 gggaggatgt agactggcgt accaggaacc ccgagagcag ggtgacgggg agttggcgtg 1620 tttctccgtc tttggctatc atgaccgctt ttctatggat cctgtatact gaatggttac 1680 tgacagaccg ataggttggg taatcagcta ctaatttcga tagaatctgt acggtctctg 1740 tcatgaaccc atctccgttg tgagccccgc aaacccaagt attcccccaa ggtatcccgt 1800 cttactcctc tggtaatggt ctcctactta accagacacg catgtttccg gcaccaggtc 1860 aataatgacc tttcatacgg agataatctg ccggatagcg tcccgtcgca ataaggaccc 1920 gtgttcgcta gagtctccct ctgataagtg cca 1953

<210> 2843 <211> 2566 <212> DNA

<213> Aspergillus nidulans

<400> 2843

gccttgaaat atctgaggta atacttccaa caacgagtct tgacatactc ccagctctat 60 ccgctcgagg ccagttgcgg aatcctgtca ggggttgatc tagattccta cgtgttgtat 120

ctgggtgaat caggcttttc tgtcacttat cgagagtatg tgaaaatcta ttagaaaaca 180 240 ggcatacctc cggctggctt gtggtagttg ttactctagc tagccagaag tatcacctct ctcccttcaa gacccgactt gacgacgcat tcctcatcgc actcaaaaac agggtaagtc 300 360 tqagccgaag cagacagctc ttatgctggt cgcagccagt atgtgataat aggcagaacc 420 teggeattge attgeagtet caatatatet teatteggee aagetaaaca cetttateae cagtccttta cagatgagcc agcaccgcat ccgcaccgga gacctatcgc aaacagttag 480 540 cttcagccat cgaacgccaa aagccgaaat aaaaaaagac gcacctcaac ggcacccttc 600 ttagtctcga tatccgcata cgtgaccttc ccatgatcaa tgatgatcgc ataccgccca 660 gttcgaccac cgctggccca tccaatggaa tcggagaatt tcgcgtcggg gtcggagagg 720 aacaactgta gcaagacaga caccacatta gcatgaaccg cgccttaaca aacggctaga 780 aaaggtgcag tacaatgtca tcaccggtaa cctggtttgc ctttccccag gcactcatca cgaaggggtc attggacgct accaccgcaa cgatctggat gccctttttc ttcagctcgg 840 900 gaaggttctt gatgtagccg gggaggtggt tcacggagca ggtaggagtg aacgcgccta tgagcacgag tcagcataaa ccaagaaaaa cctcgcattt agaggggaat gacaagctca ccaggaaccg agaacagaac gactttcttg tctgcccact ccttggaggc atcgtatttg 1020 attggaatgc cgcacgcggt gacctcaccc ttgtcttcag accaggggat atactggaaa 1080 gagacgtcgc tgggaaaggg tcaccggcct tgagggagcc attttgtgaa tattagatca 1140 agaattggaa tgggaagagt gcagtgaggt ggaggaagga ggattgttga ctgcggggtc 1200 cagcgggacc gaggaccata aaagctatct cagtcattta tcagcggggc cagagagctc 1260 cgtcattgga ggtgggaaag gcaaattccc agccaatcaa cgtcgagcga tctacgtgct 1320 ttttatataa aggagtatgg taatcagaac aagactaccc taaacgtatc agagcttctc 1380 cccctgactg ctacggttct acttcaacag cgaaatgcaa gagaatcaac tgtatgaatc 1440 gaaaaacagg gatctgttta cctcggcgat cttcatgacc attgtcaaca ttgtcacata 1500 gtcacattgt cgaattgaca cattttcaac attgtcaact attggaatat cgtagtttgc 1560 aaaccgccga gatcaatacg aggtaaaata cggaacgaag ctgaagcctc aaaagaaaat 1620 ccagaataac ccataacttc tgaacgttat tactattgat ctaggacagt gtgatacaca 1680 gtctcattcg cagccgatac tcttggtctt actaagggcc ttaaatcttg agtattattc 1740

<210> 2844 <211> 1392 <212> DNA

<213> Aspergillus nidulans

<400> 2844

ataaggaagc tigctictac atcatgctic tacatctgca ggccggtcgg ctctacgata 60 120 ccactttcat aaggaagatg aataaaaagt ttatcagcat tgaggaaata cgtctatcta cagtatatag tectgttata tatatagteg tetatetaaa aaateeacea eeagaetege 180 tccaaccagt tccggggctg tcgctccata tcattctcgc acaaacggtc aatctcatcc 240 ttgcccgtaa agatgtcaac ctctgacacc ttggtcaacc agggcgtccg gtaccagatc 300 360 ttatgtccag cataaagcgc aaggaagata gcaaaaacaa tgtacgagac caagaagtcc gaagcagtga agcggcccgg gaagaacacc gcgtacccgt tcgtcaaggt caggatcgag 420 atgatgaaca tcacgtagta ggtaccgtat ggttgcagcg gggtcttgaa tggtagcatg 480 tccagcatge cgtggaattg cagggccttg cggaacgctg tttttggtca ggtgttca

gatgaagaga tggagggaag cataccagat aggcgattcc gatcagaacc cagttgatga accegecaac ggtagtaata ttggtgaacc agtagaagac egtetgteeg gagetagaca 660 720 gattaaggaa ggatagcagt ccgattgtcc atgtcgcaag aacagccaca tagggaacgc 780 eggtgeggtt ggtgegtgtg aagatetttg gggeetggee eteaceggeg agegagtaca gcgttctcga tccagcgtaa caccatgcgt taccggatga ccaggcagag atcaggatgg 840 cagcattgac gacatggttg agccctccaa taccagcgtt ttggatggca acgacgaatg 900 gactegegee ggeeeetgae eegeegettt egacteeage eteaagggta gggtegttgt aggccacagt gactccaata accaaactgc ccaggatata gaaggtgaaa acacggtaga 1020 tgaaccgctt ggtggctttg gggatgttcc gacgcggtgc ctcgacctct ccagcggctg 1080 tggtgatcaa ttcgggcgag aaaatgaacg aaaaaccgga cttgatcagg gcagtccaaa 1140 accccaggaa tttgccagtg tccccgggaa ccaggtacgg attgaatgca ccggggtctt 1200 gccagtagcg gaaccctaag cggtcatgat ttgggcctcc accgaaaaac agcacaacgc 1260 ccaggataat cagaccgatg atggccaata ttttcagacc agcgaaccag aactcggatt 1320 ctccgtacca ctcgaccgcg aagacgttca gggccaggat cactaggctt gttaccggct 1380 ggctttgggg tg 1392

<210> 2845 <211> 1066 <212> DNA

<213> Aspergillus nidulans

<400> 2845

ggcggaatca gaaaaatggc tgagcacgag tggatgaaga acgaacagct tggagctgtt 60 actggtctcc caaccagaga acattggaag gtaagctaaa cactgacact acccgggcct 120 ttccttggat ttatactgcg gcggttgcgt gcggcgccca gggtccgcaa gccaactgtc 180 tegegacate ttgcgtgate tgcgccgcca gttccatcat tccctgcgtc atggcccacc 240 aactgtgtta ctgggatcct cgctcacatg atataggcgg actcggcttc ccgtagctgt 300 gactegeeca cetgtegete etegtteggt etetteetee gtegeeatea etgeegeeat 360 tgcggccatg ttttctgttc ctcgcacact cctcatgtgg tccctctcga ccaggaagca 420 cgcttccacc cggacggtgt cccttctcga gcctgcgact tatgctggag tgcgtaccag 480

cgctgggaag aagcccgtgc tgagcgtcta agtaagatcc aacaatcgat cgactctcag gacgaggacg accagagete egatggeeae agecegaeea getetgtgga ageetegetg 600 gccgagggac gcaagcagga gcctaccaac ccaggccaga acagtgagat tgctgccagc 660 720 gtccctcgtg gctggaactg gagcaccttc taatcggcta catcgacttc atcgactaca tcagctgcat cgacgaaatt tctatctaat taatgagcct tcacattgat tgatgaggct ccgcgaccgc aacttcactt cgacacacca ccttctagac attttatccc aattgcttgg 840 900 gcttgcgcag ctttcgtcat ttacatggag ttcggtctcg cgatgttcac ggatctactt tegetttegt egaggtetee tetaatgttg tgategtteg tagatetggg aggettette 960 tattgtttgt ttctattcgc taggataccc tgtcatgcgt acacgttctg tttcccttct 1020 1066 tctgcttctc tttcatgtta atcttttatt tacaatggcg ttacga

<210> 2846 <211> 1662 <212> DNA

<213> Aspergillus nidulans

<400> 2846

tgccttgcaa ccttgttatt atacaccaac gtccttctca agcccgccct tgatctgact cttaaagccc ttctttaacc tcctccccca cttctcccta ctccgcttca tcgccatctc 180 agtéctetce caeggataat teaceggaet etcaececea gtgaagatea taaacteata 240 aagaaaggcg ccaataaagg cgccacagaa gctgcctgcc cagggtccat agaaccagta cgggttgagg aagaggtcgc ttccatagcc tagggctagg agtgctaatc ttggcccgaa 300 atcacgcgat gggtttagtg cagcaccagt ctggtaggaa aatgtgatgc tcagcgtgta 360 caccattagc ccgacgacca gggcgttcat tcctgcgcct ggtggcgcgt tctggtcgtc 420 480 gcccagcgca agcacggtca cagtgagcac gactgtaccg aggaactcgt tgaagaaggc cgtttgcggg ttgatccaag ggttgcgttg ggatgtgacg aagctgttga ggacgtttgt 540 600 tgtactgctt gtgctgcttg tgctgatgga aagatattca tttatagagt cgtggtacag cccgtagact gcaagcgcgg caacaaacgc gccaataaac tgggccgcaa agtactctgg 660 720 cattttccgc ttgggaaatc cgcgataaaa ccagagcata cacgtgatgg ttgggttaag 780 gtgtgcaccg gagacgccac cagagatgta gattgccatc atggctgcga aaccccaggc

ccaggctgtg gtattggggt ttgtggttcc gccgagggtg acgctgagat ctgcggcgag gccaacagtg agctggatga aaactgcgag agattcggcg agggcttcgc ggtggtgtgt 900 gcgaatgacg ctccagactg tgtggttgtt gtgaacttct tcctcgacga ggtcctggac 960 gagcgggtgc aggtcctccg ggtacgcagc ttcatcaaaa tcaagctgat cggggcttat 1020 ctcgggtgat gggggctcct ctgggatgtg tacgtcctgg aggggttcat cacttaggtc 1080 atgacctgtg tcgtcagggg gcgactgcga ggaatcgtgg ccctcacctt ctgggactgc 1140 ggagagttgc tctgatgggc gcggttcaat ttgaacgccg gagggccgtc tgattgctgt 1200 tgacgaggta cgcgatatcc tcgtcgtgcc aacgtccccg gtcagaatct tggtcaccaa 1260 attgttctcc ctctgtattc gcgcgttgtc cacctgcgcc ggcatctttt ttggatcagc 1320 ctttttgatc cgggcagcct ccaactaatt ggatcgacaa tcacgccttg gttctgtgag 1380 gttttggccg gtatggtggg ccttaagcct accaacctgc aaaatcttct ctttgttggg 1440 acatccccgg ctaacacccg aggagagggt ttgcaaactc atacggtctg ttattggggc 1500 tgtttatatt tgattggaac ggtgttccgg ggccaaaggg tatgtgcctt cgaattaaac 1560 ttttttggcc cgaaaagaaa ttctttcttg ggtgcggagt tttctaaaca accgaaacca 1620 1662 tttgcggttt ctaagagcct gttcggacca accgtctttt tc

<210> 2847 <211> 1849

<212> DNA

<213> Aspergillus nidulans

<400> 2847

ccageggtee thatggtgta tecaatgetg gractetggt the tested aggaaaatet 60 the tecagegete categories gracegggag gracegggag engety engety 120 cteegtgttg aatgetggta tateaggtag eagatgagag tecaatgee ecataagate 180 aacgaegega tegecateth aghtgaateg gracegagge teaacagaaa ghaagteatg 240 caggacaaat ghaactega graceggagge eathgeeeth geagatgtgg 300 eeeethtea etgetatae eegeaatae thagagteg greegeageth taateetgge 360 aeethaateeth graageeth teagataate egatgaethe gracegeageth 420 greegeagethe eathgeage the egataatee egatgaethe greegeagethe 420 greegeagethe attatgeage the egatgaethe egatgaethe egatgaethe egatgaethe greegeaatae attatgeage 480

qqttqcatta qcqqcqagta catqccctca ccqqtqqcqc ggtcctagcc ccttcttttg 540 600 gececetect ecectettea cettetecat etcaacagat ataacegatt gaatecagtg 660 acattqttqa atattcqaat ttqacctttt ttqacacacc caqqtccqag aggaccatcc caatcacccg ccatggccaa catgccaacc gaggatgaga tcgcgtggat gcaggcgcac 720 780 atcaacgact caacggttcc agacattatc gcctgctgct caatctgcgg tgctgcctca 840 gtcatcatct tgacgctgcg catctggtcg cggctgcaaa cgcgccgtca gctcgttctc agcgacaatt tggtcattag ctcagtggtg agtattatgc tcttgacaag caacaaaggg 900 960 tcatcgctga gagctattcc gtccaggtgt tttttatagc tttttgtact gtcttcgcct tgtcaacacg ttacggcgct ggaagacaga taattctaat tactgacccc gctgacatgc 1020 gtatgctage aattgtaege eggeteeaaa eeattagaaa teettttatg gtattaettt 1080 gagagetgae atacgegget ceaceagett aatateetga atectateet etatggegtg 1140 gccaccgcat tcgtcaagtg gagtattett gccctgtaca tcgccatett cccgcagaag 1200 aacttccagt actgggttta tttcctctgc gtgatcaact gtctcaatgc tgtcgcaatt 1260 gttettgtta gttgeetgea atgtegeeet etegaageae tgtggaaeea ageagtggga 1320 ggcacatgca tegaetteag catttteage etetteaata egteetteaa eetggttttg 1380 gatgtggcca tactagtatc gcctatcaag cttgtcatga acctcaacct gagtcaacga 1440 aagaaaatat tgttggcact taacttcggg ttgggcggag ggtcagtccc ctatccactg 1500 ttccattaat cccttggggt aaatacacca ttacggcctc gatgctaacc taacaactcc 1560 agegeetgtg tegtegeage cateegactt ceetttgeta gaegegtggg eggtacatee 1620 aacccaagct gtaggttatg ccggccccga gtatatctga tcttagcgat cattgtgttg 1680 gcagttaact gactcctcct gacaggggac atgattccag gaggcctatg ctgcgtcgtc 1740 gaggtcgccg tggcccttct ttgcgcatcg ctaccagtct atcgacccct gtttgcgcgc 1800 atggtgtcca atcattcgac cacgggcaac tcccagcagc cgggacgct 1849

<210> 2848 <211> 1304

<212> DNA

<213> Aspergillus nidulans

<400> 2848

60 agtttggggg caaatcccca gcatctgctt tttattcgcg ccgaagccta atactccacc tcgacctttg aaaggggaat caatgaacgc agcggtgaac atccagcctc gaccggtcag 120 180 tatttggccc gaatgagtcc tggccatgtg actggggatg tcgcttgcgc tccaccgatt 240 gcaggtctcg caccaggtcc cgccaacttt gggtgttttt ccatagatgt gaaaatcgac gtgctgacta aaatagtcct gctgaaggat cttgtctttc atgaggatac cggagactct 300 360 gataccttgt tagaaaggca ttgtggatgt gcgggtgaga tggagaggga aggcgaggag 420 aggacagaac agtaaagaca tacctggcgc tgatgatcgt gacgcggaag cgcttggaag gctgagtttc ggtcatgatc actatctata cttctgatac aatgtaatat acggtagcca 480 540 tgggtgggtt cttcttgctt ctgactcaag tgtctattta tctctgtcta tcctatctct 600 catatcagge attcaatcae tgtgeggaga gtggeeegga teaeteteeg tetecaagtt cgataagaaa taatagttta atcettgtgt gtagttettt aatggetete tataetteet 660 gcttggtcta ggcagctacc gttattctca tagcttcgac tgctccaaca ccgacagctt 720 780 gcggagagge ggtcctcccc ggctcccatc tccagacata accactgggc cctgggcaga ttccttctcc ggtgccttca ggcgccattt ctggcgaagt tcgctggatg cgcagttctc 840 900 gaagcaatca atgacgtatt ttcccagcac ggggagaaat ttgaatgcac tgttagattt tagcacctca tctggttagc agtcgttgcg gaatagacgt actgtcctga accgcctgta gcgacaaaaa gcccattcag cgtcggatgc cgatcaatga taaagtcccc atttggcgta 1020 teggtgtace ageacageeg gegatteaae eaaggeegat eaceeaaaet ggggaaaagg 1080 teetteagee cacegeggag tgeagegtet geateateag geaegtagee ggaageegeg 1140 ttactagaat ctegtetggg tecagaaatg atgegteeeg ttgettegga etgaacttea 1200 gtcgcgaagc cgtagccgtg gcgagcgagc ttgaggatgt ttgttccggg agaagaaagg 1260 1304 gaaagagaag acgcccgtcg tcatattgat caagacaggt gtgg

<210> 2849 <211> 755 <212> DNA

<213> Aspergillus nidulans

<400> 2849

cctcactacc gatgatcgcc tgtccttgat tctaaagtgc ggccaatata tttgccatca

60

ctatgcattc aaaaacggtc aaaacgaata cctctagtca agtgtcagac atccttctgt cgaagggggc tcgagtgtat acgattcgtt caagtagcga tcaaggcgtg agtgaagtgg 180 ctcaaccaat gaatcatggg aatcattagg aagtctgaac tggtatacac agccctatct 240 gccaattgat ccaatcgatc caattgattt gccaattgat atgggtaagc tgactaactg 300 atagtaacgt tagttatggc agactgttcg ggaaaccgaa ataattattt tccgccaacg 360 ccatagatat ggtattgggt atagtatata taactggaat attcaccaga atgataaagt 420 tgaagaatcg tattactgtt aagccgtcct agagtgcatg gcgtgatata taatgtactt 480 gttatggagg ttgacttctt aagcttgccc aatatgggtg acttctacaa tcccgattga 540 cttaccagat ctcaacagcc acgtccaact agtatggaga ctagtcaccg ccgacagaca 600 gtcgagctca ctggtggaag caggaccatg atatacagcg gagctacttg ccgtcacagg 660 acgtgaacgc ttcctcgaac gcgacttcta tctcctgaac gtatccatca ccagtcctag 720 755 tcacccatta gcccattaga acagcctctg attca 2850 <210> 4656 <211> <212> DNA Aspergillus nidulans <213> <400> 2850

agttgcggat gatctttgca atcaatttga aatttatggc tactaaattc tgcggatcat 60 ctgtcgttgc gggttctctg gggtcagcca gaattttgga tcacctaatc gggctagtgc 120 tggtacccca gcatggtacg ggcctgggtg cgtcgctgcc tacagaggtg tacctaaagg 180 ctttgatcag tagatattat tgccctgagt atccattttg tacctcaacg tactcgaggt agacaaagca tgggattgtg gaagtccagc tgagaccggt acacatatat atattttgct 300 cagccatgta cgatgcagta gatctttagc gccctctcca cgaccaacaa ttatatccac 360 gttcagcacg aaagaggaaa tgggcgagaa tggccctttc actagagttc cagtctgttg 420 caagccctac tggcaaggat atttcaacaa ggcaagaacg accgaaagag ggttatttta 480 ggggaagtaa gttgtggtgg aatgcgcggc cgttccttcg tgcgtataca attacagtgc 540 gccttcccaa tacctagaca atccgtacta tctggcgtca tggtgcgtgg gatgaataga 600 tccatgagat cgccgccgca ctcaaaatta ctactaccgt tatatatccg ccactctgca 660 tttcatcatc agaacacaaa gctggccgcc aaattttgat ggccaatgtt tgctcatgtc tgctgcggac tcaagggtgt cctagattca gagacagcgg agcttgacat gatagcttca 780 840 ctgtatcacg gaagctgcgc gactgcgtcg cgaaacagcg agttccaaag ggaaggcgag caagctgaaa gagcagccga tggtgtctat gcggagcacg ggctgcggta tccttttgcg 900 caatcagaga tatctggtcc gacgtaaggt atgcgacgtc ctataatgtg cacagtccct 960 agataatctc cagcgttgcc cattgcccat atcaagtgaa ttacgctgag ggatgttttt 1020 teagectgte geagteegte ggtegtgget gtettetaag ttgetggeag tegtateaga 1080 gttcgagaac gctgggggaa gtcatatgct gcagttcggc ttaatgacgg tggacaccat 1140 ctattcgaaa cagcgaagcg aagcgcacga agcacgtcta ctatcattcg ctgcgactgt 1200 tgagtggatg aaaacgtcat acaacaaggt gtcttggaat gcggaaagaa gacattatat 1260 gtggtgctat ccacacctag catcgcgctt cggcctcaag cagtcatgaa agcatcggca 1320 attggctggt ggacatgcgc acagaagcca cctggctcta taataacgga ccatcaacgg 1380 ctctgtcaag atatgccgtg tgcgtgtata gagtattcgc gagagtggta cgtggagatc 1440 tccgttgtga gtaatggatg gcgctggtga taatgaccaa gcttgaccag ctgacccgga 1500 atgggaacac tgatatcgcg gtgaaccaga agaaaggatg cgaggtcgag gtcatctgca 1560 atctcgctct aacgctggaa aatctcaagc ccgccaaacc caggccttct caccgaaccc 1620 gtgcgcctat tcaagctcct ttgaatcgtc ttggtcttcg tggagtattt cataaatcat 1680 actcggtgct atgtagcaac gctggtttac cgtcattgac gaagccaaaa agctgcggta 1740 agttccgacg cacaaccagt ggttaggttc ttacagattc cgcatccact taaaaagcat 1800 gctctggtgg gaatgcgatc gaacaatgtc ccaatgagag tgcaagaccc caggctggaa 1860 cccaaggata cggacggccc aggcggactg aagccctggt tcgcaaccat ttcgacatct 1920 ataaacatta gcgaattgat aattggacgg ttgaatttgt cggaacccgg tactaggtag 1980 ggcagcatct gcactgaggc agaagattag caaatggagg agggtttcca actgacgtct 2040 gatgaatgcc caagccgcca cacgcatgac tgcccaacgc aacgcccaag atctcgtcca 2100 agtacgtcac tggctgcggg aaaatttgct gccacccaac accaaaaaag cgtcaatctt 2160 tgtccagtga aagacgagaa acattttaaa tcgcaatata gactatgact ctatacgttt 2220 aaggaagtct cgaggagcct tgaattcttg agccgtcaag ggacaggtga caaccttcca 2280 aatcacqtaa tccgcagttt agcgaagtac atacagacta cctcagacaa gtagcgatgg 2340 tagacgcaac tgtcccctaa tgcatttttt gtgattccat cgaggccgaa agaagcaaag 2400 acqaqctctt gatagggttt gctcctgaac aatcgacgac gcatccccag caccaaatct 2460 tegeettaat egaaggetgg geagetaeeg etgggtgaae aaageaaaeg gaceagaage 2520 ettqtctqtq qcaccqqqtg aggcaaagat agtcatcaaa taggcgaggc ggtctgtctg 2580 ctgttagccg aaaatctcat tgtctctcat gttgttgacc tcgagatacg caaaaagcaa 2640 qctattttct ctttctqcac ccaqatcttt cactttccca ccatcttccc atagaatcag 2700 ttccagaccg agtctatcgt ccttttgata gttagtgatt atagtacgct tatttcggag 2760 acatactccg tagettagat gatattctgc tgatettcaa ggetgggtet tatecaataa 2820 tgaccagcaa acgggaagag acagcatcgc gactcaagcg ctggagcaag ccgtggacca 2880 ccqqcqtcqa cggtcttcga tggccaagcg cctaagcctt attggtttgg ccatgcatgc 2940 agaatctggc gttgtctttt ggtgcctttg ctgccgttgc ggtgtgatgt ggagtcatct 3000 cctccgtagt cgtggcacca gacaggccag cagcccaaag ccggcccaac agcccaatca 3060 atccctgcag gtggcggaac acaggcgcaa acccacacac gaatgagtct cccacctttt 3120 tetatteque eccetequag ectequent cagegetece ttettatete getgetgete 3180 gtetettett tecaacette teateteett tectecetee etetetteet actaeteact 3240 cctatccttq ctctqqttqc tatcaccaqc tcccaqcttq cataatctqt acaaaqcatc 3300 actggaaacg acaaacggcc ttgaaacctg gaatccccta aaacccctct ttctagtgat 3360 ctccctctca cctcgttatc ctgtttcgtg gcctcttcgt tgtcttctcg actctctaca 3420 tcaatatccc ggccgtcttc ctgctggata ctccccaagg atcatcacat atctgcctgc 3480 cacccaaccg tggtcaagaa ttcacccccc gggatttctt tcttttcgtt gtcgcctgga 3540 aagccattta cccttcctgg atacaccagc ttacctctct atccacttgg gaatttatca 3600 aatcaaaagt cagatttgat atatctatca gtcttggagc ttcagcctca taattacctg 3660 ccttgttctt gaagaacagc cggatattga tctcgctcgt caccacattt acctggactt 3720 teeggettet gtttteetgg actteetttg geegtttgga tteteeaget tgtttaatta 3780 aataccggat actcttccct ggacaagatg actagccgtc agaatgaata cttcatcccc 3840 ggagatggta ttagccgaga agtaattcag gccgacatct gccgttacct tggaaatgat 3900 getttagtaa gaeetggaaa eeacaatgte egteteeetg ateetttgae tgegaeegeg 3960
tacaggegee agagagattg geetegatga atgaaacaag egaggteteg ttactgacat 4020
gegaataggg tegegeggga ttetteatte gegettateg aaaceteaca teagtatget 4080
cetttecaaa etetatgttt tgggaaggea aactaacate tgtgtettea ggaaatgatt 4140
getgatetea aggeggaete egeeegggg gaagcagaeg teagaaggeg tgetgaeeaa 4200
ggttateeee ggggeageta eateeaggae tacagetaet eteaacetag eegggetaea 4260
ceaacetaet eaacetetat gggaagttee atgeaeeetg aaatgteeea tggteaagge 4320
cetteteete etacaaceta egetgeteeg eegeageagt attetgagea gtateaceaa 4380
tetggetaee eageaactte aagteegtea taceteaaatg eteegteata teetteaaae 4440
caeteggget ttggatetgg teageeeeea taceettaae atateeeeta eagtgeteea 4500
aceeageete etgtgaette tgaggteeae eetteatata ettaegeeag etetggetat 4560
ggtttegaga ttgggegaaa eaatgeeeet teggaeeetg gteetggata tgatgeeeat 4620
tetgattatt eteetgttae taceggaatg gettat

<210> 2851 <211> 1188 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2851

aacagagtga tegetgteca gecacaceaa gategeeege ageagaagte ttgtettega 60 aatgcaggac cgtttgaccg tccatttctg atacgcctcc gaccttcttt ccgtaaacga tgttgatgtt gggctggcgt tcgaggactg ccaqcatcgc caqaqacaga acqatccqca teaccegeeg eccettgtae cegtteacge egtteecatg eccgteggeg aagtegaetg 240 300 acccgagcga gcgtgctgat cgactggaga agagtccaat ggcatagacc tccgctccac cgactggacc ctggcgatct agttcgtcaa ggacgcctag cctaaccaga tgccgatggg 360 ccaccggagt atgagtgaat gctccaccca aggggggaag gacttcgtga cgctcgaaga 420 gagtgatctg aagattcggt tcgtgggggc cgagttcctt tgcaagagcg agtgcactag 480 cgacgccggc aatgcccatg ccaacaatga ggactttacg acatcgcggt gaaggatcgg 540

qtactqacaq aqqqaccqac accqtatagc cggaccaggg ctcaccgttt tctttaggaa 660 tacqcatqat ctctctctac gatcatactg agaacttctg aagacttttc ggccagggcc 720 atcggttgca gaaataaatc gatcactgat taaaagagct aaaaagagct aactgctagc qtcqqcaqtt qtqqaqaatt ctcqqctqcc aaaagactta gcggccgctc ggctgttcca 780 accttqcaaq tttcqqcctt tccqttqttt cgtacaqagt aaagtaaaga acacatcgcc 840 900 cgtccaattc atacatcata catcataaag tgcgctcatt acacccaata ccaatacagt caatacacct aataccacqa qaacagctaq aqaqctaqaq cagcqtctcc tggtgcgcaa 960 teacgegeea ttetecatee gateeetgge eecaagtegt tgageetgtt gegtggtaat 1020 ctggctgtcc ttccctgctg gcatggattc gatacgttat ggtacccgca tgagatcgat 1080 cacaatcacq cqcacqtctt qcangtcgta ctcatcgaat tgtggaatcc cttgcgacag 1140 1188 gtctcgccag ggtttcaacc gggggatatc cttttgggaa caagagac

<210> 2852 <211> 1100 <212> DNA <213> Aspergillus nidulans

<400> 2852

attetecagg gecectgeac ctacteaatt getgegteaa agageteaat teteatgtta 60 gttgccaata cctttctctc ctttcttgta cggtttcacc aacgacctgg cgttcgactg 120 cttgtatcgc tcttcgctcg gtctcagaat cagcacttgt ttcctggaag tatcgagaat 180 cttgaaaaac atgtcctcga cgatcgtgga ctgatcaaat ggtggtgccg tgctctcgat 240 ccaattcttc gcgagtacga acctgaatct gcctcccagg agcaagacaa gaaacacgaa 300 gagecatege ggageteage aacggeatat eteategtge etggttgega eaggtttgaa 360 actagaggtt tetteectag tagegecaaa geagaegata aagaeeggee eegatggetg 420 480 aatgcttate ctttacgtca aatatgcage aagcctgatg ctccgccgcg ctctctggtt cctcggttcc ctgatgatcc aaagacgcgc tttctcattg acctcgatga tgaacttcca 540 gaggetgegg geggagagag etegagtgge eaetggagga gtgtqaagte tttggacqaq 600 ttctgggaga tgatgtcctt ccgccaggag tgctctgcgg gaagactggt tgggtttctg 660 720 tggcttgtta tcaaccctcc tggagtggtg aattcgaagc caatgctgag cagcactgcc

ggttctgcgg aggttagggg caccacctcc gcggccggg aaggaccggc aacggatagc 780 caactgctaa cgtctaacgc cccggccaac tcagatcagg cacagtctct ggaggtcccg 840 aaaagcagcg aagatgcttc aatcactcat tcagtcgatc agacgataaa tcagcaggcg 900 aacaacggaa gtgcatttta ctggccacaa gcggcgagag gacatgcagt gttgaacgaa 960 gatgactata agaaagtcat caacttcctt ctcgagcaag acttttacaa cgaagaggtc 1020 tcgttgcca gcacgaaggc gttcaacgac aaggttgcaa cacttgcaga tgagctgtgg 1080 gttgccagca tgttgtggga

<210> 2853 <211> 1281

<212> DNA <213> Aspergillus nidulans

<400> 2853

agctggactt accccagtcc tgcttcttca gaccggaacc caagttaccc atgcggtcac 60 ceeggeaceg geaceggeac caccacegee gegteegtaa eegeegeege egtaaceace 120 accgccgtag ccacctccgt agccactacc accaccacca ccgtaaccgc cgccgcgacc 180 tccatagccg cctccatggc cattagagta accgtttgag tagccgccgc caccgccgga 240 300 gtgaaacttg aatgttgatg gctaggatcg tcaaaaccgg tggcttgtga acaaagcttc 360 ggctcaaaca aggaacagaa gacatagcag tgtgcaactt gcagcagaat cacaatgttg 420 480 ctcaaccagt ctctagcctt ttatgtttta tgttgagatg cgacaaagat agtatgtcaa 540 cgtaccgata ggaatcgcgc tggtagccac cgctgccgcc gtaagaagac atggtgaatg 600 agagaaagtt gtgttgcgtt gttggtaaaa ggaatcctca acttgagaat cagaggcaac 660 gaaaggtgaa aggtttagga taagaaaaag agggagaaga ggaaaattaa gggaaggcgc 720 tgaggcaacg tttgttcctg tttgggttag tgcaggagaa aattggaaaa tctcgacacc 780 gctgctgtta tgtaagctgt accagtggcc aatggccaat gatgactagt gcaggtggcc 840 900 aatgtggcta ccataaaaat tcaagaaact aggcttccag tgaggtaggt aataggttgt ttgaactcga tgctatgagt tggctaatgt ctccattcgc tggacatcat ctgttcccac 960 cttgggcagt attagttggt ctaccgacat acaacgcgaa cactcccatt atacataagg 1020 gagcctggaa gtatatagaa gggaacttga tctatataca aacattcatg gagacaagct 1080 atatgtacat cagctgtgtc cagcgccaag tcccatgtcc caaaacatga tctacaattc 1140 ggttgccttg atgaagatct tgaccaactc tttcatccgg gaaagcgaga cctatctata 1200 tgagtttcga gtagctctgg aagccctcag tcgcaagctg aacaagtgtt gcgcattcta 1260 tatgaggagc gagtgttctt a 1281

<210> 2854 <211> 1100

<212> DNA

<213> Aspergillus nidulans

<400> 2854

60 gggtatgtcc ttcttgactt tcccctctag cgaaaagcgc cgttgttggt tggcgccatc acceptcaggg taaatgggac catgctaatg gtgatagege cegeggeage aaagaegeee 120 caqteetege eggeegagta ettagtegea geegeeagte egtacaaege ggatgtgett 180 240 aggcagatga tggggccttt tatgtgcccg ttgaggtaga tccggctcca gtggcggacg agctggtcag gactacttgt tgtttcgaag agggacggga ccgctagagg tagacgctca 300 360 tcattgcacc tggtggcatt agttaggcgg ccggcaaggg acgtggcagc attaccggac 420 aggaaagtge eggtgataac ggetatgget tecaetecag egttacteat ggttttgaag 480 agttccagga gtatgaactt atgcttgggg tatctgccag gtctcttttt ctcgtcttat accgacgcct acatgggtct cggcaagcga tcggtgaggg ctccgccatg tgccgaagta 540 600 ttggtacgtg gtggccggtt tattaacttc gcgagagcct aagctacaga cgagcaccat 660 cagacagace ategteacta tgecegectg gteeteete gteeteteeg eeeteecagt ggtgggtatg ttcgccggtc aaacgacctt cttctcctca ccatgggaga ccctttttgg 720 caccgccgct gagcagcatg aagcagcaat ggacggccgc atccaaggcc gtggcctcct 780 cageteteae tttggetggt acgggtggee gggeeaaace ttegaetatg tgattgttgg 840 cggcggcaca gccggcctag caatggccca tcggctgtca gaggacggta gcaactctgt 900 tgcggttatt gaggccggag gattctacga aattgaggca gggaatgcca ctgaagtgcc aatgttcctg ttcaactaca ttgatgacaa cggccatgtc aagaacccgc tgtttgactg 1020 gtttttttat atctaagtcc agccagtatg cttaccctac aatcgagata gctcagatgc 1080 1100 ttacagtttc aggggctggc 2855 <210> 1229 <211> DNA <212> Aspergillus nidulans <213> 2855 <400> caattgtttg cagatgagct actaaagtcc gaaagagctt gaaagcttga aataagtcta 60 gtctacttca ttcaaattca caacatccaa catccgaact ggacctcacc aagacggcgg 120 aatccaatac tcccgccaat gctcctccgt atccttagtt gtctagcaag gcccggtagt 180 aatgcatcat tggtattaac ttgctccatt ctgctcagtc cgcagtctta gattgttcct 240 ttgaaacatg ccaaaaccag atggaagatc attgaagtat gcttaggcca gattacacca 300 attgtgctgt tttaatgagc acatggaaat aacacctcct acccctagac acgcttcttg 360 gaagctttaa agattcgaat gggttcggag caagtttgat gagctactgc agcctatagt 420 ccgactgtgc gatgtttcgc tatgtgtgag gatttgtcat tggtttttcc tttctcgcac 480 tatccagccg ctggcaacga tgtgacgacg atgttgttga ggtccttagg aaggagtcat 540 ttacttcagg atgagggtaa atgtgtcaaa tttggacttt tcgatgtttc aattggtacg 600 aagcagcggg acacagtatt tataaatacg attgttcgcg catgtcagga taccacgctc 660 cttgcggcac cccataaaaa cgacatattc agtcatatac ctgaacgagg acggatttct 720 cgcagactat gccgtagaat actctccggt gcctgtgatg aaggcttttt aattgaccgg 780 aatttgaagt tgccctacac tccaacctcg cccgttgtag tgagcccgaa cccttttgaa 840 aggtacgact gggaatcctg tttagtcaat ctagacaaca gtgacgagca ttttgatcat ggtttgaatt gaaatatact acccggaacg gcttgacgac tataggctgg ataagctaca tgggtcactc gggtggagga ccgctaccaa gcacctacta atcggctttc aggaccgtga 1020 tggaagatta acggtactta agaggaaggt agaagagac ggccacacta catgggagct 1080 gtctggactt attgtgccat ctgtcgcttg tcccggcgca atgtgattta cgccatgggt 1140 acgtaataat tccctgtttt ctcttcgagc gacttcgcca cagtacgact gggcattgat 1200

tccgaattcg tctggcgaac taacgatcc

1229

<210> 2856 <211> 1464 <212> DNA <213> Aspergillus nidulans <223> unsure at all n locations <400> 2856

gaaagaagtc ttttcaatcg cattggtcga cagcagacag tgtcttgggg cgaggctgcg 60 120 caatcacqcg ggcgatttgc aatgttaacg tgtctcaaaa aaggcatcaa gcatagcttt ttgttttcag cagtgtgtca agagcaactg ggtctgtttc gatcctacag tcatttggct 180 tcttttcact gcagatgcca gctaacagac gtgcagagcc agcacaagac cgtccatgct 240 300 cccagaatgg taccatccat aagacatcag acttcagctc taggctgtct ttgaccgtga ctcagtggat ggttctacaa ccctttcccc tgacattcgt ttcctggcac aatccgacag 360 420 gtctatcctc ttttctgcga tgcgtatttt gctcaggtcg ataaaatgcc cacactgggc 480 cgtgactcgt aaactcaagg gcgaacgctt cctaggcagg atgaagatag atttcttgga cgccaaggga caggaggtta tacggaaggt cgctgactag cttgagaagt actggataac 540 acggccgcgg gatcgagccg ggcgtcgcca cagattacct ggacgatatc atttatcaag 600 660 cttgtgtaga gtgtgttgag agagcaactc tgttcaagat gttttccttt ctgacctcgg 720 cagtcatatt cttcgccctt agaccgacac gtttcccaaa tcgctgtgca cttctgcaaa 780 taaagtggct tgccacggga aacccgaccg gcggagcctt ctcgatggcg atatcatcaa tctcgaaatt tcgctctacc aaggcggcta ccatgtcaat atcagggtga tcgagctaag 840 900 gtagaccccg attcggtcat ggtagccggg taacacgcga atgcttggat ttggcagtcg aaacgtcaag attggcacgc ctatacgggc gttctgtcac attaatatga aactgtaagt agteacaget tgagtgteea tggettteat teagaateee aateeneece atteataeee 1020 cattatggca agatcaagca agtggcagtg tgtatggccg gaatgacttt tactattgag 1080 cctatacttg ctccgggaag tccttgggta actgttgacc gggtgactgg acgaatcact 1140 gccgatggca tgcgcacggc tcagtttggt gcgtaaggct gcatattagc agtcatcacc 1200 tgacatacgt ttagaacacc ccttgcttgt cacgcagaca ggtgtcgaag tcctgtctgc 1260 gegaaaegea gatteacetg gatgeeetge ettgttgeeg aetaceagtg aggetegata 1320 gctaatcgac gaccggacat agccaaagcg taagtccgtg accaaagcca gatgttctgg 1380 tgtcgtagtc acaaatgaaa acatggaata ttctcgccgc cagatcgaca cgcagtgcaa 1440 1464 cgtagatgtt ggcaaggacg tcgt 2857 <210> 1366 <211> <212> DNA Aspergillus nidulans <213> 2857 <400> accccatact tagcagggac atcaatcaca agaaactcag tgacaaacca agacaccaat 60 actaacacaa cctcccattg tatctccact gccacctcca gatctttttg tgattccctt 120 tcgcccactc agcatctgga atttccgaag cgccctttac ccaatacaac acccacgccc 180 ttctgtacaa gggccataaa ccaacatcgt cgtcattcaa cacttcctat taatctcata 240 catattgaca aaagettete geaacatetg etgteeegee gacaaggeee geeaegeteg 300 gcacagtaca cgctcattgg accactatgt ccgctgacca gtgcctggct caaagctcat 360 gctgtccagg tcgtatgctg ctattgaggc ggatcaggtc ttagttagac ggacctttcc 420 ctgaacatgt aaagcatcca cttgagagac agctgttctt agccatacag agtatctcat 480 ggaattcaga ggttcggaaa atcgtacaat tggcgttgag cagttctgac tttatcttta 540 tagaacgaca ttgtcgaatt tacctcccag ccggcatacg tccgttaata ctgtaatatg 600 aattatattt caagaatata acaaatcgtg acctcgagga acactctttg cttttattag 660 acagcaagaa gcatgcttga tgggaggaac aaattccggc gcaactttca cgtaggttta 720 tttatgcacg tatttatgca tagtatagcc attggctgac caatcttgtg taaatcatgt 780 gattatgaaa cagccacgcg gctgccgctc tcagcccgaa gacatcacgt caatccttag gtgctcaggc ttgggagcag tggctgttct caccttctac cccatcattc ttttatcgtt 900 acctcctata acttttctca gagttaaatt tagcgcagtt gcgcaactcc tggtcgctgt ggtgcaggac tacccactgc taaggcagtc gacttcacca tggctccgaa ggacaccttc 1020 ttccgctcgt cggatatgag cttgacgcag ctctatatcg cgaacgagat cggtcgtgag 1080 gttgttagtg ctcttggtga gctaggccag gtgcagtttc gggatgtaag tgctgttcat 1140 ggttgataat gctggagagg cgctggcaag tgagtcgtca ctaactggta ctcttttgct 1200 taacagctca atcccgagac aaacgctttc caaaagacgt ttacgaagga gattcggcgg 1260

ttggataatg	tggagaggca	gcttcgtatg	tttaccagct	tctgcgactt	tccagcactt	1320
tgagtgagtg	ggttggtggc	taatcgattc	ggacgggcag	gttact		1366
<210> <211> <212> <213>	2858 983 DNA Aspergillus	s nidulans				
<400>	2858					
ccctgtcggc	ctatataaag	tacgtttaga	ggacactcat	tectggeteg	ctcgcagcta	60
aaccgttctc	tttagtcgct	cagtctagtt	gtcctcatcc	tgaaccatct	ccaggccttc	120
tegtegetee	tcctgcaatc	cacctccact	ccaattgaat	gggcatagaa	acagctccac	180
ttgatgtcga	ggagtcgacg	gagcctccta	tatgtggtta	ctcccacaag	caccctttac	240
aagaccataa	tcgttcaaga	gatgtaaaag	acgcgctcga	cagcgagaag	gctgcaacaa	300
ctctctccga	cgagcctgaa	tctatagcct	ataactctga	acaagatctt	ccagcctctg	360
cggaccatgc	tcacattctc	agcccctcta	gcctctcggc	acttcttaaa	gtcgaccttc	420
agtacgttag	ctctcgtgtg	ccgtttgcaa	gtgttgacca	tgtagacatg	ggctctccaa	480
cgaggaggcc	tcttctcgtc	ttgcacgaga	tgggccaaat	cgtgtcaggg	agatggaagg	540
actatccgta	tggaagatcc	tcctgaggca	ggtttccaac	agcctaactt	tagtatgatc	600
tcaccgaagt	caacggttgc	gtctcgtggt	acagaagcca	ttattaacta	tgatcagatt	660
cttgtcatcg	tcatgggagt	ctcttttgga	atcaacgatt	atattgaagg	cggcgttgtc	720
accgcggtca	ttcttctcaa	tattgtcgtg	gggtaagcat	ccccgatcag	gtttcaattt	780
cctctgactt	gtccagtttc	gtgcaagact	accgtgcgga	aaaggacatc	ctctcgctac	840
agcgattatc	tgcccctata	tgtaaggtat	tacgtgacgg	gcgagttgcc	cctataaagg	900
ctgagtcgct	tgtggtcggg	gatatcgtgc	tacttgctgt	tggggacatt	gttccagctg	960
atttgaggtt	attcgatggc	atg				983
<210> <211> <212> <213> <400>	2859 1080 DNA Aspergillus 2859	s nidulans				

60 gtgatgcatc atggagctga catagtggga taggatcgag gacattggaa gaatcacacg 120 aggggatgaa cgcgtcggtc tactcataca ttgtactgct tgtgtaggac aggcggaagc 180 tggaactgag gagggtagac aaaatcgcaa acagctagct agagccgata acaagtattg 240 tgccgataat ggatatattg agttcttgaa agatccacgc ttggtcgtta atcgcgacgt 300 gatgggcttg gcgcgtagta agcggagata tttgcgtgcc tgagtgcctt gaccggtccg actcctgtgc ggggccagag aacctgaaac tgatatgggg ctcggaatta ccccttggac 360 420 cgtgacgaaa aactaacact ccagcacgaa aattcttata taaagcgttt gggccttcgc tgctggagga ggatctcaag attgtgtaaa attctactaa atgggagtga ttgctgcata 480 540 taatgcaagt tatatattat tactctagat tgccaatgtt tagattagca tgcaggacct 600 agcctgcaga cgagatgctg agctcaaaaa ggctctcgtg ttgaataatc gctcccaagc 660 aacgccggta catccctccc agtggtatca tgttgaattt atccgcgcaa ccctgatccc 720 cgcagggacc atgcaaagaa atagtcagac agtaggaaag gaaacaaaat gtgctttttg 780 ttttgacatg tctatgctgc gctttgagtt gttgaaacaa agcaggaatc attacaatcg taaaaagaga tgaggaagat atgtcatagg ggattcaagc ctaagcgacg agcttagaac 840 ttaagggeet tgggetgete ceaggagaae ttetggttgg tgaagtggee gttetgagea 900 gtctcaaagt agatgggctt ggccaggtca agctcacgga cgatgacacc ggggcggagg tcaaagttgt tgcggatgat ctggacgagc tcctcagagg tcttctcaga ggtgccgtag 1020 gtgtccacgt aaaaagacag gggcttggcg acaccatagc gtatgagaac tggacgaggg 1080

<210> 2860

<211> 1303

<212> DNA

<213> Aspergillus nidulans

<400> 2860

ggctaacaag cttcgataga cccggactga gcttaatggg tggtgacttt gcgtgatgag 60 ccttatatta tgatcagaat ccaggtaggt tcctttggtt gaatgatccc acaaaatgat 120 cccactaagt atcccacacc aagagagtaa gccgcggcgt taatcaatcc atccttgatt 180 ctctcagatt aataggtgat agtgtaatgt gccgattctt ggtacaagtt ccaggaggtt 240 gcgttggaga tgcggagtcc ttcaggtatg actgacgtca tacaagacct cgacataaac 300

atgatgeaat cetgacteet teatatttaa teetttagat eetteaatte teteattete attccaagaa tcatcgatcc atctatagcc acgatggcag aacaagaagt gtacggcggc 420 480 eqecteteqa eqqqeeecet qeeeqteqae aaggeeggat egtaceteee acaccage ggcgccgaac aagateteta eggeteeegt tttggcacca gettegaaaa ggcccgacag 540 600 catatecege atgtaggaca gaccaaagge acagetgeag ageaggacet etaeggetee 660 cactteteeg gecaceeea gteetegace geegeggeae taggeeteet ceaatetgee 720 geteteceat cetttaettt eeaegeagea ttttetaeaa tegegtaegg tattteeege tacacggatc gcgctgaagg caaagactgg ctttggcctg ccggcatgac cctcaatgca 780 840 tggtatagcg ctattggcac caaggttctc cacgacggtc tetettgete cacggeatgg 900 tctacactca gctactcaga gaaactgctt ctcggtggtg ttactgcctg gggtgttcgt ctgttccacc ggatcgcgac tcgtggtgtt gcacgtggca aggacgaccc gcgctacgat 960 gcgctcaaga aggaccccgg attttggaac aagtcgctct tcaccatgtt cttacctgag 1020 getgeagtge agaegeteat etegttgeeg ttegtgetge cetteegeaa gaeegetgag 1080 agcattgctg cttcgcccgt gaccacggaa cgcggctggt accacgcgct ggccgtcttc 1140 ctcttctcgg ccggtttcgc gatggaagtc ctcgctgata acgacttgct tcccacaaga 1200 agaagggega cattggtgtt tgeegegaeg gagtetggag egttgttaga cacetaagta 1260 1303 tgtcccatgc cctagtctgc taaagagctc aagttaacag aga

<210> 2861 <211> 1052

<212> DNA

<213> Aspergillus nidulans

<400> 2861

aattataggg cacagacgca cggggcctag ggacctggaa ggaagctcct tggaatgtga 60
atcgacttat gagctcttc gacttagttt ccaggtctcg atttgcgcgc gcctagaacg 120
cgacttccat ttctagttag ggccaattgt ttatccgggt cccgcgatat cggaggcgga 180
gcgggattta tatcgcacag ctctgctaat ggatagataa atagcgccga cagtattgtt 240
ggggatatat accggcattg ggtatattct attggagggc cactttctaa tctggctgtg 300
gacatatcgt ccacattgcc ttgaggaatc aagaattgag tcgcagatcg agctccaaaa 360

tttgagtcat cgagagggt atttatatec ttcagatete egggetttgt tattgagetg 420 ttttcccttc ctttccctct atttactaaa taccatccca gctgggcagc ccatggctcc 480 ttccgctcaa cctacagccg caatggctac attcacccgt atggtgaagg gccaaatgcg 540 ctqctactcg gcacccgtgg acgccgctat cccagccagc aagcgcaagt acattcccac 600 ctcgggcacg tatccgaagg gattctttgt ctcagggact cacgttggcg tgaaagcatc 660 caacaccaag ttcccagacc ttgcgctcat cacgtctgag acgccctgct ccgcggccgc 720 780 agtgtttacg acaaacaagt tccaggctgc accggtgcaa gttagcaaga agatacttaa tgcgactcaa ggtcaaggga tccggtctgt tattatcaac tcgggctgcg cgaatgctgt 840 taccggcaag ggcggtcttg aagatgcgat gagcatggct acaaaggtgg atgagtatac 900 tggtgtegee gagaaeggga egetegttat gagtaeaggt gttattggge ageggtatgt 960 ttctcatcgt catgacttgc aaatgattgc caacagattc caatttetet agtetteeta 1020 tctctaagat cctttccaag attcccgaag cc 1052

<210> 2862 <211> 1580 <212> DNA

<213> Aspergillus nidulans

<400> 2862

tggttagatg cccgctagat gtgttcgaag gatgttctgg tcccagtcgg actgaaqaac 60 tgattcttcc cagtatcatt cagcgggctt actgggcacc ttcccaaagg ggcatgctct 120 180 tcattcctgg gaccagcaaa ataaactctt tcgcgtccta agttatctac tgtgcttact aaatggccac tcgacaagcc tctgatttgc taacccatcc tattcaccag cataagacgg 240 tcatattgaa ggtttgagaa gcggcctcga actaccaaag gcatttgttc catctatgcc 300 agagacaaaa caggattatc caattcacgt accaagecee ttggaaggtt gegatgtett 360 tcacaaaagc gtaaacgctc acagcatgct atgctacgcg gtaatcctct tctctcgata 420 tgtacgataa cagtcaattc gaacaaggcc gcaacaactc agccaaccta aaaagacgac 480 cttgacgatg tagtttgcac cgaaaataca agctggccaa atgcaccgtg atctagccga 540 cgggtctgga tttaaccatg tccattatgg ggcaagccac caaacggtat atagcctagt 600 gattccagga gcccgatatg agtatgattg agatagccgg ccctttgtcc ttccggcctt 660 ggtaagggtg acttaacgat cctatagccc ataatgatct cttccaaacc cgcggaaagt gcgaatgggc acctgtgact ctgttttccg taaaggatgt agtcgcagac tggctcttgg 780 840 gtcagatcta aatggacgta atgagggaga tcggaactcg atcaggaact ctcgctagga 900 tragggager tagageratg tetgacegtg gtercaaate tggaactegg gegtgteage ttgagccaag ttcaaactca ctctgcattt gatctcctgt tagcttagcc gtactgacct 960 ggcaatatcg ggctccgtcg gaggctccga cggaggctct gctggtatgg aagttccggc 1020 attgtcggtg gctggctgcg tctgggcctc tccctactct agataaaggg tctcagtgga 1080 caagcetetg ceagttteaa etaaggeaee caaaetteet taateatgtt aecaaggeat 1140 ctgtgaacct tctcatctta gcaacgattc ggtaatcaaa aaatacgagc aactcactac 1200 cgcttgatcg acgagacaag gaatgggtac ctagtttata taactagatg ggtttgattt 1260 tgcgtcgagg gatgtgttgg atcaaaaggt atcgtcacag cacctagttt caagcaatga 1320 ccaccaaaag cggattcagc tgcaccttgc cttgataacg accaaatatt tgaaggctgc 1380 aaagatacaa ccttgccgta ttagtttcat cgagattgaa tatgtatggc gaatatgtaa 1440 agegagteag teetagaget gataacatte tgeeetgege tacegettea ettttagtte 1500 ggctccgcct aaggacccac gaccccagat gcttcatttt gagaactcta gacatatcac 1560 gcatcaatga gatagagaga 1580

<210> 2863 <211> 1704

<212> DNA

<213> Aspergillus nidulans

<400> 2863

ttttccccat aatatgccgc ccacgcctct tcctttgact ccctcggatc tacattaccg 60 gcatactgcc cgtagtatgc atccgggtgg cccgaagtaa gaacgtcgct caacccgttc 120 agaaactgga tcgtcgtatc agtcaaagca ctggcggtgc ggccaaatga gaatgcgaag 180 aatagagtat cgcggtggac gaaggctgtc tccgagggtg cgacgtcggc gactgcgccg 240 ccgagcccat taaaggtaac tgcgtacaaa tccgtgccgt ttgtcgtggt gtcgaggtat 300 tcaaaggcag cttgcgccac ttcgtccgga atcagggtct cctgcttgaa gacaagcgat 360 ttagcgtaga agtggctcgg ctgggccgtg ccagaagcaa tagtccgcg gcttgcggcg 420

gcacgaactt gtagaagttt gtatatggtg taatctgcgt ggtctggggt gctgtgctga agtgcgagag gaagtcgagg gcctcgaagt ccgcttggct gccgaagtat gcgccagaga 540 caatgatgct gctcggtgtc acgacgaggt cgaagccagt gtttcggggc agggagccgc 600 tggcgagcag gccttgccac gagaggaaga cctgtgcgcg agtggccgag tccgtctctg 660 720 tccagacata cgagtaactg atggtagaag gtggcgcggg ttcagtgcgg atagcgaagt eggteacgat geegacactg gaaceggege egegaatgge gaagaagaga teegtattet 780 gtgtcttcga agcgcgaaca acggacgagt tggctagcac cacttccact tcctcgaggt 840 agtcaaccaa gaggccgagc tgccgtgacg ccgctccagc ccctccaacc gtcgcatgcc 900 egeegageee gaetgtaaag gtggaeeegt ggggggtatg eeggeeteeg ttgttgtaet 960 ggagtteggt caccegtece aggeggttac caggaceaaa ggaggtgate catgtgtegg 1020 tatccacgct gaagtgctgg aggttctcca gattgatgga aagtccgtcc gtgggcgagc 1080 catagttgcc atagctgtgt ccgccgctct tggcttgaac tttgattcct gcatctacag 1140 cacatttgac agecgetgee acetgagagg tgteeteggg aaatacaatg gegacaggag 1200 tcgtaagaag atcaagattg tacggtgcca cgaggtttgg gtagttgggt tgctggggaa 1260 aagcaactag actggagtcg cctccgactg atgccaggag acatgttgcg aacgtgctga 1320 qcqcqqtcat tqatqqacta tqgtcqtggt aagtacggtt tctgttgatc cgttgcaaca 1380 agaaaattgt ctcggaacat ctgtacttgt atattgtcga aggattgcta tacgaggacg 1440 gactgaagee tgaactataa eteegeaaet eegtaaetee geetetgeaa ttgteatata 1500 cctttcaaag tgaagttgtc ctcttcactt ttttctcttt ttcagctatt tctatacagc 1560 aagcccatgt tettgeteca agtgetgtea aagaaactge agcagecatg ttggtgegtt 1620 taggetatea aaaceetagg tetaaetttt ettgettgat teteaggetg gtacatettg 1680 1704 aataacagtg aatggctgta taga

<210> 2864 <211> 1591 <212> DNA <213> Aspergillus nidulans

<400> 2864

tgtttccgca caggttcagg cttatatccg ttctctagga aaagatcacc agggaattgt 60

gttttcaggc aagtgttgaa cctctctccg aagatcgctg gctgcatcat gagttttcgg ttcatgccat ttcttcaaag ctgagattta tattctcaaa cctgtctcca gaccggaaaa 180 tcataatcac ttggatagcc ggtattcatg aatgggttgt gaagagaatc ttctgagaac 240 cagtacagct atacagagta tgtagtattt gtagctccgc cagaagatac atcctaggaa 300 360 cgggctcctt ggttttgtga ataactgtaa atccactcga aaggcacacg gggccacgtg 420 ccattctaca acctacgtcc tctttacttc agtaagataa ctataaggcc agttcaagca 480 cagaaacatt tggccggggt atcaacaacc atagctggcc atgagaactt tgaatgaagg 540 gtcggccaaa agttgcgttg cagtcagacg tctctcgggt gagtaattga ataccttctg 600 cataatagag agcacaagct ctcgctcagc cggaccagcg tcaggccggt agcgtgcaat ctctgatgcg aggctatttt ttgagcaggc gcttgacttt gatcgtcaac gcttccacca 660 attgtttcgc agccgacatg cgagtggctc tagaaaatct gcccactgta taacggtcaa 720 ggtacggccc cattagagga agcacataac cctatggtaa caattgtccc cggacagcat 780 aaaagtgtcc atataagtca ccaggtgcga tgatcctcta ccctctgaac gatttcatca 840 tgtatgcgtc gttcgatgtc acccgagtcg ccggtggcca tggctttgac agcaacctct 900 ttgttttcct gaaggtcgag ggcaggccag actgtggaaa acccgccggt gccaatttta 960 tgctcaacca ggtgtctcgc gttgaggatg tcttcgagac aaattggata gtaaacgttt 1020 ggcgttgcct tgcgttcata cttatcccag gactcgacaa cttcttcgag ctctatttcc 1080 tegeettetg tgettacaag atetecaaag tetgtegegt categteett ggttgtttge 1140 ggcggcgtta ctctatccgt cctatcttat ccacgactat gctgtatcgc ggtccggtct 1200 tegtatgtae agtgeegaga cacaacataa geactgtgea gteactagtg aatggetteg 1260 cgagagagtt cttgaatgat gaaagtggct tccgcggcca gcgtgctttc cgtcgcaatt 1320 gcagtttggt gtggttgtgt gatcaattgg tgatgtacag gttgtatcct tctgagttta 1380 gggtgeegtt actttggtca tatttteegt gtttgeetgg gettggeeta geetggeeta 1440 gcctgatctt cggtctggtc agcttagccg ttttatgggc acgccaggcc attccctttg 1500 acttecttet etgegaggtt ggggtttttt tagatgttat tttettaatg tagttatget 1560 1591 tttatagttt ggtggttttt tagatgaatg t

<211> <212>	2865 1065 DNA Aspergillus	s nidulans				
<400>	2865					
ttttttgatt	gcattattgt	tcctcttggt	ttccagattt	cgttgttttt	tctttctgtg	60
gctttgcaat	tgttttctag	aattgcgttc	cgcaaggcta	tcaaatattg	tcttgtctgc	120
ggtttccttc	atatttaggc	acgagagaat	tagatctcga	tgagtttccc	aggagttcgg	180
aagtattaag	gacgaagtgt	gttcaagaac	cagttttctt	atgcagcatg	aaagccgctc	240
tgcaagtggc	tgaagcagag	tgggccgctg	gagctcagtt	gtctgcgcgc	tggtcagtcc	300
gaacttatta	gtactcttca	ccacgatcac	tacctacctg	atgcagcttc	cccagaagca	360
cttcggccaa	ccgccgtcca	cgttttctgt	atcgcaacat	actatcccaa	tagataccta	420
gcattagaag	ccaaacagga	accatgttga	gtgaagcgcc	ctccaaagag	gttagaaacc	480
aagcaaagta	ctggtcgtga	tcaagtagac	gctcaaagaa	taggcgagct	gtcaggctgg	540
ttctgcaaga	tgttagaaat	gtcttctaca	cacatgggag	acgtacgcgt	aagtcatttt	600
cgatttccag	tctgcagatc	cgcaggctcc	tattactcct	tcaaggaact	gctgtacgcc	660
gctcgtccag	tegegaacee	attttacctc	ggatcctacc	accaacgtgc	cgccggtacc	720
ctttctcttg	caagctcgaa	tctcgttggc	accgacacat	ttaacaagcc	atacggctcg	780
gtttaccgga	atccatttgc	ttaagcactg	atcaagaaga	ttcttgccac	ggataccatg	840
aggaatcgtg	cgactcagcc	tgcgcaacgg	cacagaggga	ttggcgaggt	cacggagcca	900
agcttctcgt	ttgttatccg	tcagcgtaac	gcgaggcggc	ggcttaaagt	tcgacgggac	960
attaattgta	ttgtgattct	gtcgcttctc	cagggcagcc	atgaaaacag	acgagagcat	1020
ttgtaagccg	gacgggtgct	tcaattgcgc	atagagtgat	gggcg		1065
<211> <212> <213>	2866 2058 DNA Aspergillus 2866	s nidulans				
		ccaaggttgg	gagacctgtg	gacgtgctgc	cttactcttc	60

ggcgactgga agattgtgta cattcccaag ccaaagggtc cggagcggtg gcagctttac 120

aacctcgttg aagaccctgg tgaaattaat gatttagcgg agaaatatcc agaacggctg 240 cagaaattgc tcaagctctg ggaccagtac gtcctggaga ccggggtcat ccctctcaac 300 ccqqatctag gtqacttttt ggaagccacc gaggcgcaga tgacggagaa tgcctggatg gagtatgact attggaaggc gggtgcgagg gacgacccag gacgggagaa gttcatgcgg 360 420 aagccgccga ggtttcagag ggttgtaaaa cagttctaat taagatccaa gtcattagca 480 tcataggtat atacagatta tgaatgacaa actgatatgg tatatagatg aaaaagttta tatcataaca aagaaatccg taaaaagctc cctccgcaca cacttcgagt ccgcccaagt 540 600 tctcgacqca tcctgqcgtc tcatcatctc tttaagaagt agaagggcct tgcctgcatt 660 tggatgagct ggggggcta atgatgccat acgctggatc tcgttcgcaa tccaactgcg ctgctcgaat gaaccttcaa gggccgcgat gaagagcggc cagaggaagc ttatggggat 720 780 tggttctgtg ccggattctg agggaggttc atggctattg gagttgctat ttgtagaact 840 qqaqqtaaqq qaaqaactct cctccttcqc cagcctaata atctggtcta cggctgcata 900 taccctatcc gtgcgtggat atatggcgaa cgccacgcgg tgaaggtata taaacaatgc caggaaattc gcgacatagg agcgaaacgt gctgacgatt ctcactgcga gtggtggtgc 960 caatacttcg agcagcgacg ctttcccgtc cttgctggga gatgtcaatt gtgacgagga 1020 gagetegtag aggtecagta ttettggeet tttgttecag agaetetega ggtetgegga 1080 aatagcatgt gcgatctgta gcacttcgaa ttcgtcggat accgttcctc ggctgcggtg 1140 gtggaggtct atcataatga tgcgccgggt gacttgctgt gttgcgagaa aaaaggtgaa 1200 ggctggcgag gtgatggtgc gggttactat gtatgctggg ggtggagttg ttgcaaaaag 1260 atcatcctcg gctgagtctg ggggggaggt agtagggta gagatggtac ttgcttcgga 1320 ggtgtggtct cetactacag agcggggctc gacggctggg ccggcgagca gtgctttgac 1380 gtctaggaga gaaacacatg acgcgatgaa atgcgcgaga cctgtccagg attcaatctg 1440 cggttggaag cgtcggagga gaaggtaaga ggtgtgtagg taagggaccg ctgggcgcca 1500 ggtttcgggg gatatgaget getttctgtc aatataggeg catatgteet getttgttet 1560 cttggagtaa ggtgtagaaa aggacgggca tacctcagcc aacatcagca gcagcacact 1620 cataagcacc ctcttcagca atacttcatt tggatccccc agcagaaaag cctgaatctc 1680 ggaacteget tgageatggt aggttggace catttteggt tgtttgeggt etacecaege 1740 caaatgcatg tctgagtagc agtatacagc caacagaatc gcatgacaac cgggtgcgct 1800 ccgattcgac tcagcgaaaa tagtatetet cacatatete cactecaagt cgactggtgc 1860 gaatattgta ggtggtgett cgttetegeg gaaatgetge agcagttgtt ceteceagae 1920 teetatteeg atagteecet gaggegaggt tgggtegggt acgaececaa teeeaggaet 1980 acceatttee aceteecag aateceaage aacaaggegt tggtegaaaa ggtgaecgee 2040 gtetatetet tgeatage 2058

<210> 2867 <211> 2151 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2867

gggagcggat cctttacaag ctggtcttca actttcqcga tcaactttgt tttccaatcc 60 aggcgttgaa cctgccatgt cccgagggcg aaggaaataa ttgggattaa agctgtctac 120 aaagttagca ctcatcttga tgggccaccg ggcgaaagca actacgaaag gcataccgag 180 aatgatcaat cctggcccgt gtttgcggcc agttcgcacg atttgtgcgg ggtggtcgac 240 gacagataac cagcggggat catcacccat ctgcccgttg aagaagcgga cttggaattg ttggcgacgg catctggcgc agattgaatc gaacttgaat aatgtgcgcg gaattcgagt 360 ggatgagatc ggatgttqcc atactcgagg gacggcccgt tcagcgaccg agaagatcgg 420 480 tcgcattatt tatcgtgtta tttattgttt ctatttcgct ttgtatgtcc tgttgtcaac tgagaggcct cctaacgttg ttgatgagct agaagaagta gaagcaaaaa gtaggtcgat 540 ggaggagatt caaaccgacc cggccgtgct gcggaacccc aaatgatcgg caccggctga 600 660 tgcgcgagca actactgctg accttcgaat ccataacatc ctcaaatcag aacagcatac cacagtcaat atgttcttta ccgggacctt acaagaagga attactctgg cagttcaaga 720 gtcaaaagcc gttgtttgct ttgtgccagg tctgtcctcg agaattgacg cgtacgtgat 780 atacccgctg ctaattattg ccttcgcaga taacggcgag acaagctcaa catggcagga ggaatacttt caaggcgacg aggtacaacc tcaagtgttt aactgaaatc tttgcttgcg 900 catgttaatc cgatccgttg tataggagtt tacacgactt cttggatcgc aatctgtcct 960 attacgcatc gctaaagaca gccaagaagc tgggtttcta gcctccgtct gtcccatctc 1020 aaagtatcca acggtcgtta ttattaggta cggatttctg tcccagctgg gaggtggaac 1080 catctgcgca gggcgtctgt tgaccggatc gcaggaatgg aatgctgcgg gagtatatag 1140 tgccqqacat ctcaaaaqaq qqctttcqca atcqqqttat qqccqctata qctqatagca 1200 aaccgcagag tcagacgatt tcttcttcgg tgcctcaaca gtccgctcag caagctcaag 1260 aattgagete eeeggeegea eggtegeeae aaactgttae cacaqeteee acqccaqcaq 1320 tegataegae aegggeeteg ataacteagg gacaateaag teaaaaegta teeacgagga 1380 gctcaggcgg cagggcaaat gatataacgt attcttcagg gtcaagaatg tactctgcaa 1440 cagtaccccg aaagcaagag agggagtacg atacgccgca atcttctaac aaagctaagg 1500 agacqaccqa qcaaaaqaat qatqatatga aaqqqaaqqc acctatacgg acaaacatgg 1560 acqaaaaatc aaaqaaccaa aaatccgctg ctgcgtctcc agcccctcac tcaacqtcag 1620 tgccagtgcc tccatcgcaa taccgtctcc aggtccggct ctttagtgga ggtttctgtc 1680 cgctcaacgt tttcaccctt acataccatn cgcagtgacg tccgttcctg gctagataac 1740 caattggagg aaaagcgacc ctatacctca aactcatcat gacgcccttg ccgtacaaaa 1800 cacttacaat cgccgaagag gaccagaccc ttagtgaact cataagcggc tccacggcga 1860 cctttgcatg gtgccatcaa gcatatacag aagctactng gactggatcc taccctttcg 1920 ccaggcttaa gaattattgg ttggtccttg ngggtggagg gcggggatta tgtccttatg 1980 gtattcccaa aggtttatat aagccccccc ccaaccgggt ttcggttctg atctcaatgg 2040 ccggtgtggg caatttgtct tgcataggtg caatgngtta tgtgccttca gtctttcttt 2100 tetteaagtt attetgette eectettgat tteattetet ggtggttttt a 2151

<210> 2868 <211> 1878 <212> DNA

<213> Aspergillus nidulans

<400> 2868

ttggttggga ttgcacgatg cattgctttg gtatgtatca gtgaggtctt cacgaactcg 60 ggttgacgaa aataggtcct agtctggaca ggattggcag gcggtgacag cgactactgc 120 gcgattctag tggcaatcaa ctcgattctg cagatggtcc tattcgcgcc cctggccatc 180

ttcttcatca acgtgatcag tgggtcgaat gagggcgtca caatcgatta ttccctggcc 240 gcaaagagcg taggggtatt teteggtate eegetaggeg cagecateet caccegettt gccctgcgac tcctgataag cgaggagtgg tatgatcggc agttcctaaa atggctgagc 360 ccctggtctc tgatcggact tttgtttacg attctggtcc tgttcgcatc gcagggcaag 420 caggtggtgc attcgattgt atccgtggtg agggtcgctg cgccgctgat cgtctacttt 480 gccgtgatct tcctggtgac gcttgcggta acacggcggt ttggctttgg atataagctg 540 600 tcttgcacgc agagettcac agecgcaagc aacaactttg agetggegat tgeggtageg attgcggcct ttggtgtaga tagcgaccag gctctggccg cgacggtcgg cccgctcatc 660 gaggtccccg tgctgctggg gctggtgtat gtggtcaagt gggtagccag aagacaaaaa 720 tgggcgtgat ttctcctgta aatagtcgta tgcttcattg accactaatt tcatccaaga 780 840 cttgaaatag aacctgattc tgctctctgc aggcttcttc ggagttgctg cggatgaacc cctttcgtag cttttgctgg atttctgaga cgtccagtcc gcgagcgttg tactggttca 900 cgagcttctc ggcgatggcg cagaatgtcg tattgaggac gtgctcacta atgggcagag agtccaagcc ttcgtcggga gagcaggcgc aaagtggagg aagctctgtt gctctagctt 1020 tctcacactg ggattcgttc ttgttcgcgc tcggcttgca tgcaccgatt acaggttctt 1080 ggctcgggac tgattcgctg cgaggactct gctcagtcga gcaagacggc tcagatttca 1140 cctccgccac tcgcgaccga gcctcagacg gatctcgtcg aattgccgga atagcaactt 1200 tetgagetge aactggattg tegaceatee geagatacte etetagtgea ttaggeggta 1260 cgccgaggaa gaaatgcaga tctctcagcc tcttgttctc agcctctaat ctctgggccg 1320 ccagcctgtg ctcgacgtcc ctgcgatcga gctcttgctg gagactgagc actttgcgct 1380 cgaggtcctg aagatgatcc tgtctccgtg ctctgctctt acgctggttc tccctcacac 1440 gggcgagttt atctaatcgc tacgtatagg taagaaagtg atatcagaaa gctcgggaga 1500 acatgttacc ttcttctcca aagctgaggt catcttgctc ttgcgcttgg tgttatggaa 1560 agggtcctgc agctggactg gagaaaactt ccagtccgca gaagcaaaat gcgagccaga 1620 acctggtcat gtgactttgt ttctttggat ttcagtttca gctgcagaag caattatcac 1680 tagtaatctg cagaccggta tacaactgcg gcttgatcaa taacccggct tcatatatca 1740 cagtaatctc atgaatgagc atggtctata tggagcgtgg acctggcact ggtccgagcc 1800

teegtetgeg	tcacagtcac	accagttagc	tggtgcggta	caaagtcggc	gctcaccaga	1860
tcgctgagct	aattgaca					1878
<210> <211> <212> <213>	2869 1437 DNA Aspergillus	nidulans	•			
<400>	2869					
agacaagcct	gtcagactct	acgtttggtg	cggcacctcc	ctgcagttct	ccaatcgtga	60
gtgcgggttt	gttttttagt	agaccagagg	ctgaaaacct	ttttcagtaa	tgagaaaaat	120
cgatccaata	cttcgtagta	ggactcggca	taattccctt	actctgagta	tattcaatac	180
ctttgctgtc	tgtagcagat	aagggtctgt	aatttacgac	cggatgcgtt	gataagccca	240
ctcctggtga	ctctccaaga	tcggcggcct	ttaatagtcg	gccctctccc	ttccaccccg	300
teettteece	ctcgatccgg	tcgtttcttc	tttcgttcac	ataatctgtt	tcaatcgaga	360
ttcaatcgct	accgggacag	agctttattg	cctctcttcc	caacctggcc	ctctctcagc	420
ggtgatttag	gtctcctatt	tcccgcagtc	cttcgttgat	tggtgcgctc	ctcgatcata	480
ctactatact	ccatcgcctt	gtataaatca	ctctatactc	tcccaatctg	aaacgcaatt	540
teegeatget	tcttggtaag	tggcccctct	cactccagtt	catcgtcatc	tgcaatcaat	600
ccacacccta	a tgtcttgttg	tcataattcg	tgcacgcccg	gcatttccaa	taccaagcct	660
tgggtgttc	c cctgagtgga	tcgcagacaa	agactttgat	caaggcccac	tgttatacca	1 720
ctctttctgg	g gtgctccctg	cgctgaattg	atttttaaac	: tgatctttta	tccgtcttct	780
ccagaccct	g ttctctgtat	atgattctcg	gcctatcctg	accccatcac	gtcgtcgcca	a 840
tgctgcgcc	t tcaaactgct	ctgttcttcg	cctacctggc	ggccaggtcc	ctcgccgcag	900
acgacttta	c geegeecage	tgcagtctcg	atgaacacto	g teceaaggaa	tacccttgct	960
gctccggta	g gtcggatccg	ccacatatac	actgcgcccg	g ctcatgttgc	actagtatac	2 1020
ggacaatgt	g gtaccggcgc	ttactgccto	ggcggttgcg	g atcccctgat	gtcgtactcg	g 1080
cttgattcc	t gegeeeegat	gcccgtctgt	gagagcaaga	a gctacaagtg	ggagaacct	g 1140
gacagcgcc	g cctcgaacaa	tgagtaccto	ggaaacgcca	a cagaatccga	a ctgggtgta	2 1200
agcggaaag	c ttaaagtcga	agacggaaac	cttgtgctca	a ccatgcccaa	a ggagagcac	g 1260

ggctcgctga tcgcgaacaa ccactacatc tggtacggca agattggtgc aaagatcaag 1320 agcagtcgcg gtgccggtgt tgttactgcc ttcattcttc tctctgacac caaggacgaa 1380 atcgactacg aatgcgtcgg ctccgatcta aaagaggttc aaaccaccta ttacttc 1437

- <210> 2870 <211> 1692
- <212> DNA
- <213> Aspergillus nidulans
- <223> unsure at all n locations
- <400> 2870

acqtqtaqqt aqtcgacqtt qtatactcac tcgtgtacgg ccgctcgcta cagtatggat 60 acqcqqqaca qtqcqqqtac ttaqqcqqqt qqacttcata ctccqctqqc gaaggatagc 120 caccagacga gtagtagtag tacgcgtaat agcagtccgg tgcgtacacg ttgtagcact 180 qqcaqtaatt cqqaqcqcac ttqtaqtaat catacttqtt gtagcqqcag aagcaagcgc 240 agagecegge getgtatttg tegeagtaat agaettgtet eteggagagg teatetaeaa 300 tcccagatta gtcggttatt gcagagcaga acaaggtagg gcagagtcag catacggttg 360 tcagcatggg cctgatcctc actcttgggg ggaagcgaaa tgcccaaggc gagaatggat 420 480 gtgaatgtgc tgaggacgat gactggtttc attgtgacgt tgccagtgta tctccagcta cggttttcct ccagttgaaa ttgatagaac ggatccaatg ccagttgcaa ctggcgcagc 540 atcgaggacc atcttatact gcggaaactc actacgtata ctttgtccgg cagtggcgcc 600 acceagtata cetgetgtga egactegtge etgtgaagea aettteatee tetatgatge 660 720 ttgtccgggt cgaagcctgg ccaggctgct cggcatccac ttcctgtcta ccggcctgat ggagctgata atctttagat ctcggatgac gtttagattc cattcaagac agtcgttgat 780 840 accggcgtac cgggattgcc ttaaagagct cactcaggtt cgtctcatga tactataaac ggacgtaatc accatggatt cccttcagat gctccatact gtcgggttat gacaagggct 900 accgcgagtg agactgccga caattcattc aatcgatggc tgggcctcgt caggccacca 960 gcagaaccca tgggcgcaga cccgggagag agacgggaaa accagacttt gctaagtcag 1020 tcgcctggta taaatccata tctagacacc tgaaaatggt ctgatcacta ccgatcgttg 1080 cgtatgtcat ttactgccgg atgatggtgc ttttatgcag cttgagaaag gtcctagaat 1140 atccaatgat gtgtacagtc gctgtgagcc tatcactatc gcatgaggcc ggqccgtgaa 1200 cgaagacaat attgattcgg cttcaacaaa ctgagaacat atctctagat agatagctat 1260 agctatacgc ggcagataac cagacaaggg gaaagacaag acattaggac attatgacaa 1320 gataaacagg tctatatcta tcgttaagca gaaccagtcc atccaaacgc ctcgccaaga 1380 aaaaccaaaa taggcgtcta tatgtgagtg agtggagtgn taatataacc ataacaaata 1440 aacccaagca tacaggaaac tgaaaacaga atgagaacag aatagaagaa gatgtgaaac 1500 cgggttctca agcctggtcc aatcccttca accacccca ttaactttcc ggcgccatcc 1560 tgacatttga ccaacactcc ccctattccg gtatcgcccg gtacaattt tttcccatag 1620 ccggccaaaa aaaatctgtg gccacaataa aatcctttc cttggaatcc cctccccgaa 1680 ctttctttc ct

<210> 2871 <211> 949 <212> DNA

<213> Aspergillus nidulans

<400> 2871

gcctagactg tattaccggc atcaaccggc aatagcataa acgaagggct gactttttaa 60 gtctaactgt atatggtcaa ccaaatacac aaagattaag agaagcatag cctgatacag 120 cactegaggg acataaattt tgaactgtag aactaacaga attttcttgc agaaacctcg 180 gcgacaaatg ccatagatga ctagtagcca catacagttg acatattcag atcagccttc 240 gcttaccaca tattccccta acgagagcat agatcgggtt tctgacttgg ggtctgtgag 300 aatgeteaag eactggeatt ateaatatte tgeegatgea atgtaeagee ettttgtget 360 cacatgccaa aatatatatc gcacagcagc acactttcca ctgccttacc ccagctattq 420 agttagccaa tgaaagaatt tgtactagct atcggcgaca acaataccaa ttaatactcc 480 tctctttgga aaattgatgg tttgtgctgt tctcgtcata atgtcttacc tagagcacca 540 tccaggcaga cccgaggatg gccgcaacca ggacatacct gctacaatac qactqaaatc 600 agtcccaaac gtcccgtata cagtttagac cctggctacg gcgaagtatg cacagcacaa 660 tttgtgggga atgccttgcc tcggcacgta gacggatgct gggtggagtt ctacaaatag 720 tcggtgtggg tcaatactga taggaaagtt gagtgattgc aagcccaata atctgctggt 780 taactgggag atgaatccat ttggaaggga gagctataca atccgatggc cgcccatgat 840

caatactcaa	tatccagccc	atcggaaata	tcgatctcgc	cagcattgag	gtacacggat	900
cagagcgccc	taggagtagt	ttgtgactgg	cataaatgat	agcaaatgc		949
<210> <211> <212> <213>	2872 766 DNA Aspergillus	s nidulans				
<400>	2872					
caaggcatcg	accactacct	cggcatgtga	gatggttaag	aacatcctta	tcatgcgctt	60
tggcaacgag	ttcttcaatg	ccacctggaa	ccgccatcac	atcgacaacg	ttcaggtagg	120
accaactccc	aaactctcgc	gtcatagcgc	atcgctaaga	cagtttattg	gtatagatca	180
cgttcaagga	accattcggt	acggagggcc	gtggaggtta	ctttgatgaa	ttcggcatca	240
tccgtgacgt	tatgcagaac	cgtatgcttg	ccgtgtcctc	tggtccgacg	acatgctgac	300
atgaattttt	tagaccttct	gcaagttctc	acactgcttg	ctatggagcg	acccatctct	360
ttctccgccg	aagacatccg	tgacgagaag	gtaaagtaac	tcgcaagagg	ttactctaat	420
gatgctaatc	aattgtacag	gttcgcgtct	tgcgcgccat	ggaccccatt	caacccaagg	480
atgtcatcat	cggccagtac	ggcagatcac	tagatggtag	caaacccgca	tataaggagg	540
atgatacagt	gccacaggac	tctcgctgcc	ccaccttctg	tgcgctggtc	gctcacatca	600
agaacgagag	atgggatggt	gttcctttca	tcatgaaggc	gggtaaaggt	atgcagacct	660
gatacatgcc	tgatgtacca	tgcactcacc	atctctagcc	ctcaacgaac	agaagaccga	720
aatccgtatt	cagttcaagg	acgtcacttc	ggcatcttca	aggatc		766
<210> <211> <212> <213>	2873 1179 DNA Aspergillus	s nidulans				
<400>	2873					
gaacttccat	ggttaggccc	ggcaggattg	aagtctagta	gagggagcta	gcagcggcga	60
ctcgaagagt	ttgccccaca	gccaatcaga	ggccacggaa	ccggctatca	ccgtggggcc	120
tcccgaactc	ttcatcaacg	ggtatctcga	ccccaactct	accaggactc	tagcaagtac	180
agtagctcag	cactagccga	gccgggccaa	agcctacctc	tagacagtac	tgcagacagg	240

300 tcatctgaac gggtcctgag acggtcagcg tataccagcc gctgtacctg taacaactga caccqaaqaq qtcaaaqaqc actaaataga gagggggagt tccgtcacgg cgcctttacc 360 eqteeggegt cectttteag etteagetga teaetgattg tetgettage gegeeetegt 420 ccatgtctat gggactgcgc atgggggcgt tgcggtccca cccgtagcgg catcagtcac 480 540 tttacgaccg caacgttcgg ttagttaggg acagaccaca ggcgcataat gcttcgatca 600 atccaggacg ggatgcacgc tggaggactc tgcacaaagc ttggttggcc aactcactaa ttcgaaggtg cttccgttgc ggtgaatcat gctaacgaag cacggctccc ttttgagaaa 660 720 tcaaqactta ggataggccc gctcgcgcat cgattaatct attgatgata tatggtatcc 780 agegeeecag tegaeecaaa gaatgeettt geatgegagt etteeegete teettgeete ccgagcggac cggcgagtcg gcaccagatt gacaagtttc ttactgtgaa cttcttttta 840 ttatattatt attgttaggg ctctgtcttg atcttttccc cgaaactact tcttcgagac 900 ttttctatcc acaccagtct caccagtcta accagtctac accagcactg ccttgagccg cctqcqcact caqtccaqaq tcgctttgca ctattagcct tccggcgtag tgtcctttct 1020 cgcttaccgg taagaatcca tttattgtgg ttgatttttc tgctattttg tcttcacgtc 1080 ataatcagaa teetgaagee attitettit geagtgteae tieteettat tettetetge 1140 1179 tttttcctct cttgattttt tccatctccg cctttcctt

<210> 2874 <211> 508

<212> DNA

<213> Aspergillus nidulans

<400> 2874

cgaagaatct cgaggcggag caaatggtga cgaggacgcg agtcaacctg ttcttacaat 60 gggcaagatc cagctcctta agcgtgggga tatagaatcg cagcagtgag aatacagata 120 taatactata catcgtataa tgtagattga ggtgtggtat cgcttcgcaa cggtgtacga 180 agatatatat aaccgagctt cagctattag tttaaccggt ctccatatca cttaacagaa 240 accggaagca tattgagttc ctatgctaga tgccgtctgc atcactatat ttgtaaatac 300 tttattcagg ttcctgtccg ctccacttgg ccctcaaggc accgacatca accccgcaat 360 cctccgcctt tctaacaatc gctttcgctt tctccgcaac cggcacatca atcatctcc 420

catcaagcgt	ccaggcaccc	tgccctgcct	cgcagccttc	tcatccgcaa	ccacaaccct	480
aatcgcccag	ttaacttcct	cctcatca				508
<210> <211> <212> <213>	2875 2883 DNA Aspergillus	s nidulans				
<400>	2875					
cgtcatgaac	tgcgtggtca	aggcttccat	caagcttcta	gcccagccaa	gagtctgttt	60
atcagctgtc	tcccagctta	gtcgaaacta	tcgcgaaata	cttacataga	tcatatcata	120
cacctaaata	atcccttttc	ctaattctca	tcaattaggc	ccgctcattc	tcgttaccag	180
ctacatgcaa	gcttttggag	attgacatcg	agatagatat	ataggcggta	agctagtgag	240
aacatcaaac	gactcctcgg	gggcttataa	tcagaatcct	aagcatagac	cagagaacta	300
agtgctgcac	tgtttagtcg	atgcaaatga	ttccaacaag	aagtattgtc	tgcctgagtt	360
tgttgccagg	atgaattgtc	tttcaactta	tcatttatct	atacattacc	aagtctaaaa	420
taccctgagc	tattactgcg	acgatttaaa	tctaagtgat	attgggaagg	ttaactataa	480
gcctagcttg	gcagggggat	catgaatcgt	catttaacta	gagtatgaaa	cccctttggc	540
aaagcaggta	gagttacatg	gtgtatgggc	ggaaggtttc	acgcatgtac	ataatttccg	600
agtccaaaac	ttattattag	ctgcctatga	cttagctttt	ggtgcatctg	tagcttcctc	660
cgcttagggt	aatggaatga	tcaggcatag	atatagtgtt	ttgagcttca	agagtataaa	720
ccctcctacg	acgaaagatg	aacaaacaac	taaacatatt	gagtctcata	gggcacagag	780
cccaatttgt	ccactaatat	cttctcagtc	aacttccaca	gattctcctg	gagctggtgg	840
ttctgggctt	cactagacgg	actagtagga	ctacgatctg	gcacaatctg	taattttcaa	900
tcagcacacg	gatgtagtag	agggcagaag	ttggaaactt	acgtattgtc	cctgaatggc	960
gtccttacga	tgtcctcccc	tgtagcggca	aaaagcgcgg	gtctgcagcc	ttgatcgaca	1020
ggatcttcaa	aaacggcctg	acaatcgcga	caccaacctt	tccaagaacg	ccgtatgcgt	1080
cctccgcctg	tttctgctgg	tcagtactga	cagcaccagg	gtgagttgcg	-ttcatccagg	1140
gtccagtatc	cgtctttgga	tcgaatccaa	gctggccctt	tcccttgcgc	tcagccagcg	1200
ctcggatata	taagaccatc	gcgagtttgg	tgcggttgta	cagcttggtt	ggtccaatat	1260

ccgtattgag ctcttcgaga gattcaaact tcacgtcgct gattgcacga tgcaggtcag 1320 acgattgcag caccaggcga gagttcgacg tcttctggag cagcggaagc aggatgcggg 1380 ataagtggaa ctgagagatg tggttgactt gcatgtggct atcaatgccg tcattggtca 1440 ggttgaagac tecagaacec aggeeegegt tgeagatgag geegtegagt eggtegaget 1500 tegaageeag etetttggeg acetgategg tetgetttag gtettegage tegatetgea 1560 cggagtggac tttggaggta tcgccatact tcttgagacc ctcagtggct tcctggatgt 1620 gctcctcctt cttaccgagg agataaagag cggcaggatt gtgctggagg aggtgggcgc 1680 agatacegaa geegatgeeg gegeteeete etgtgacaae gtacacettt ceagaaagat 1740 ccggaatgte agtgttgggg ttgaatgtgt tgctgcttct aaacatgate ccttataact 1800 cgagttagct cacttcgaaa tgcataagag attcgagcag gtgattttgt aggccagtgc 1860 cgctgcggtc gtgggatcat ggtgacgtca aggcctaggt catcatggct gtttgcaggg 1920 ctgaatcagc atattcggga aattcaggag gctttctggt taatggcaaa ttagggaaca 1980 gctgggaact ctataagata tagaagggag atttgtggaa aagcacggtt tgagtggaag 2040 cgggcttgaa ggtggaccct gttgcaacta tgtgggccgc ctgcgggcaa ctatcaagat 2100 cttacgactg aagatcttag ggttcaacga gtcataaaga attatatctg ccgaacagac 2160 gaaattattt aaggattcaa gggcaaaaga tcgatcatct atatgaagat ggcttctttg 2220 ttgcactata cgatgaggca aagcctaaca atatggtgga taagaacttt aacatagaat 2280 gttgcagaca agagtagttt gtgatatcaa agaggcaaca tcaagcaagg gagtaaagtg 2340 ctagatgtga cgaataactc agaagtataa gcctaggagc cttttctata cattgttctc 2400 gaatctgctt ccgtgagtta ctccgctctg ccacccagat tgcaataaca gcctaaggat 2460 tctagagtcc aatagcgcct gttggctctt gcttgtcatc tccttctata taaagtagta 2520 gaaatggaac agtaaaagaa aagcaatttg agttaggtgg tctggcaaat cagttttctg 2580 ttttctaaga acagttgcta gctgggtaag gtttgtaatt tgtatagacc tgtagtttag 2640 ggctggactt cacgaaattc tgtttaatac attaggtcat ttgttgaagc tttcttcata 2700 gacaagtgct ctgaatgtaa taattttgct acactagagt tctttgtcct aatcgtcgaa 2760 atactettta aactaatata aegaggtttt gttggttgeg aatagettea agttegetaa 2820 gtacttagca aatcacccaa ggtgggcgga atggggccga atcacgttga aagcatcttt 2880 ata 2883

<210>	2876	
<211>	2395	
<212>	DNA	
<213>	Aspergillus	nidulan

<400> 2876

taggegecat gaatgecaga accattaate ageaattget tgteeegata ataatgeaeg 60 cgtccgatta atgtccatat tggggaccac tgcccggaag ctattgcatc cgaggccctt 120 180 ttctcttttt tttcggtcat cacataccct gtctaaaggg caatatttgc tcaagtaacg 240 gacacccaat attggctcag aaaagctggc cgcgtacatc atgcatggtt tcgttacttg gtgggcgct agagtcaccg ctttatatgt ctctaagcaa ttagtctgac aacattgcat 300 360 tagggtatac atggccctca ataatgcatg cacaatgata gcataatcgc cattcacgtt 420 tcccattcat gattagcgtc tttaatcgtt tgtaggaacg gtaggtacat acaaccttga 480 gtgtatcaaa ttacaacaaa caagggagca gtatcagagc ataattcaaa ctcaagctga gtcttaaaga gcttgccgac ctagcatggc gccaaactcc gatctgagat atgtaccttt 540 600 tacccggtta tatcttctgg actgaaattc ggccagaagt ttatccaggg cgagcgtggc 660 attgcaatat tegaggttea gteteaatge etecetaaga agtgaggeta geategetge gtcctccacg gaagtatttg cgccctgtcc attgttcggg gtcatctatt gatgaaatca 720 780 agtacagage gtetgecatg ttgaggegag gettaetttg tgaacaetgt eteccaaaag 840 aacaaagcga ctgaaatgcc acgtttgcag taggccttcc tctaacgccg tcatggatgc aaacgttctg gttgcccaaa gatcacctac acagacgtgt tcggtgactc ggacaggcga 900 960 aaatttgegg cagaactteg etgeategte tgetgagaae egaggagtgt tgggatttte tgaettttge ggaagtttea egagaatgaa eeagaagaea eggetetete ttecatggaa 1020 ggttatcacg cacageceet tegagtatga gttgatgtge teecegatet tgagtecage 1080 tagetgttea gaaateeeaa agatgeaege gtattegaet gtgaaagtta ttgttetttt 1140 gcattagcct ctgcaggttg aacactgcaa atatgccata cacaccattt ctttccaggg 1200 tagtggcaat geetgaetge gttgeetetg etaategeea egteteggae egaaceegae 1260 tatggattcc atcagcaccg actacacggt ctccgtttta tacaaatccg ccttctacca 1320

cgactgatac tccagctgca taaatcggat tccagtcacc ttcttattga caaggatatg 1380 ggacatgatt ggataccggt catggagaat ttctaaaacc ctctgtcgat ctaccgatat 1440 gataaggtat ccaaagccgt gcgatatagc ccattcagta catctacttt tatacaaaag 1500 aaccgggcta cacacacctt tcataaatgt cccatggtag taggctgttg aatacaaact 1560 catctggaaa acggacatgc attttatgaa taggcgcagt agcgctcttg agctcatcat 1620 agagtecaag etggtegagg atteggeete egttgageea aataceaata aaggeaeett 1680 cctgaggact aatttcagct cgcttttcca atactatgtg gtcgatgtcc gctctagcca 1740 ggcagtgtgc caaagtcaac ccagcaactg agcctccaac tataatgact cgaaattttg 1800 atttccgcgc ctcttcttcg tccattttaa tttctgagac atcaagtggt gagcttaatt 1860 gagcttaact ggcaaggtta gaagaaacca ccaacacact ttgtttgaat gacatttgga 1920 tacataaaat tatacgtact tgacgggcaa gatgtccaag tctaaaccta aaaaggctat 1980 ttgaaacatg tagcaacaat ttttatccct tgtttgagct ccatgcttga aaatgctaca 2040 tagggaatac atgttctgct caatccttgc atatacaact ctgcacctaa ttgaatcctc 2100 gtgcaattta tgacctggga gagaaaggga gcactcatac aagaccccta ctgccctgat 2160 gcatgtaagc cttgcatgaa acaggatcta ttattggtgc aaaagcggcg gcattcagat 2220 gccagtgtca aattatccct agagaagggg gtatgtcccg caacagagcc agcgatgatc 2280 tggtatttgc ggacataaaa atttataccc agtgctaata gttcggctag gattagattt 2340 aactggtgcg aatgtctgct ggtgtaatat atatggtatg cgcggcgctt tcttt 2395

<210> 2877 <211> 437

<212> DNA

<213> Aspergillus nidulans

<400> 2877

tatccgacgc aatgggatgc gagctgtatt accaaagcac aagcaaaaga ggcaaaggga 60 gatatggatt gacatcacaa tgtttgggag cgttggggaa ttccagaacg tcgttttggg 120 acagtcccat acaactcttg actgtccggg actgtgtcga ggtcgtggaa ggactgcctc 180 tcggcgaaat ccaggttacc ggcgcgtcgt cttgaaaccg agtgtctgtt tattccaagc 240 gcctagttga aacgagaatg gtaggggtgt ttcagatgtc aaaataagca ggcgccgacg 300

360 cgagaagtgc aggcgcgacc aagccgcgta aacttcgagt caagacacac tgatactgcg 420 ggactgggac aatctcgaat gcgcaagaca ggccgacgat gcaatggacg ctggttggag 437 tcqaatgcaq gagaagc <210> 2878 <211> 1666 <212> DNA <213> Aspergillus nidulans <400> 2878 60 gtcccaactc agtctccttg tcctcggggc tgtttacatc aacatcgggc accttgcgct 120 tottatectt ettatectte ttatecttet tateettett teetteette ttagaeteae gctttgcctt cttgccctcg ggttcggtag cagcgacatc ctccggggga ttctcgagct 180 240 tacgcttctt ctcggccatt ttgtaacgta ggattaagcg attttctgaa aagtttgttg cgtcgtattc gtcggtgctc ttgtatatat ctttttacct ccgtgaggaa gtcaactcaa 300 cacttcaaat aaatgaaacc taatccgatg actcaggatt gtttaacgtt tgacgaagaa 360 agatetecat egacaageeg caaaaaaaaa atataetata ttattetgee gggeggteeg 420 480 agtaaatgac tgagcggtga atctccgcat ccgcgcctga aatataaggt gtctagggct gcgattccca tcaaccttct ggtgtatcgg tcggtgccgt gccttcattc ttggatataa 540 atatcttgtc aatcgacggt aatatgcttg gtcgtctact catcgttgat atgggtaaag 600 660 agaacctcag caaggcatgc agttctaagt agacactaag accgctgatt ttatgctatc tgccaggatt gaggcagaaa tctcagggta ttgctcaagt ccctgaagga gtgcggttca 720 tatcaacgta atctcgcctc aactggcata cttattactt ttgcagtcct ggtcctgaag 780 gaggagtact tatttctctt tcatgtagtt gagaatccaa acgtaagatt ggcgggaccg 840 900 atctattcat atatactaca tatatactac aaatagagat agtctatgcg atatcatcag taagacgcaa actaatacac aggattggtg agcacagacg gcgtgtataa ggtaggatta 960 gaacgagaag acgcggatta gcgcaaaccg cagtaagaag ctcaaaaaaa aaaagaggag 1020 cagggaatgt tgtaaggatg gaatggtgtt ttgagggccc ggaaagatgg tcgaaagctt 1080 ttcctcatgc cgtcccagcc atcttcttgc ccttgggcac acgagcgagc caatagataa 1140 acacagegee gaegatattg aacaaaatat aageeeacat gagaeeaaag tteeteeaag 1200 cetcatcaaa egtactgeca actgacaaga gaaatgtgte egtettgtee atggagcaaa 1260 acgagcactg gteagttgeg eteggateea ggagatagee getttgaact teatcaatgt 1320 aggeeegeat atagteteea caagtetggt tgtteggtgg agcaaaggtg agatactega 1380 caggtteaca eteaacatee gtteetgaca ggeetgttga aagcattgee gaaactaggt 1440 atgtgaaggg tgataaacaa aacatgaaaa teeaaaacee aggeatggea tegggagtag 1500 agageacgee geagaagatt agacacaggg agaataacaa ttgggegaca ttggeaacgg 1560 tetetgeaag etegatgeet geaatgatea tgtgeacaga atgtggatgt aaaggaaag 1620 aatgteeaga taageaagag catgtagace geegegatat gttetg 1666

<210> 2879 <211> 1405 <212> DNA

<213> Aspergillus nidulans

<400> 2879

60 tctgcgcaac gtcatgctca tgaatactgt ccaattgtct cggcagagtt tgataatcag ctccggcaac ccgcgcttgt cattgtcata cctcaaaaaa gaggccgcgg acgaattgca 120 180 ccttttgaac agctttagcc agtgtataaa taccaggcag tattaaatac ggagtataat 240 taacaaatgo atatogacot gtacgtoata tagoocacat ggatococat ogogtoacoa cgcaccggaa tagcacccag ctgcggatga tcctgccggc cttctgccat ctagccgccc 300 360 aagtaagtac gagattactc aaggtactgg cggctcattt tcgttctgtt gcgttataca 420 atttctcatt qatqactqqc attcgacgag atgttaaggc tactgtttag cttgcgatca aggttggtgc tgcatcctac tagattgcga tttcgttcca gcgaatctag cggttcattg 480 540 taaacagcgc gaagcgacag cgttgggata tggctgaagt actagccgga caaatcagat 600 tttgagetgg gttatecett teetggeaca ageeggaget teeetgeace etaeecaget attgtctctt ccaacacagc aatagtgggt ccccgattgg accaggtcgt caacatctat 660 acaagteeca eegggeettt etgegtgtae atteteegga aagagatttt etagtatett 720 agaaccaagc gttggggaga cccacgtcgg aattagggtt tgttgaccgc cgtatatggc 780 ggcaattccg cactcataga ttccaagcag ctaaccttct ctataggaag caaattccac 840 aageetgaag aettacagae ggaaaaaaaa atggteeaeg cacceagtet aacaccaget 900 gaaactactg aaacagcaaa cgcacaaggt acttaaacca tcttgaggga tgggtcaaaa 960 acccggetet ggtccaggta catacagacg actgtaccgc ttgtgttttc gtggacagag 1020 cgtcatggtt tgtcgtggcg ccatgcaaat gaaatcaggc agataaaggt agtgtcgatg 1080 actctggtcc tgagatggag ttcagccatt gtaggagcgg cctggattat accctctgtt 1140 tcggtcgttc cgggcaaaag aaaaacataa gaaggaacca ggagatagac agctgaagac 1200 aaagggtgat ggaaataaat actatgttga gattgctgca gggaggagat acggtacgct 1260 cgacgagcga gccggaacat ctcgaagtac cacacttggt tatcgagcgg ccacctaccg 1320 cctatgaagg actggacctg atattcagat catatatcat tgtggtcaaa ttctcccgg 1380 cattaccttc atcctctt ttcag

<210> 2880 <211> 1666

<212> DNA

<213> Aspergillus nidulans

<400> 2880

tggcagcctc tggatcgcag tcgtcatttg cccagcggta cgccatggtg ctcgaagagc 60 ttcgtaaaga ggcgcaaaag tgcatacagc aaaaacagca actggcgact ggatatcacc 120 attcagatca agtcaccgac agcgccagtg cggatatgag cgctcaggag ccaaacgttt 180 caaggcagag cttcagctat gagcctgcag tgtttcctca gtctacattc gcgcatacag 240 300 agcaagctat cacccacagc ccacccctgg agctttcgaa catgcatccg gagcagcaaa cctggataga aaacctgatt caagacagca gccctagaac ctacattccc agttttaccg 360 gctggggaga atttgactcg ctggctctca caggcctggg agagttaggt cacatattct 420 catccaatga tctaccggat ttccggggtt aaaaccctgg gcctggccaa ccttcccctg 480 ttcagctatg ctgggataga gaatggcaaa aatataaact cgacaagaca agagggtctg 540 acaacceteg ceegeagtet aatttgtete caatagetgg caateceagt eegaetttaa 600 atgagatate eccaaactee tggggagtat getatttget ettetgaeat aaagacetet 660 cagagacggc ttctgtaaga cttagatagc tccgtttcta gcataacgag caccaacccg 720 ggtaacacct gcacttecaa gggtcccatg cacgtccaca gcccttatcc ataagcctgt 780 accagtattg agcgacatgg aagcacagca ttgaaacaca tctgccttat cccggggctt 840

tgcatatttg cagageegee atgetetttg atatgtette teatattata tteecagega acaagcttca gagaaggacg tccacagaga ttgtgtctga ctttgagccc agtaggcagc 960 tacqqtqaac ataatqcaqc taccataatt atqqtqaqqq atatatctqc cqttatctca 1020 ctgtaactca gtccagattc ataaataata ggcagttgct tatcgtctct gatgtggttg 1080 gggactgtat gatcacaacc tgcataactt tgtagatgac taatgcatac agtaaggctc 1140 agaacagaac tcaaacagac catcaggaac tgtgccttct gcgagttctt ccatgattct 1200 ctcatacacc taatactcat gcctatattc ccgtgtatga taagcaggat tcagggcact 1260 ctgccggtat tgtctatgga ggtcagcctg gcgcctaccg ttgtactgca aacaacatcc 1320 accegaacae etetggetta geataetteg ggeattaece getaegagae aetteggtea 1440 gaagacaaag taagccgccc ctggcccgcg agtctagtca aaacacaatc agggcgaggt 1500 accattgctg cgcaagacaa atcggatacg caaggttagt agttatccga accccgcttt 1560 getttteega geactgeect aacaagetae ggatagetga tgagacagee etteteggae 1620 catatgagaa tagtgcggca tagacaaata ttagccgcgg caatct 1666

<210> 2881 <211> 3641 <212> DNA

<213> Aspergillus nidulans

<400> 2881

gagggaactg gcaccaagcc cgcctctcgt acgtcgtatc cagtttcctc atattcttcc 60 cggatcgcgc agtcaagatc tttttcgtcc ttgttgattt tcccccgagg gaaactccag ttagcgccct tcttccagcc cttgactaaa acaacctgat ccatttcttg gttcaacatg 180 attgctccac gaacaggaac gcgagtttta taggcaagga actcagaaaa ggcagtcata 240 300 tgatgatate gagaccagtt ggccataage ggacaatget ggaaaateeg caaggegaaa gccttcagtg aaagcgaagg gagggctggg tctaacggcc ggatgaaatc ttcgtaaaac 360 cattgtgctt cttcgacttg gaaacatatt cgctcaaccg attccagttc ctcacggggc 420 480 aggtttataa tgaagcggac gcacaagtca tctagccctg tttttgatcg ttgttagcgc actggtgccg tgtcgggaga gcagggaggg gtattccaca aagaacatga catacagtcc 540 tccagttgca tctttgtttc tgtcatagtg aagggcgtgc tttggcattt caagacggcc tgttatggcc gagtgatact ccgaggtcag tggtaaaaag tacgtcgtca acagacgcag 660 ttggtgaaca accgtgcagc ttcaaggaga ggtgcttgca aagcgccaac cctgaagcgg 720 acagtcacta atcgggtgca cagcgcaagc aatgaaaggc agcagtttgt ccgtcaccga 780 caaacgcggt taagcgaata gacaaagata gatgcgtcag tagttggccg tagcctgtca 840 gtgtgccgga ggtcgagctc tggtgactta tcaagtgcgt ggcggtgctg tggcatgttc 900 gtcacgtgat taacatgaaa gctgagcaga acaggtatga tgacgtctgc tgtctgccca 960 agggcgcttg ttgaggtata tttaacgtag aagtcaaatc tagctcaact ctctcctaaa 1020 gggacttgca taatagccta cagagcaatc taagacatat tttcttgtat aataattgct 1080 atattgtgag ctccttgcaa gccatgtcat ttcttttcag cttcgttggg aagaagattc 1140 tcgctgagtc tgcgagaaac cattttggac aagaggtgag tccaaggctg ctatgatcca 1200 ttcgtactgt gtctaacaga agccaacacc ataggatccc tactttgaag aagtccctgc 1260 atcgcgactt ggccgcgctt ttggcaagaa gacacagaaa agacgcaaag ccatcccacc 1320 tggcctctct gaaaatgata gtaaagtcct cacacgcgtt aaacgacgag cctacaggct 1380 ggaccttgct ctatttagtc tttgtgggtt aaagtttgga tggggcagcg ttattggctt 1440 gatccctttg taagtcaaga ttccacgagt cacgacggct tcttcctgac tagcttctag 1500 cattggagac gcagccgacg cggcgttggc aatgatggtt ctgaagacct gcgaaggcat 1560 cgacggaggg cttccgactt ggcttcggac gcggatgacg ataaacataa taattgactt 1620 tcttatcggg ttggtcccgt ttgtgggaga catagcggac gccgcgtaca aatgcaatac 1680 gcgtaatgcc attgctcttg agaagtatct acgggaaaaa ggagcccgca atatctcaag 1740 gcaagaaaga aaagatgttg atccgagctc tgccagcgga gttcgatcgg tacgatagag 1800 aggcccatac tgaacatgcc accgagccgc gaagatcgaa atctcgaaaa ggtcatcctc 1860 gtaagtcaac gcgcggagaa gaagatttag aaagtggaat cgttgaggac cgctcaggca 1920 ggagataaag ctgaaggttt gtttgtttcg cgagcggtag tgttgtcgcc aacttgacat 1980 tatgaatcat agtctctttt agttgtttca cccaagttat ggtgtcacct ttcagcttag 2040 cccagggcgg gatcgttcac aggcgtagca gaaatggttc gttgggcgtt cctcaagatc 2100 catggtctgc cgaccttcag gattgcagat gaaagtgtca caaagagcac atctcaatcc 2160 gtccgtaatc attcgggatg attcaagttt attcacggtc cttgtcacat tagacatgac 2220 accagggtat ttcgctccct gagatgaaac gtaacgcatc atcaattggt cgatggatag 2280 gttcttggtc aggatattgt cggagagagg gccatctggg attatgatgt tgagaagttc 2340 ggggaagaaa ttagcgtaac tctgcaattc cgcagtaaac agatctcgga gcggaaaact 2400 gaattetaag ccaaatggag atgtteegte agacacetge caagteaacg aagageegeg 2460 ccccttggaa acattcgcca atgtctttgc agcaagccgg tcgtcagagt ctccccatat 2520 tattccaagg caaccaaggc tcctagcgaa agcgatgata agcctgttca gcaggacaga 2580 gtcaacatca gcagcggagg tggctgacgt gatagaagca cggaaagcat caaggcgctc 2640 tttggaagge agtgaagtat catecacaaa egetgggeea acatattegg caagaatgte 2700 gttcaaaccc gaaacataat cgaaaacgct gtgtagaggc agctgggtga acgaggcgtg 2760 agggaattgc tgctgaagca actggaaagc cccgcgatgt gacggattcg acggagagat 2820 acttgatggt tetactataa ggacatgaag etegaaacet ggtggtgggt gtggettegt 2880 gagcagcctc tcaacttgtc catgaaccat gtgcaaaagg accgatgagg acaggccgta 2940 agacaaagga aggagaaccg gacacggccc gctccttggt agatctctcc ggagacgata 3000 cttttccatg cgcttgaaga ctttataccc aacgaatttt atatagcagt ctctatgttg 3060 gqtacaaqag ttagaaaqqc agcagtcaag acttagaaag tatacctact tgcacagaga 3120 acggccccgg atcgtcagaa cagagtccgc atttcgacag tccacacagg aattggacaa 3180 ttgtttcccc ggcatctttg ggcttttttc ttttcgctga acgtgggctt gtagcaaaaa 3240 atatgcgagg ggtggcagcg gccatgaaaa agtgcccaga aaggtgggat tttcacgtga 3300 tctcattcaa tacttgagag tcgggggctg tcctggccgg tgatcattgg cgtaaataat 3360 aaagctaccg tggacgaagt actgtactgc caccattcca ttctacccgc agacggctgc 3420 tggcttatct cagaagcctt acatgtagcc tgaaaccgtc atctttacca ttcgatttat 3480 tttcatattt gtgtatgacc aatacctccg acctagttcc tttctgctca accagggagc 3540 egegeettag etecaagtta agteacaatg agaagetgga tteggaeact tggtttgtet 3600 gccatgttgg cagggacagc tgtcgcaaat gaagcagaat t 3641

<210> 2882 <211> 561

DNA <212> Aspergillus nidulans <213> 2882 <400> aaatattttt agtagagctt ttaatcgatc agggagaaac atgtgaagtt ctgaatgacc 60 gagacaccgt agcattgtta gtcggataga ttcgaagagc tgtgttgaac aaggagcacg 120 tgacgcgcta ccttggggag aatcagcttc acgccttagc agttcgacct ctctccattt 180 gatcaagccc tgcttcctca aggccagctt acaatgccta cttgatcagt tacgagatta 240 caatacgtta tcgacgccca catggcattt aagagcctct tgctccgagc tcaaggtcgg 300 ctccgagtcc agcctcgtct aacacagcca cgcttgcatg gcaccgtcta agaccgtccc 360 gttcagccta tcaaagaaaa ccggggaaat gtgcatcgtg ttgccgctct tgagaacttt 420 480 catacctaga agtgctccca ttggccgttg ggtgacgcgc tcgtgttcaa attagtttgg ctgctatgca ggtgaaattg ccccgcggt cctagaggtg gccagttatg tcgatggcgg 540 561 aagggactga ccccttatct c 2883 <210> 2735 <211> DNA <212> Aspergillus nidulans <213> <400> 2883 actttaagcg aatagggtca atgttttcct gtagcgagcg tggctgcctc agctggggtc 60 tttccgagaa cttcgctaac tgcttccctg tttgaattgc gcatcgccga tttttgaggg 120 gtaggcacgt caaaagggac cgcgggagag gacgaaccga ccgctatttt ccatgctcaa 180 gtacgaattt cgcgagtcgt cgagtcgtcg cggagggtta gtcggagctc gccctacctc aagggagata tcatcgtcaa tctcgtggtc ttcttcttct tcggatgtcc ctatcggcga 360 gatgttgggg aggtattgtt caaatgtgga agtgttgaaa acgtaatctg gctcttcttc ttcgtcaacc tgtgacagct tgctaaacgc gcctttcatc tttggaagtc gtgggctctc 420 atcaatctct ctggttgatg caatggcttc atgttctgga tcaaagtcgg acccgaaaga 480 cgcgaagctg ttcgccgtgt tatcgcgcga catggctgac gcgacgtttt cgaggaagaa 540 tactcgagag gacgaagctg agggttggaa gtcctccgct cctaatctcg aggggttaag 600 atgtatctgc ctctatgata tgggatgtgt gtgaaacaaa acagcgcgtc gagtgggttc 660 cgcttgaggt aatggtaaat ggggaggctg ggtttgttta cgggtaaccc gtgctaaatc 780 actcaccgct ttctgcatac acaagattca ggaacgtgcc aagcaaagtc atcagacttg cgtcttttaa ccatggttac tgcaaggctc agggcatagt attaattcaa gatgaaaatt 840 gtactattat acgcatgatc aattatatgt gcagccaaac ccactaaatg ctcttttccc 900 acttaacgat gcctcccaaa cgccttgcta ggtccataca agaaattcca aaaccatgga 960 cagaaaatcg tagagaatct tataatcgta gcaggtcata tccataatag ggtgcacaag 1020 cgctagctca ccctcgcggc ggatttgcac tattatcgcc ttcagagcct gattctgtcg 1080 ttctatttgc cgaagtgctt cttgatgcgc tatcatgatt aaaagtacca gccgttgcgg 1140 gcgcactttc ttcttcgcgt tgtgttatag gcgtgggagg gtcattactg attgggctcg 1200 ccacttcaat ttggatcgta ggtaagggag ttaactcacg cagccgaggc gaattgtcgg 1260 ggtgtaactc tgaaggggga ggttcatagg aggagcctct ccccaatcca gattgtcgta 1320 gtccgaaggt ggaatatttc gtgctcaaac gtccccatct tcaggctgtt cattttgatt 1380 gtgagcagag tgcagagaag tggtatagga ttgtgtagga gttagaccct ccccgtcgga 1440 tagcgccgaa gaataagatt cgccacggga atgcacgctg ataaatccag atgagcgatc 1500 agggccctcg ctcatcgcgg cagcgtcgtt caaaagaggc cgagaatctg aatcgcgtga 1560 actggctcga acgcgtgaac cgtcgtgccg aacatagcct acatcagcat aagtgacact 1620 tgagatccgc ctatcgcggc cgcgactctg agcttccgct agagccgtag ccgccgacac 1680 cgaagtactc ccgttgacag attctcgact attggcacgt gcccggcggc tttccgcccg 1740 aagctgttca agacggacaa tgtctccacg ttcgcgggct tcacggcgct cgcgtcgtcg 1800 tgcttcgcgc tcggcgattt cctgacgccg ctgcagtcga atttggtaca gcgattccat 1860 cattlectee egeogetett etteeteete egetgtttee ggaaatteaa eeaccaegte 1920 cattectect egiteteect ceetigegat caetigetet gigggittig gegiegatga 1980 gtaggcaggt agggttatta tagaacgaat cgaggtatcg cgacgaattc cggcgtcaga 2040 tteggtetge ggacegeett eggeggtttg ageggteget gteteeeegg etegattggg 2100 cgacgagcgc ccggaacctg gccgtacgag gcgccaacat tccaccgatt ccatctatcc 2160 ttgagatatt ttcctggtat gtatttaggg cgacagttca attttcggag agcacgtagg 2220 acaaagtaga cgatcactag aaatgccacg acgaacacta cgatggcggc aatctaccac 2280 aagtcagtac tgaacaggca atttacctgg atgaatgaag acccacgata atgaccacgt 2340 tattatttcc gctcccgaa ccatcttttg tagggttgtt ttgcccttct gttccattgt 2400 ttgagtgttc attagtcgga ggatccgagc tttgacgagg ctcgagctgc cgcaacggga 2460 ttggaatcag catgctgtgg aaagggacaa agaaaagcga aatcccaata gaagctcagt 2520 ccgacgcata tagagccttg gggaagtcga aaaatgtcga aaaaaatcag caatcaaggc 2580 ccagtctttg cttgctgacc gaaccaggca gagacgaata aaacggcctc gagcggaaac 2640 agcagagtcg gcgaatgcgt tgacagcttg ggtgtcaatg tgggtcggtc tgccgttgaa 2700 atcaatagaa acgagatgaa acagacgcaa tgtct 52735

<210> 2884

<211> 1427 <212> DNA

<213> Aspergillus nidulans

<400> 2884

60 ctctcttctc tacgacatcg acatgatgtc cctatttggt ggtaaagaga gatctctggc ggaatggaag tatctgatcg cctccgccga agagagcttg catattgtca acgtgatttt cagcacggag tccgaggcag ccattcttga tgtccgaatc aagtgatgta cttgaggact tatcgcaggt tccccagatt gttcccttta ggcataacaa cgcggagact taggtactgt gtgttgcact ggaacgtgta aaaaccagtc atcttttgca tgcttttagt agtctagctc 300 tggcgtgccg agatcccagc cttcaagatc tttatcttgg ttatagaatg gaaagttgtg 360 ttattcccag cagtgattcg aagcagcttt gaagctattc ttgggggcaca aactgtcccg 420 atggaacttc aaactggtgg aattcatcta ttggaggtag cgttctgatc atcggtggtg 480 540 agtaacttat atttgcacat actggaggga cccaccttgc tgccaaagag gatgagaaaa 600 aaagtgcaag cgagcgcacg agtgacacaa aaataatatc tacttcatcc gcaccaatca gaattgaaac agccctgagt ctggcgagac agcaaggtgc tcttcatatg gggagtatgg 660 gttcgattac ccacacgcct ggatctttgg ctgcgtcctc agcattgagc ataggtgctt 720 780 catcagcatt aaaccctaaa ctaaacagcg actcttttac atgaaatcca caattttaaa accttttcca ctacctgggc ttaaacgccg ttacttttat tctacttgcg cttagaaggg 840 ggaaaataca taacccacaa caagcattcc accacatacc atcccacccg ttaacgctcc 900 gcgacgaatt ctgtctcgcg cggtagacgt atctcgctag aaagagggaa aaaaaggtaa 960
tggattttgt tctttctctt gccgtagata tttgtgcaga atattcgtaa tttcatgctg 1020
attatagata atcctacaca gtaccgacgg atctacactc tcctcttacg agatgaatct 1080
ttacgagatg aagcttttc taccttccaa gaatggctag agcgcctcaa taactaagag 1140
tctaatacgg aaatatcatg ttattttcat tgtctaagac tgtgcagacc aggcacagtc 1200
ttagtcaatc tcattagtat tcagcctagc ttctttgtgc atccgcactc ctgaatacca 1260
gactccttca tacttccaca tcgtgtacac atggtgtgct cgctgataag gatccttcaa 1320
ttatgccggc gcattgtgcc cgttgaacat aacatccatc aataggttcg aaaacgtgtt 1380
cctacaccac ccctcctcc caccattttc caggccatca tcgggcg 1427

<210> 2885 <211> 730 <212> DNA

<213> Aspergillus nidulans

<400> 2885

tgcgctgggt ccaactatta acgtggggac ccgttgacca caccgcagga tcacggcatc 60 gcatcettee gttageacet eeggeetege teggtageaa geeageeget atetgeatgg 120 gtaccagacg tggctaccac ccacctaacc aagtatagat ggaagggctc ctatctctcg ggcactgccg gtatacctca taaattcatc gcgccatatt attgtaccga gcgttgacgg 240 tgtcccttta attaaagaaa atatagctta ccgaagacca gagccatctc cctctataac 300 360 tagcacattc cagccctttt tagtctcttc tccttgatcc agattgtcca accccatctt gaccctcatt ttttttgttc tctccctccc atcttatcta cctgtctata cgcactgggc 420 cactgtatag cacagaaatg aacceteece aaggegtaae aaaaaceatt etgegeeetg 480 gaaacggccg cgatagcccc cacaccggtg acaccgtgat cattgactac acaggatatc 540 600 tttatgatga tacacgtggg gagaacgagt actttatggg gacacagtgc gtacccgcca acgcaaacaa ctcgcctatc taccttccac tactagtcct agcgtgtatt ctcaggattc 660 cacgcttgga gggctcggca aaacagctaa ctaatttgta atgctgtaga ttcgatacct 720 730 cgcaaggtcg

<210> 2886 <211> 1630 <212> DNA <213> Aspergillus nidulans

<400> 2886

60 aggggagaga ataatgaata ataaaaaaga aataaagata tagaataacg accgcgcaga attaagaaaa gaaaatacca agaaaaatgg ggaattataa caccccagaa aataattgac 180 tgtggggggc aaaaaaatta aaaatggccc cctacaaagt tcgcagtact taaaattttt 240 ttcccaattt gataagggtt gttcgatgtt cgatattcat ttattcgtag cgggttatgg 300 atcagagtaa tggcttgtct tgaccaaatt atacagctgt gctcgcagtc aggtacttac 360 ctatcagtaa ccctcctttc agcctcaatt cgctccagcg tacgcttatt gaaggaagac 420 ccactcacgc tcacgtttgc tctaagtgcc gatttccctg ttcccgtcct ggctggttat 480 acaatagtac ataagaatta agatctacag ggacggccga gagaacgccg gtggtgtgcc 540 ctgcgatcat ccttgccttc gtagtagaag gatcgatatc tgggctaaag ttcctacaaa 600 ccatacacca ctgtatcgta tatcgcaaga tatgacctgg gaaatctatc caaacatgac 660 720 tgggcctcgg atcccctgct aggactatga tcagagcgag gatgacgcca tttacctgcc gtctacatgt atcggtctgt tttccaccgc taacgagtga tcgcttgccc ttcagcgcag 780 tttctttcac tgtataggtg aagtatttct caatctattg aatcccgacg gcgtcaggaa 840 atagcagccc cgcagaagcc acaatatacg gtataaccgg tgcaaatctg tgcagacatt 900 acggctgtgg cttgaattag cccggccacc aacaagtagc agcctctgag ctggaccctg gcttggcttg ggcccctcgc gctcgtggca gccaaggcag gaaatacatg atctacctac 1020 tgtagtacgg tgtacgatag cttcaagata gacggtgacc agcaaaagcc gaactcccga 1080 agcacacaag ttatcctgta ttgggtatac aagcacggcc gcataatgca gatgcatgat 1140 gctccgcagg gccttcacga ctcgagacaa tatatactag tagatctttc ggcacagcgt 1200 agcttggcta gatacctaat tttgtatgtg tgctttgctc ttcaccaaca ttttcactaa 1260 gagtctgacc acctacttcc caatcccgtc ggcggcagac tggagactcg cttaacctcg 1320 aagttgggta cctactcatg cacaatgata tcagattgga tcctctatca cggtctcctg 1380 gcagtagtag tctggactgc agaagtctag tgtctgcccg tacgtcttag gtaggcgtct 1440 atcactgage egtacatata gegtgetetg catcacegat gtgeceageg tgeggecaca 1500 getagecatac ttgetatgte gecacttgtt getaatgtee egcacatgte eggacatga 1560 tggattgeaa eaggegaceg tacteacegt caatgaateg gateetaage etgggteace 1620 taagtagtgt

<210> 2887 <211> 895 <212> DNA <213> Aspergillus nidulans

<400> 2887

tgaacgtgca gaacatcaat atatgtcttg aagagtgtct tctggggttcg ctggcgaggg 60 ttgactcgca cagggttcga tcggaagatt ccggttacct caacgcggtc acctgctttg 120 cacacatcta ctaactcgtc gtaaacacac agggaaactg agtgaggtgt ctggccgtca 180 gggatgctat caggagtctc ctgcaacttg ataacctgct tatcggcaaa gacacagcgg 240 300 ttgtgcacga tttccatcga gtttctctcc tggcatgcct gacgcggaca aatggtgggt tcggcaatct tgccgcggtc gatatccact tggactgaat ggttgcaagc ttgacagcgg 360 aaaaacgctt gatgaagggt tagcatggcc ctctctgagt ttggagaaat gcactaacct 420 tctttcatat cgggaatgat gggcgtagct cggatcacta gacccttaat gctcaccaac 480 ttgtccatat ctagtagccg tcagcgattt gggtttccgg gaaataaaaa cttaatctta 540 ccagccgggt caaggtctct catattgact gtggcatcaa ggccgaacgg aagaacttta 600 tatggcttgg tctcggcctc tgccaccaag tctggaattt cagcctgtgg catcctaccc 660 gtctcactca tagcatcaga gctgggaacg accggagctg aactcagatc tctgtgattg 720 cttcgggtcc gctgaatccg tgatcgcagt cgatccatgt cttttgcagc taattcgacc 780 ctgacatccc gtacgctttg aaccataagc ggaatggatt tctgagggag gcctggaccg 840 atgctggcag tgtcccgcgc cgggtgctcc cagacacttt ggattggacc ttaac 895

<210> 2888 <211> 1083 <212> DNA <213> Aspergillus nidulans

<400> 2888

ttcctttgac acgacgcatg gcttccctct aggattagag tatgtgaagg gatcagctgc 60 gccaataagc acagccaatt ggacgcacac caccgccaat tgccagtcag tcgcgctcta 120 ccataagtgc actcttggtc tgacgtgtta gcacaagata ggcggatatg aagcgcaatg 180 caggtgtctt ggacaaggct tccaggaacc ttcgcaatcg gctctgctcc ggtatgatcg 240 gtcacactta gaagacatcg attgccttga tgtgggttga caagggccgg ttaggagaga 300 taagttgctt gcgtcgtcga ggcctagata cagtagtact ttttgaagtt cgagaccgaa agccgttcat tggccttgac caatattccc tgttggcttg tataaaatgg ttgtaacata 420 ctagagcagc ctatttagta aactagttcg gaccaggatg ttgtatgatt cttacctttc 480 gtttgtacct ggtcgtcacg ctggtagcta ggacaccatt ctttatgctg cttgtagcaa 540 ggtggtttag tacagtatga ttagggttat tgagaagact gctatcatcc ttcatcggcg 600 tagtgccgtt gaggatagac tttccaagga aaagcggaag gctcggtggt gttggcgcgt 660 caccgatgat attgactgct tgctgatagc acgggctctc ctcgtcttta tcaaggtcga 720 gcagaaactg agggacgact ccacggaagt caccgatagg aatttcctcc ggctcctctt 780 ctttttctgg cttctcgtca tcaacagcag tttcgacctt cccatccgca acttcttcgg 840 gaagtacctg cggagggtgg acccctgagg gtgcggattt gtcactctct ctccttgaac 900 gatttacatc gtcggcacta agttcgatat aattgacgag atggttcgta aagtcaaccg cggttggtag attgtccgaa gcgcgcatct caccatcaac aataaacttc aagtgatgtg 1020 ttccgggccg gaggtttagt ttcgtggaca ggacatcggg attattctca ctgttcgaaa 1080 1083 cga

<210> 2889

<211> 1642

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2889

acaatagtag aatgagattc aatcagccaa agtcaacaga gcactgatga aaagcaagca 60 tatccaagtc cgttttcatg aggttcaaga tggggctgac gatatgaagg atgttgtttg 120 gcggacctgg gccgaactgg aggcggggg caggtctggg gaagaaatta tataaagaaa 180

cagacccagt ccgaagcact ctgtacggag taaaaaaaaag atcggtccga ccaggggaat cttgccaagt tcaagccctc aagagataaa ctccactata acccccaatt agcaacaggt tgcgcctgcg aacctcctga agagggtaaa aaaccccgcg cctgagtcac ctgactggtc 360 ccgtgccaac gctcttacat atactacaaa ggggtgtctt ttgtttcgag taatccaacc 420 attgctttga gtccattgtt taagcccata gtttagagcc caaggcaatc tcgtcagcag 480 actgcattgg aagtaagcgg acagctgctg aacaccaatc gcttcaagtg caaaaataag 540 cgggtacagt tactcttcaa atcccgccac caaattcgag accccggcta tactgaaaac 600 aatccaaaaa aaagaaaaaa aaaaaaaaaa aaaaaaagga aagaaaagaa aagaaaaaga 660 aaagataaag aaaaagaaac aggttcacat cttaatggtt tgatccggct caacatgctc 720 780 gacatgagga tgttcctcga caaaggacat ggacgtgact tgttctggca tggcgaccct aaacagcgcc tcggctagta tactccaagc attgggtagg gaggcaagac aggtcgatgg 840 gtagcactca cgcaaatccc ttgatcagct tgtactcgtg agttatggtg cctccgttgg 900 agacagcgct gtccttcacc ctatacggtg taaacattaa atattctagg ctctgcgaga gtctggaatc catacgcttg gatatcctct gctgttgcgc taggcttgag tttgatctat 1020 tcaacagtcc ataagtttcc aattacacag ttgagggctg aagacgtacc atataggtcg 1080 gcatcgtgct tgaacaatac gcctgtgttg gtatgtagat atggactgta gaaaatgcgg 1140 gcttgaaggg agttgaatgt agacaagagg cttggtctca cgtttacaaa gaacagttgt 1200 tttctcgctg gactcaagtt acggcgatct agcttggtta agtactggga atgactagta 1260 cgtcattgtg catgcacaag atagcctttc gtcaattgca gtaggctgat cttgcatcct 1320 gtcaataaaa cctaggtgga gctatatggg atttgaagct agccggttta cagngacgta 1380 agcccaggta aagcaaatag taccttatgn ggtgtgaaaa ttccttctat cattgccgaa 1440 gtaaacaggt acatgccgag tcacctagga agggattaca gcgcggttgc catgagccgc 1500 taccagatga tacacaagct ttacaggtta tgtagntata taatcatata tgcgcaaata 1560 gcctgaatta ccagttgctg gtgcgcttag agcctcggtc tgaatacctc gaccagttcc 1620 1642 gtctggtcga gaggaacgcg ag

<210> 2890 <211> 1695

<212> DNA

<213> Aspergillus nídulans

<400> 2890

acccctagcg gtgtggactc gccgtctaaa ctgtgcggtt cagctcgacg gcgaagtgca 60 120 cactcgagca gtttatcccc gtaagagaag ttgagagaag ttgagacgtt ggcaatctag acaagaccgg ggttcgcgta cttggtagcg ccggggtagg atttgtatgc ctctgcgtca 180 atggggcata agaaatcagg gcagccaaga atgagttttg aatgggcgtc gattggggct gaattaggta agaaaagata aatatatata gtggtgaaat aatgatgagt gtgcgtctgt tggcaccttg tctggctggt gatcccgaat tggatagcta ggtaggaagg tgacgggttt aaagccttag agaagggtag gatcaccagt gagggcacag tcatttattc atgtatgtca 420 tgtgtccctt gctatctgtt caaaatcgta agtatggacg atttatatgc aatatgccca 480 gagtgagcgg ccactcacgg tcaccacatg cctccaaaca ctgctcttgg ccaactaccc 540 cgacttctct ggcaaatccc tatacggatt cttgggatcg ttcaactcct cctccgcact 600 ttgaatggtc tttatggcct tacaagggct acccactgca accgaaaacg gcgggatatc 660 cttcgtaacc acactccccg ccccaattgt gcacccttct ccaatcctca cgccaggcag 720 aataatcaca tttcccccaa tccagcaatc atctccaata aacacggggt gaccaaactc 780 gacgaacttg cgtcgggata ggatggatgt gtcgtggcct gccgtgtaaa tggatacgtt aggaccaagc tgcacgcggt cgccaatgac gattaggctc gtgtccaggg ccgtaaagct agccattaca gttagctcga ctagatatag ctaggaggcg aagacaatag ggaagagaca tacttgaaat tcacaaagca ttccttccca attacaatat tgcacccata gtctggccaa 1020 aatggagget egacaaaggt geetteteea accegeecaa caacattett taacaacteg 1080 aaccggcgtt ccccaatctt ctcccaggag acggcctttg tgtcgagatt gttgtaatca 1140 cttgtcactc cccggttaga atgtctcttt atttcctgag ctgtatgcat gtaatttcct 1200 tttcctctcc ttattttact tttcatatct attcctctcc tctttctatt atttcatact 1260 tottaccatt atatacact totottttac toottattaa tittattatc tattitaact 1320 ttttcttttt atttatttat tatcaaatta ttattttttt cttctttaa atttcttatt 1380 tottactatt tacttottta taaatacttt atttacttaa caaacacttt attacactta 1440 teetteetta attitattet attitetaet eacaetteat teeattiett attatattat 1500 taactttctc tctctatcat tattcttatc ttactctttc atttttaact ttatattatt 1560
tatttcctct aatgtaattc atactcttat ttctttatta ccctctcttt cattttatac 1620
atatctctag tacttttctt caacctcaca tactttctac tatcaaaatt actctactta 1680
ttttcctcta caatt 1695

<210> 2891 <211> 1206 <212> DNA

<213> Aspergillus nidulans

<400> 2891

gtagaataac cctcacaaag ggatctttct tttctagcac gtgaaggaca tggacgatac 60 120 gcgaacatga aacaacgcga ctccaaatga aaaacaagca gtagacctta acgcatgata tccatatgca gttagaaaat aagaaaccga gatagatgag atgacggaga tgggagagac 180 240 gaaaataaaa ctgggggtat agattggttc gtagaggaga ggacgacgaa gtagcatgat aggtagatag atggacagtg gtataagtag tggatggtaa cacaagactc gcgatgaaat 300 tcaaaaaacg atgtgaaaat agaagctcaa cgcctaacca gtaaatcttg aaacccaggg 360 ccatgatctc gttccgaacc aacgctctat gtactgtagt gtagtgtatg attcagatga 420 agtagtcaga cagacagaca gacggacgga caaatgaaat aaggaaataa aaataaatca 480 ttcacaaaag aaagttcgtg attacaattc gttatggtca gggatgcggc tgtcggtgtc 540 actgccaggt gcaatgccgg gcgtttgcag catcttttct ttttccgacc tcgtggtcac 600 cgcacggatt ttgagttcgg gtcgctgtgc gacaaggctg cagcttgtgt aacgcaggat 660 gactcgagaa ctgagcgctg ggattggcgg atttccaacg atttctttt atagaaaggt 720 cgttattggt cggcggtgga tgtatgtttg tagatcttgg atttgcaata ccatcgacgt 780 gcatgagggc gtaaattgtg agtaagatat tgaggctgtg gaaagaaaat cacagagccc 840 acggggcttt gcagttgctg cttgctgttg tttcgtacgg tagagatact ggtacagatt ggatgatgtt ctcgttatag ttgatatgct gcggcatggg ccatgattgc gattggtatt gtagagccta agacaagttt agtttgatgc ttaaagaaat caggagccgt gccgcttacg 1020 ggatgaatca gactgtccgg aatagtagag atgggaacca tgctcgcagt tgcagggggc 1080 ccagtgtcag cgcgctccca ttggcagccg tcaagcgtcg catgcatcgg gcccggcgaa 1140

gacgtcagct	ccgagacgat	gattgggtct	ggatacgagt	egaecaaace	ggeeggegee	1200
gatgaa						1206
<210> <211> <212> <213>	2892 1457 DNA Aspergillus	nidulans				
<400>	2892					
aggtctttgt	ctctcttgtc	gagagcgccg	agatcgccat	cacgccgtcg	cagctttctc	60
ttgatttgta	gatcttccag	aagcgcgtcg	agatcggcgc	cgttctccct	aggtaaggag	120
aacgtatgat	gaccgtcaag	ttctcctacc	tggccttcgt	ggcgagcacc	taatcgtgcg	180
gcaatatccg	acggggacgt	cgaggcgtca	aggtggaggg	cgaaataatc	acgagtctcg	240
taggaacggc	gaggatgaag	agatgcggtc	gctgcacaga	agaggcccaa	ggccgctgct	300
gcaccctgga	gacgcattat	ggaaggcgag	gacggaagga	gaagataaaa	atccttctca	360
aacggacgag	ttaaggacag	ctaacagcct	gacatcggag	gacagcgcaa	gcagagactg	420
gagagcaatg	atgacaatac	gccacaagaa	ttgattgagg	atagaaacaa	ccgtctattc	480
atccacagat	acaaatgaga	gtggaaaaaa	ataaaccaaa	agcgaaaaaa	aaagtcccct	540
aatcagggga	gtcgtgaacg	atttgtgttg	aatcagcgga	gcctagaggt	gttctctagg	600
ctgagacccc	gatetetgge	tttattatta	gtgtaatacc	gctccgtact	gatcgcctcc	660
tgaaccaaaa	ttcctgaatt	gtaaggctgc	gatgccaagc	tgaggcgggg	acggaccgca	720
gagttatgcc	gccagcaatg	aacacaacat	aagacatttg	tgcaaaatac	tctgttcgcc	780
tcgattattg	tgcaattata	gacgggaaac	actctatatg	ccaccatata	attgtctcta	840
ccctcgaaag	tcgcttcatc	cagcaccacc	aagctaagat	tatgacgcta	ttacagggta	900
gatgtattca	ı gggtagagta	tggctctact	acacaatgtg	ctgacaatac	accctgccgg	960
aatccacaaa	cccacattgt	tcctttgcga	cgcaatatga	gctttgcctt	tttatattgg	1020
acataagtca	ı gatcaagtgg	aaatcggacc	: ggacgcaatt	tagatcggtg	gtgcctggtc	1080
tattgtgcag	g ccccgcatac	tgcatcagaa	ı gaggaggctg	ggcccagcca	cctgggctct	1140
ctcacaatgo	c atacgcatcg	tcatcctaga	taaaatctca	tcgcgacaat	ctcattcatt	1200
cttttttat	tacttcacta	r chtcattaco	n atcgcactcg	attgctgcct	. aattgtggtc	1260

aatttettge egetgaetet tgtacataeg getgaggage tggagceaet egeataagta 1320 taccaettge gegagcatgt gtacaageae teggetattg tggaetetgg tteageatet 1380 acacaaggea acattetatg egetteatee gtgaaatgge gatetaggeg atetggtaca 1440 ttgaattete gatagag 1457

<210> 2893 <211> 2093 <212> DNA

<213> Aspergillus nidulans

<400> 2893

60 agctatagcc ttctttcgaa tgtcccatac gtgaattgcg tttttaatgc ctccactgaa tacctcattt cgagcttcag attgtgccac cgcggtaata ggaagctccg tttccaggta 120 atcgattgcc tctttctgtc gagggtccca tatccccatc gtaccatcgt cactagcgct 180 240 gaccagcatt tcttggcctc ttttgctaat ttcgacactg tttatgacct cttcatgacc aatgtagcgc cggatcctct ggccagactc tatatcccag cttgcaagag tcatgtcagc 300 cgatgcggag aatatggttt tggagtctcg tgaccattgc aggtcaagaa tagcgccttt 360 gtgaccagat agaatgccgt aattttcgca ttgcccatag gtgttccaga gtactttgta 420 aatgcaagtt agtcattatt cgagttcatg tcctagtctt gacttacata tagatcgatc 480 catggaaccg gatgcgatgt gctgagccgt tgggtcaaat cgtacggcga aaacctcacc 540 agaatgacct gaagtettgt attageatag ttatteeagg tagategeat teageeteae 600 ctgtgagctc catgatcggc gcgttgagac cactggtacg ggggacctgc aattaccgtc 660 aatgacgata tttcatcggt atttgtgcgt cgatagagct ctccataccg cttgtacgag 720 ggttccatct tgtcctgagc tcttgacaac agctgcacta ttatcgagtc caccatcaga 780 tttctttcgt ttcacaacca attgacttga cgagccaaag gccgtttgtt ccggttgttt 840 ctcgccggac attctgcaag aaaatgggca atttccaaag actgaaatgg gagagaatgt 900 gatatgagaa gtctgggggc ggtaaacagc cagccgtagt aactaagcag gtatcgcaat caagaaaaac gcggccggta gacctcgggc ggtgaccaaa tcagcgagac gctagccgcg 1020 gcaggegctg gccaegtate taagegegta aageteegea eteeceagee taageggggt 1080 ctcattcatc ggcgattgaa tccgtgtagt attgcggaga tcgattaact ccgtgtcccc 1140 tecetgaact tagteactga acateetgaa cagagtetgt gaccatgtee teaacgaaag 1200 tgtcgagaat tggagaagag taagtaattc tgatattgga ttaaccagcc tgctaacacg 1260 ttgatctttc agactctgga agtcagtaag ccgccgccat ctcctcactc tagcagcctt 1320 qqqataqcta ccqaacaaat qcactgatac qatcqttqct tqcaqaaaca agatcqataa 1380 agttaatgcg gaattggtga cgctgactta cgggacaatt gttgcacaac tatgtcagga 1440 ctacgtcgga aactaccccg aagtgaacaa gcagttggag aaaatgggtt ataatattgg 1500 aatgcgcctc attgaagact ttctggcaaa gtccaatgct caacgatgtg ccaacttccg 1560 tgagacggcg gacatgatct caaaggtacg atagccgttg gtaaactacg acgatcagct 1620 ggatctaccc agtgaagcta atacggatca ggtgggattt aagatatttc tgaatatcac 1680 cccgacggtg acgaattggg ccagcgacaa caaccaattt tccttgatct ttgatgagaa 1740 cccgctagcg gattttgtcg agttgccaga cgatggacga gcgcaggatg aattgtggtt 1800 ctcaaatata ttgtgcggca ttcttcgggg cgcgttagaa atggtaagtc taaaagactc 1860 ctctccaatt gaccgcatcg ctagcgctaa ctaagaatta atataagggg caaatgcagg 1920 attgaagete gttttgttag eggeattetg eggggggatg tegeaactga aatgegggat 1980 tegettgtga ggtatgttgg ggggggaggg ceteegtagt caaattgeee eeggtgeggt 2040 tgttgtggtt cagtgggtca gatgttcggg gctttcagat taggataact atg 2093

<210> 2894 <211> 3785

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2894

ctattattga gattggtgag cgattcctaa tgttaaggga cgtatttaga tggatcttcc 60
tatctagacg tgccgtacgt acaagaagga atcgctaaag aagaaatgag aaagaaggat 120
tgttgttgca aggaagtctt gtaggtggct caccgccttc aggacagcgc aggccttggc 180
anagtcacta aggtctaagg tccttgtata ggcaaaggac ccataacaca tggcaaaagt 240
aggtaactac ttgataagta cttcttaaat acttactaac tatttattt agttattata 300
cttttctgta tctttaccag ccaagaaaca acagaagact actatcttt atttaagagg 360
gtttttactc ttatccagaa gattactgga tagcctatgc agtttaattt aatttactct 420

agtaggattt atgggattat catggacata gataccaaac agtatattgg taagcaacta 540 cttattaagt actatacaac tacttacgaa ctagctagga cttgggcaat accttcaaga agttgatccc ctttattgac cagtactgtg gcagctgaag ggattaatta tattttatta 600 agtccccttt ttttagccaa tccctgaagt agttgggtgc tataccccaa gtccatttga 660 atgcacctga atgctggtct aattgattgt aaatctgaag aggattatga tcagttatgt 720 gatttattaa ttggtaagta cttggttact ggttacaggg gtggctgcta actgctctag 780 ccaacaaaga gccaaaggta caagcctggg cagagtacaa aaagcaacct gttatcaagg 840 ctggacttaa taaacactgt tcaaatattc cagtatttat ctataattct atccagaatt 900 atataaactt agctgaatag tcttattaca aagcaaatac aggtagcaag cagttaatat 960 taactgcagc aatccaaaag taagtagtta ccaagcagtt cctaactagt tacggagtat 1020 gtactcacag attctacaac tagttctgcc aagctagata aacaagatat cctgcaatat 1080 ataaaccaca ccaactttaa tattcactat ttataccaaa tattaaatat agagacaaac 1140 tatttgcggc atattgcgtg tgaaggtaaa tatatatcca cccaacaaca tacatagcaa 1200 ctatttacta agtacttaat cctgcctaga atcaaggaaa catcgctgtt cagcatctac 1260 atatctatct tctacttcca agcctgaatt agtgccgagt aggtcttaat cacggctccg 1320 agttccgagt gccacctggt tagctattgt taattgcttt gcaactagtt ggcaactaat 1380 taagaactag ttcttcgtcc acttcatctc gcaatcttcg tcgaacttcc tcacagaata 1440 taatgacett tgageaggaa agacaageat tagagetteg egaattagag etteggttaa 1500 aggaaaagga ggaggctgta cgagaaaagc aacttcagaa tgaggaaaaa gagttggagc 1560 taatggaaca acgcgcgagg cttcgagata tgaataatta aaaatacaag cagtctgtaa 1620 gcggtttcca agtgattagg aactggttgc ggactaatat taccttataa ttatggactt 1680 gggtcgaata tcacgctcga catcactggc gtgcctgcct tgatcgcgga gggcgtgaaa 1740 tgacggcatt caatccaagt tggctgtgta agccactgaa aacttcagac gctccgtaat 1800 taatacgagt tgcggtatcg ggcatgtgcc ccgctagccg catcacatga ctggtttcgg 1860 ggcgcccgac cgttcggacg aggccacctc acctgtaacc tgaaggattt acaaggagtg 1920 caggtggaga tggtgtaagc catcagccgc agcaatgccc catctcgaca gctggagacc 1980 aaaggaattg tgagctgaaa ctccttggtc tggtacgtgg cataatctct ctaaaccgcc 2040

ggtttgaaat cacceteget ttcaagtatt cettagegte ttcettcaag tetgeaggtg 2100 agtgaccccg gtcatagaat tgtgggcttt aacaggatag atccatgaag tggtgaaaat 2160 gaggcaggca ttgcgccatc atttacttct cagaaaagct atccttgcat gcttcctggc 2220 ctcttcagct ctcacagaat ctagctcacg ataaaggtcc ccaaatcata tttttataat 2280 tttttatagt atgactcacc cccaacaagt gatcgatctc gcgctttaaa tactcggcta 2340 ccatacgagg cgaggcccgt aatttgccag gcccaccggg tataattccc attcttaaag 2400 aggatgtggt tatgctgctg atataccgct ttctatagtc aacttctagc gttagatgac 2460 gaaccgtgtc tcggcgtcac gttctgaggg tcagcgtatc tacagtaaca tggcggttgg 2520 tgagtattag attctcgcag gccctgaaag actgtttccc cgatttggct ttaacgtttc 2580 cgtctcgcgt tcagtttgtg attggtcagt acaccagaaa ctgctccagc agcgcctaga 2640 gattccaacg gaagtctagg tccggcgtcg ctagtttgat gtaccgcatg gttccgcgag 2700 atgatttggc ctaaacgcca gttcgtatgg cacccacctt gcccaatcga acagataagt 2760 atgaagagta gggtaagtct taggaggtca cgctcactat aacatccaag ccgtcgccac 2820 acaagtagta agccaggccc acaaaggagc cccagagcca caggacatcg tctctgataa 2880 tgagagatgc tactgagcct aactggctac gttatgatta ttctgacgaa gggcagagtc 2940 catatgatgt ctgacttcgc ccaacctgac agaagctgat gagacgggcc actgaagcca 3000 tetggeettg tacatetgae tategteega cateetattg titetgatea ataettitag 3060 cataagggtc ctgatataat acagaagcgt cttggatata gatgcacatg gcttcctaag 3120 tctccacatt tgttacccag ctgctgatga cgcacaagtc attcatttgc atactgctcc 3180 cctgcctgaa cgggccgtga tcccaatttg acaattgttt attacggaat cttcgacaga 3240 tgcaaagttt gtctcttgaa ctcgggaacg aactcattcc cctccaagcg cgtgctgcct 3300 gcacgcgcta gagtgctctg agggaatggc caaaccgtct ggcctcggta atcggaggca 3360 aattgccaca tagccactta acggcatttg atgaccatag gagccaggtt tatagataag 3420 agccagttct gtacccgttc tgggccattt tcgctcttgt cgtgtttctg ggcgatatat 3480 cttcacatat catgctgtaa agaatcgttt ggctcgagag acgctttccc ttatgtccta 3540 cctgcgttca ttggaaagaa aagatattat tttccacgct gaagctactg aagctacccc 3600 acggggcgct tttagtcgca cagggtgttg gctccatgag gaacattata tggaacaaca 3660

gttaacacca	cccaacccgt	cgtacagctt	ctctgtcgct	tcaggtcgtc	acggcattga	3720
aactgcgggc	ttacaccatt	gacccttatg	ctatactgcg	cacaacgcgc	gtgaatgtct	3780
ctttg						3785
<210> <211> <212> <213>	2895 748 DNA Aspergillus	s nidulans				
<400>	2895					
gtcccgtccc	gtctcacccg	ccgcgccgag	catctctcct	agcctcgttc	cccaaccaac	60
cgatccagct	cattcaactg	cgcaattgca	ttcctctcag	ctaaaatctc	ctcaaattcg	120
gccttggcgc	tctcctctaa	cttcgcattc	agctggcgcc	acacattctc	cagactagcc	180
gggacatgtt	tcgcgggtgt	gggaaaacag	gcagcaaaat	tagagtacga	gtttgcgcgg	240
agtgtacgcg	cgagtgcttg	tgcgtagatc	tcttgcaggc	gggtaacgcg	ggggccggga	300
gtttgggcaa	tgggcggttg	agggggtgga	gagggcgatt	cgtcgtcccg	taagggattg	360
ttgggttctg	gggccatttt	aatttttatt	tttctgttcg	gattgaatat	gttgatcgaa	420
ttggtggagg	aagcaagagg	tgtaatagac	tcttagtgat	gtcgagttgg	tgtgttatgt	480
caaatcgcgg	cgcgtagagc	aaactggtaa	acgcgatgat	cacgtgctct	atatagacat	540
cggcgaagcc	tgttacagtg	acattcaaaa	acttgaaaaa	aaaaacaatt	tgcttttgaa	600
ccattaaaaa	tattatttct	cataactcta	catggcccaa	tcctagttcg	ttaacggcga	660
gtgctgtcat	gccccaaga	cccccgccgg	tgacctgcac	cgaagtatgt	atacaaaaac	720
aggcgattat	gtaggtcaga	aagagccg				748
<210> <211> <212> <213>	2896 1186 DNA Aspergillu	s nidulans				
<400>	2896					
cttactgcat	ttctttgcgg	ı atgaagtgaa	cacccgattg	ttctggagcg	cctgcgctco	60
ctctgccgct	ttcagcgcct	ctageegaae	ccatcgaatc	caacctagct	tttcattctt	120
taasaasts	, gaagaattg	t teetacetee	r coctattaco	cttcttaaga	a gagagegget	180

gtcctgttat tgcctttcag gcgacgtatc agcaaagata tacgggaatg agcttgtgct acctaccggc cccagcgcta cccgcaaact tgccattagt gcacccgacg gcctcatcct 300 cgctgcgagc attcagatta taacgaaggc ttttgtctct gtgttcttct tccttctgaa 360 caatcctttg attatgcgca gactccgaca ggagatcgag agtattcccc ggttccgtaa 420 tcgaactaaa ctgccctcct cgagggacct tggtggccta tactatcttg atgctgtttt 480 caaggaaaca atgagacttg tcatacttca gagccagctc aatggaggtc cgagtcacat 540 ttgaatctct atacatatca tccaagcatg tcccgcgtgg gacagtgctt tcatggcatc 600 ctcacgttgt actaacaaac gacgccatat atgagaacaa cctttatgtg ttccggccag 660 aacgatggct tactccgaac cgacagcggc agaccttgat ggaggcctct ctcttaccat 720 ttatggtttg tcgaattcat tacccaaagc tggaagctgc ttggctgttg ttgaaaaaga 780 cggtcgtggt gctactgagg gaattctgtg atgtaagttt gtcttggttg ctctgcagca 840 gtctgtcaat atcgttgagg tcacggcacg attcgtttgg gggcttgcta accagcagct 900 teetttagat caatetaace cagactgagg gteagactgt tgeggatggg atggagette cccctggtc tatggtagtg gattttatac cgaggcctgc aacagcggag gaatatgttg 1020 ggcaacttct ttagaggtgt caaaatgctt ggactctctc ggtgcctaat acataatcgt 1080 caattcaaca cttgcatctt cctccctcat agattctcta tgaccgcact aggctgccca 1140 1186 tggctattct agatggccca gccagccggt gtacagcaga tgcatc

<210> 2897 <211> 4224

<212> DNA

<213> Aspergillus nidulans

<400> 2897

gaagatcgat ccgtttcgga gcttggtcgg gacaattata ggacagcaag tttcgggcgc 60 ggcggcgagg tcaattttag agaagttcgt agcgttgctg tggggcttga atcatactta 120 tgaaaatggt gatgaggtgc aaagagatcg tgaagacgag aatgaaggtt acttccctac 180 accagaggag atagtccgtg ttgatattcc tacgttacga acagcagggt tatcacagcg 240 caaggcggag tatatccacg gcctcgcgga gaaatttgcg agcggggagt tgagtgcgac 300 gatgttgttg aacgctagtg atgaggagtt gctggagaag ttgactgctg tgcgaggact 360

ggggagatgg tcggtcgaga tgtttgcgtg cttcacgctc aagcggacgg atgtgttttc qacaqqqqat ttaggtgttc agtgagttaa ctaaattcct taacgccttg tttttgggct 480 540 tggatttaca tetgettege atecaaegag geagaatgaa ttgaagetga aetggaetga ctgcagcgta ggagaggatg tgccgctttc atgggaaagg acgtaagtaa actcaaggca 600 660 aagggtggta agttcaagta catgtcggag aaagagatgc tagatttggc cgccaagttc gcgccgtata ggtatgttct gtttcaagct ccgaagtttg caatatgtgc tgcattactc 720 acatetetea ggageetett catgtggtae atgtggegtg tagaagaagt egatgteaet 780 gtgctgagcg gctagagcga gtagctcata cacctgttgt ggtctctgtt tgcaagcaag 840 gcagggacca cgcttatatc atctcaggat ttttagaaac aggcatagat atcttaagtg 900 tatataaccc gacacctagt gagctgggct ctaggtcacc aatactcgca gcgcataaat actacctcga tatcaagcag taacaaaata gatttttaca gtatcagtac acgtggtttg 1020 cacgacataa ctccaaaggc tcaagcaaat ggcagatgct ccaatcgacg gagcataagc 1080 ccgaaagaac aggtcttgta tcgtcttatt ccacacgtct atatccttgg ggagggtttg 1140 tagetttgta atttacaaaa agetatttat ttettteggt tgacgacaag gttgteaagg 1200 teggeaeget eggegttete ettetegate tegeggatga tggggetgag gtactegaea 1260 tectagegee geaateagta tgteatettt aacaaacege tetttagaag getetategt 1320 tcagtagacg gcatatccgg ggtatcgatt tgttgacaaa tccggcgtac gggattggtc 1380 aaaaggatgc ggagactgag aaagcgcttg cgactgaaag aagctcaaat tgactcacct 1440 cgttgggctt gatgtgctcc tctggaggaa gaagagtgtg agagacagag cactattaac 1500 agccattcgg ttcagcaaat atccctttca tgcttatcat acaatcaaac cgacctggaa 1560 ggccctgcgg atacggaaga tgcggtcgta agcttccttg ggaggaagac gcttgagagc 1620 ggtttggacg gtatcgcttt cctcaggaat caagtcatcg gccctgtttc catgttaacc 1680 tgatgctgga ttgacttaat gagagctttg gtggccccaa acaagaggcg atgacgctat 1740 cgcagcaaac ccagcaaaat agctgagcag tgcaaattat gctcccacat caattgtcac 1800 cagcgcttgt cctgggttac cagaaaagga gtgcgtactt tagaccgagc ttcctgtagc 1860 ccgcggcatc ggtgtaccaa ttggcaattg gcatcatcca gcgcttcagc caggggcgct 1920 tgacgatgta actggtgaga gaaggggccg acattttgat tgaacaacaa agagcgctgt 1980

actgttccaa ctgacacaag gaaaagcgga ggtgtcggag agttaagctg aacgaaagat 2040 ggcccgacgt tggtgtgcaa aacggggagg ttcaaagcgg gtgaaccttt ccaaaaacat 2100 ccgatatata cctgaggcat aaatatagaa tgcacgtgct cccgcatatc tgttagcttc 2160 atgcctcagg cgggaaagtc cggaccttct ccggcgagaa acaagttcca ggaggaagaa 2220 cetttgcgta tgtaaggett gaatagggee ttetecaaet tteattagae taetgtaece 2280 taatcttacg ctgtacgcta attaggaacc attcctgagc tttttccata ccgccgactt 2340 ctccgagtcg agtgacccga ctgacaccat ctacaatact tcattcttca cctctcgtca 2400 ttcgacacct gaggccacta ttttccagat cactaaaccc acgatatccg tcttccgagg 2460 tgggattggg gttctacaat cgttatatct ccatccactt tctcttcctt tttcgatctt 2520 tetegetgee atagtgacte gacagaceee gegeeeetgt etgtgeatag atagggeaac 2580 tttaaatcta ggcggctcgg cagcatcggc tcgcttgata aatccgattc ctcgaacctc 2640 tgcagcggtc gtcttctttc acgacattta cccccccca cccgcgatac tcccaatata 2700 cctattttac tttcaaaccg cggtcttcaa cgtcctttgg gttccggagc gggcaccgac 2760 atgctcgggt ccgggatccc ttatcggtaa agcatcaaaa cggacagctg tggaactgct 2820 tgagcgctgg ctgcaaggat gttttcagag gagcagaaga catcatcggc ttccagcgac 2880 tcgaataagc agcaaatgtc aaattccgac agccctgcgt ccccgaccgt tcatatgccc 2940 ccagcggtta cgtccagtcg gagctccgcc tttgtcactc gcatcgagct cttcgctgcc 3000 ggtgtgccgg attggtatgt cgctccaatt tgcggggcta gcgcaggtgt agcttcgggg 3060 attgtgacat gtccgcttga tgtgatcaaa acgaaacttc aggcccaggg gggcttcgtg 3120 cggcgaggga aaatggtgga ggcaaaaact atatacaggg gaatgttggg aactggcaaa 3180 gtaatctgga gggaagacgg tattcgaggt ctttatcaag gcctaggccc aatgcttcta 3240 ggatatctcc ctacgtgggc ggtatatcta gctgtttacg accggtcacg cgaatactat 3300 tatgagacta ctggtgggtg ctacttattt ttttttggct agcctcggac tttcactgaa 3360 ttcattatag gcagttggtg gctatcaaga ggatacgctt ctgtaacggc gggcgcttgc 3420 tctactattg tcactaaccc catttgggtg ataaaaacgc gactgatgtc ccagagtcta 3480 aggtccacga cagaaggatt ccgagctcct tggcaataca gcggcacttg ggatgctgcc 3540 cgaaagatgt acaagaatga gggcatcctc tcattctatt ctggcctaac gccagcattg 3600 ctgggactgg cgcacgtggc tattcaattt cctctttatg aatacctgaa aatggctttt 3660 accggttaca gcatcggaga acatcctgat actggaagtt cccactgggt tgggataagt 3720 tgcgcaacat ttctgagtaa gatctgtgcc agcactgtga cgtatcctca tgaggtttta 3780 cggacaaggc tccagacaca gcaaagaact ccgccatcac cttcaccaga ggagattgca 3840 ttccggggtg gactgggtg catggatcgt ggacgtggtg caggtgcatc ttcatctgac 3900 ggtatgccta acaggcctcg ctattccggg attatccgca catgtcagac gattctacac 3960 gaggagggct ggcgggctt ctactctggg attggaacga acctattcg agccgtccc 4020 gctgccatga ccaccatgct cacatatgag tatctccgaa aactcattgg gcatatgaaa 4080 catgagggag agatgaagct caggcttgag gaggaaaaga actccacagg ggcaatataa 4140 ctgattgagc tatgatggc atactaaca ctgactcatg gatttccacg acgtttcaa 4200 aggcttgacg cctgcgttat cccc

<210> 2898 <211> 989 <212> DNA

<213> Aspergillus nidulans

<400> 2898

actgaacgaa agcctgcttc aactggttct tggagtgctc atcgacgtac ttctggtagt 60 aggegaeaag ggaettggeg atggeetgge ggatggegta gaeetgagag gtgtgaeeae caccggtgac acggacgcgg atgtcaacgc cggcgaattt gtcggcaccg acgatgagga 180 cgggctcgta ggcctattcc atgtgatgtt agagagattt gtcttcaggt gaagccgggt 240 ttggttggtg gtgggtgtac cttgaagcgg aggatctcag gctggacgag ctggagaggc 300 tggccgttga ccttgataag acccttgcct tgctatgtga ctattagctt cgttgtgttc 360 420 cacatgtcca agtgtagtgt tcgcgattca aaacaagtca ggttctggcc aggttcgaat 480 atcgggttca gagtcttttt ggcgtgcgat cggggtgtcg ggtaagataa tgcccgtctc ttgattttct tgatcccttc cttcgctaga ccatatttat tttgccccaa gtcaaatctc 540 acatatecaa ttegeagtae caaacegteg tetaceegae eegaateeeg caegeacata 600 accagaccat gtttcagaac ccaaactcgt gcggacgcga tggcgatatc tagttgtgta 660 ggtgtataaa aacgaaaaca atatctcata ccttgcagtg ggcgacagcg gtagctaaag

aaattcaatg cgattageet caactegtet tettettea agecatgegg gaegtegaaa 780
acctaceegt ettettettg eegaageatt geacaetegg gaeggaagee atggtgagta 840
tatggeeett gteggtgteg aaaggggagt gtgetgggtg gatttggtgg gatgaagttg 900
tegtegaegt ettgeaeaet tetttegaet tgggattgat ggggaeaeaa taateegtge 960
gggtgaeett egettagtet egegetagg 989

<210> 2899 <211> 5025

<212> DNA

<213> Aspergillus nidulans

<400> 2899

agcatecatt tatatetttt tteeeggeaa gateetatee taegeteaeg ateaaaggea 60 atggcgtgct cgcgaaaaaa gaagcaaaga cttgggcggg attcttggcc atgctgccaa 120 qcaqqqatqc catqqcqqat tqacqaqatt cqtqqataaq qactqtqqct tqcccqqqqa 180 gtctgggcac ccagtccgct attcgaccaa gcttcgccat agagccgttg gatggcatca 240 300 tcacgggttc cacgagatat tgggaaagat tagcagaggg tggtatagaa gagatttgta tgcttcaagg cgtgggggcc tgcctcgaac agcaaagaag cgaaacgaca aagtttcact 360 gggctgttaa gtgggaagat cctagagatt cccagagett ctagegaagt acgaatgeeq 420 gattatgctg gttgttcgcg tggaatattc cttcgcaact tctggtcctc gagcttggga 480 cacggccatc caggcgccta taatgacatt tggtctagaa gcaccaagaa ccgccttgga 540 600 gatggcaagt agaacctaga aaaggggcat cagtagcgac actctcatgt tggctttgcc cagetttttg tecaeetaga egetggtgat gtetttaatt eeatggettt cacatacagt 660 ttcttcgaga cgggaattga gctcgccctg cagggtttcg acagtgatag aacattcacg 720 tegggtgagg cegtgactgg atcattattg etgaaacteg ateggeeeac cattatteea 780 aatatcacaa tcttcctcca cgtctggacc gtgcggtctg gtttattata tctagtgctc 840 acceptcttgc caggetcaat aaggacetet etgateggta aaggeteece gtecattett 900 gggaatgatc tgccaaccgt agcacaagaa aatcagcaag tatgtataga aagttggtat atttgcccct ggagatctga cggactgtcc tagcttttca ggttgtccaa tcgtcttttc 1020 cctccaggag acgtacctca gcttgccaaa tgttatacac agtcaaacag ggaatatagc 1080 ttcccgtttg aaatttcttt cccgcaggcg ctcaatacct cggacgcgca gcttccctcc 1140 tegtteatgg atcaateggg aaegeaegge geagaggeae gtattgagta tteeetgaga 1200 atagatetea aaegeeetga eegttttega eaaegaatea eaattgaaeg geacateaae 1260 ttcataccat cagatgcagc tcccattcag tcggcttatt attggacctc tggattcaac 1320 ataagacggg gcgcacttta taatcattcc caacgtatac tcaagcagga tctggggttc 1380 cagtgttgat actggacacg atcctgccgt atccattcgt cctgtaccca gggggcaacc 1440 taccaatgca acgacgttga cgacgtttcc caccaaagct gggctgcatg ccaatcaagt 1500 tgaagtacat ggccatctct gtgcggagta cgtttactgt ctctgctggg ttataccgta 1560 cgtcctggca ttcgcctcaa gctctcgtca cgctaagtga gttggacaat ctcatctctt 1620 gtgggggtga agagggcttt acggacctag acagcagtag tttgaagggc attgtcaatt 1680 ccccgccttg agcattgaca tcagcacctt gatcaagaag tatctgcacc accatctcaa 1740 aaccttcagc tgatgcagcc tggagtgcac tgctatatct tccaccttga gcattaatgt 1800 cagcaccetg gtgcagcaat atetgcacta attectcatg ccettgggac gatgcageet 1860 gcagagcgtt gccatacaat cctccttgag catttacatt agccccatag tcaagcagta 1920 tatgaactgt ceteteatag cetteageeg atgeageetg cagagegttg ceatategte 1980 cactetgage attgatatea geeceatagt caagtagtat etgeaceace ateteatgge 2040 ctttggacga cgcaacctgc agagcgttgc cataccattc aacttgagta ttagcatcgg 2100 cccctgctc aagcaaaaac tgcactatct tctcatggcc ttcaactgat gcagctagta 2160 gggcgttccc gtactctccg ccttgagcgt tgacgtcagc tctcttgtca agcaggatct 2220 gcacaatctt ctcatatcct ctagctgatg cagcccgcag tgcattggca taaattccgt 2280 cttgagtatt aacattagcc acctgctgaa gtaggacctg cactatette tegtggeett 2340 ggaccaatge ageetggaaa gegetgeeat aatateeatt ttgagegttg atateageee 2400 cctggttaag caggatatgg actatcttcc catggccttc aactgatgca gctagtagag 2460 cgttcctgta ctttccgcct tgagcattga cgtcagcccc atgatcaagt agaatttgca 2520 ctatcttctc atgacctcta gctgatgcag cctggagegg atttccatag tatcctcccc 2580 gagcattcag agtgcccatg acggtagttg catcagccac ggaggctatg agcgcgtcca 2640 gggttgattg cagccccaaa agagctgtat aatatacagg cgttggtata tcttcaacag 2700 cgcggttcaa gtccacggtt tttttcggtt gtctatccaa gtcatggaga cgcacccatg 2760 tcaggaaaga ctttgcccta ccaccaaaaa gtctcagaat caggccctca gctgccgact 2820 ccatccccga gccttctctg aaatgatcgt accaatgcaa cgcagcataa tgagctaagg 2880 gaaattcact gagcetttte teatetagtg gacteteage gagetetgge tetagaagat 2940 atgcaagaca aatccgagcc atttcagaat tggctcgttt tttctgaatg gcaaatgctt 3000 ttgcctgttg ttgcagcaca cgctctgact gaaggtactc ttgtacagag aagtgtgcta 3060 tgcgagcaac agaggtette tetecattgt tttcactgat caccacaact tetaccagge 3120 cacgacaaat gtcaataagg tcttcctgac catatgatcg accttcacgc tcaaggtggg 3180 gaggctgtgt aaggtcaatt gcatgagcat cgaccaactc ttgtactttt agcggccgtt 3240 tagacacaca gagaactgtc aatateegtt gaacatetgt agcataatct tcatcaatgc 3300 tacacaggat tegeteatat gttteateca ggteaegegg caaggaaegt agacaettet 3360 caaqctqqtt ttqqttccqa qcacqtttaa qatcaatcaa qtqacattqa acatatcqqa 3420 acctgtaaat agettageea aattatteea ttaettggat teggttgegt atacaeteee 3480 tgtgcttttt tggtcaaact gtcctgaatc tcgctgtggc gtgatctcca tttttggaac 3540 tttgggtcat ggccgagctg gtaagaaaca aagtgtgcta tatccctatc agcctcatta 3600 tttctcatca tgaggtcttg gtgatgagct ggctctagtg actgacggat atcgagctcg 3660 tcacggcttg taactaaaag gtgaaagcca ggtaagtgcc actgccgcat tgtctctatt 3720 acttttagaa caacgtctct ttcatgatct cgagggcttt cgtctagtgc atcaagcaaa 3780 atataagtat cgtggaatct gctgatggta ttctgaaggg agttgagaag ggcttccatt 3840 ggtggagttc ctggcatgta tgttgcatgc agttgctgca ggtctttttc tctatctttg 3900 agctgtgcta aaagctgtag taatagcgct ctaatcatgc caggagctgt gatctttgac 3960 tcatcacgaa aggtaaagta gaagaatccg atgcccacat tatggcgacg ttgagcctcg 4020 tggaaagtag attgaatagc cgtcgagcac aggactgact tgccgcatcc ggcaaacccq 4080 tttatccaaa ggaaaqaatt gctctccatc aaccagtttt tgaaataatg gctttcgata 4140 aaccagatcc ccgtgcctgt atgatgtttc tcacatgcag cattatggtc actcgtcgca 4200 tetggageca taagecaace acgtattgea gaegagatat gagtegeget tatatgtteq 4260 attagcagcc tgagttccga caattcctct tgaattgtat tgttgccctt gagctgcagt 4320

gcatcaagtg ctagagacag attitecegt atereactga tateetette gagettetgg 4380
agagtatttt tegaaaggga taagegacee gaegeeegge aaaetgaatt agaeetttga 4440
ateetgtaga tgatgtetet tgtaatttaa ggcattegge tteeaactee tgaataattt 4500
cettacatte ccatattgat etgtgaatae teteaaceaa tteetegatea ateegeggae 4560
ageggattetg taatgeacea tegategaeg tgaaaataae taaaagattt eeaagatttt 4620
gegtgatetg gtteaaateg gaateetgat eettatatge ggaatagaag etgataagag 4680
attgggtgae etggatacea agggataaca ageeageaae aceagatgea ategatagtg 4740
geteaceeat gtegagetaa tteetegtga geaateeeta aegaegaagt gtatgagteg 4800
gatgttatgg egaaatetat egagatattg agatggtatt ttteetgtea aaaatgtggg 4860
ggatatetgg gteagatgtg ggettgeetg aacaeaggeg eeetattaaa atgaeagttg 4920
gtatattace etggetgtea taaagegttg eeeaatgaet teagg
teaga

<210> 2900 <211> 2088

<212> DNA

<213> Aspergillus nidulans

<400> 2900

60 getttgttag ataacccata acgttgctga ccgtcttgga caatttacca cagagacata gagctgacga cactgcagta caagctactc ggagcagcac aatggggagg ttatgaggtt 120 180 tggagcttct cacgccagcc tcataccaac aaaggaggcc tgcctgtgca aaacaataga cagacaagac attgatagag teteagetet taatgteeca getetgaaga agaceeggaa 240 cagcgtaaat catctgtgaa agggctcgag gatttgggct ccgttgctga gaccaagctt 300 360 tgttcgaaga gcgagacaat gtgacatatt ctgactccat gcaaacggag atgctggtac 420 cttgctcagc tagccttgtt actggctgcg gaaaaggtat ataacttgat tatgtcttcc 480 getteteteg teaacgegea gtattggetg gteegeatag geeatateea tgteaacaga tcgaatcaaa caaggtaagt ccaattagct ctcaccagat ctgcgagcct tctatatctt 540 600 ctgcagtact gattcttcac aagaattgcc ttaacaccca ccggttgtca agatataccg gtgcgtcgta taccgatacg acaggaattc caacggccac gccaattgca aaacgccagg 660 tacctgtaag teggaetgte egtgeettea etgtatggee tgegteatga ateaaatgta 720 tgggaatggt attatccacg aacgggcttc aacgagtcca tccgcaaggc agccacttac 780 gccgcgtccg ataatggagg cgccgggtcc tcgcattcta ttttgttata ttaaagtgat actaacqqaq qtqtcqccac aqttqacaca gccctgtcga ttccactata cccatggata ctgtagggct ggatacgccg cgtaaagacg gtgtggctag ggggtcgtgc ggatggaggc 960 caacgetegg gteeggagte agtggeagaa eteggttteg teggetttgg tatgegetet 1020 gaaccattct ttgacaagct cttataatct tgattatgcc agaaaagaga agatccctgg 1080 tgagacattt caggcatttt cggagacacc gttgtgcaaa ggagtagaag aagcgggtca 1140 agtgacatcc gaataatcat caacagggtc ggtattggtc gtcgtaggtc aatgatacct 1200 cacacagatg ctgtaacaag tcatgttcga cgttaacgtt ccctgaacag gccctcacgg 1260 aacttgeetg agtgatggat ggagtgtace gtgactgaca ataccatege agttgttgtt 1320 gcttgccttc taagatcaag gtggatattt atccctgggc ccctgtgaag tgttcctatc 1380 atctttctat aggatgtgct tgggtttcgg aatgattgga gttcccacag gaggactgcc 1440 tttctcggcc acctcggggg cattcctcat acaggggtgt cttagtgctt gaccctttcc 1500 ctgacgacgt tattcttaga gacccttcct gtttgtgctc ggcgaagtca gagataaatg 1560 cttggtttgt cgacaaaaac ggttgatcgt ctagacgaac gttcagccta caaaacggtg 1620 attataaatc agaaagtcgc tgtagtaaga ttagacatag actcctggct gacaaatatc 1680 caatggtaac aggcatttag tgaagggtgc aagtataaaa gagcacctgt tcgtcgcagg 1740taatgccgat cagccagcac gaacactgat cgacagaacc cggacaatga agaatgccgt 1800 tetgtecaea etetttgeat tteteetetg eteageeage gtgcaaateg tgggtaegee 1860 ctctggcttc gcagctggga ccacgggagg aggtaatgcg acgcctcaga ctccctccag 1920 cctagacgag tatgtcccgt gcgccagtaa tcacactaac gttgtagact ggttgaatga 1980 atcacagacg acacteceeg tgtcacteec acegacegtg aatggagett tgttggtaet 2040 gaggacacaa catccacgca gtgatgcagc acccggacaa ctacctga 2088

<210> 2901 <211> 1479

<212> DNA

<213> Aspergillus nidulans

<400> 2901

gtgcacctgg tttgtgcgcg gccgccggcg gaaagctcgg atggggttac atggttcaat 60 cttcccgcca gctgacctaa gcccctgaat gctgccagcc agcgggcgga tctcttgcgg 120 tcgacccaac gtggtgctgt taccctttga ctcgcagacg ctgctttcat ctcatccgta 180 240 gagatcgagc cgttttcgct agggccaggg tatttgaaag tggagatgga ccagcaatta 300 atgcgtttcc tggttgctgc taacaagcca tcagagcaac aaagttttag gcgtcctcat cggtttaaca tgtgcttgaa gatattcgga caataactaa caactgctgc tggcctccaa 360 agtcagggct taaaggacaa gtgtcgcaaa ccggtcgtgt cctccaattt agagactatt 420 480 cgctgatcaa ttgggtttgc tgcggatcga tcgacagctg tggactgatc gacgaagctc gacacteteg ceateageae categttaaa ttaaageete caeegeetea egtaeeteag 540 gaccetetae tgtataegea aagtagagge eggeaaatea gtteatgtat aacteatett 600 ttttgggcaa tttgcaaaat aggagtcgca gtcgagcttt cgtgctgatt ctcgatcttc 660 tgctttcacg catagatgcg gcaattcccc aggaaagttc aataatttgg ggttctgcgt 720 780 tccatggaag cgaatgttac tggaaggatg acatcggtca tgcgattgaa gtgtcgacag tcaccacgcc gagtttatgg ttgatgagca acggcgcata ttcctcgaca accagagagc 840 atccacataa ccttqctqaa tctqqaactq cqttqtqaqt aactcqqtct ttccqatcat 900 ggcgtgtcgt agcgagccaa gtacgaagta cggagtaact cggcgaactc tagagcagcg gtagatgaaa cttggtcaaa gtcaatctta caaaagtaaa aacctatagt cacgatgtcc 1020 caaatgtcat cttctgagta agtctcttga gttcaaagga agtgatgcgt gtgactccat 1080 atatactcag cgtactggac ctccaaccga agtaatcttt gagacttgaa acttcgacag 1140 aaagagcaac gcaagagget egtgeageac eteatgtetg gtetgggaaa ggatatgegg 1200 taatgtaaag cgatgatcga ggtgaagatg cggaagatgt tgatcagatg gagtgacaga 1260 ggagtcgacc agagegegaa tggaagegtg ageggeegge eeeetgagtg atetgeggaa 1320 ggatacacgg ctcactgaat cgcaactcag gggctagtgg ctcgcctagc ctgtctagcc 1380 cgttcaggag gatcacaacc tgactccatc cggatatctg cacataaacg gttcactagt 1440 ggggaggaca tgggggtgga acgggaaaag gggtaagtc 1479

<210> 2902 <211> 1795 <212> DNA <213> Aspergillus nidulans

<400> 2902

agcacgtgac tcgggactct ggagaaggca tgatgagtaa tcgagaagat gatgatgatt 60 tgtcaaccct aggctagccc taacattcac aaacccggga agcgaaatca gccatctccc gcggaggaaa agatgtcttg tctatcgcgt cagtcctctc ttcgacctca acatcgggac 180 aagcgccaga cgattgatat atacaaatcg ccgtactttg cactatcaat cgaccatcat 240 ggccccttct caacttcctg ccatattcaa ccccactcct caggacattg agatgctcct 300 cgcagctcaa tgccacttgg gatccaagaa cctccagggt cacatggaac cctacctggg 360 gaagactcgc cctgacggtg tcaacgttat caacgatggc aagacctgat acgttatttg 420 gaggaattga gggttttata ttcgcgaagt gtgcgggttc taactcgtgc acgaaaacag 480 ggagaagate etettggeeg ecegtateat egeeggeate gacaaceetg ecgacatetg 540 tgtcatctct gctcgtcctt acggtcagcg tgctgttctg aagtttgcct cccacaccqq 600 agccaccgcc attgctggtc gtatcacccc cggtgacttc accaactaca tcacccgctc 660 ttttaaggag ccccgcctca tcgtcgtcac cgacccgcgc accgatgccc aagccatcaa 720 ggaggccagc tatgtcaaca ttcccgtcat tgctctctgc gacactgact cccccaccga 780 cttcgatgat gttgctattc ctaccaacaa caaggtcgtc acgccatcgt ctgatctgtg 840 gctacttgcc cgtgaggtcc tccgtctccg tgtaccctcg ccaaccgtga ggttgactgg gacgtcgttg ttgaccttta cttctaccgc gaccctgagg ctgaggagaa caaggaggtt gctgaggaga aggttgccag cgctgaggat gtcggtgccg gtgccatcga gtctgcgttc 1020 gctgctgaga gctgggatgc tcagggtgct gctgccctg ctgctttcgc ggctgccggt 1080 gctaccagct gggaggctga cggtggtgac tgggctgcca gctctgtccc gccctggtg 1140 gtgagaactg ggctgaggct cagcctgccg agggtgccaa gtggtaaaaa gctgcttttc 1200 aacccggcta tatcgggaca gttgttggga gagtgtgaag agaaggaaaa tcaaatatat 1260 tcccctggca tgtcaatcct agcctctgtt ccgcaaatac tcaaaaagga aaaagaaaaa 1320 acggcaaaag aattacaccc gaaaccaacg tctttttctt ccacccaatg gtatgctgtc 1380 acgaatcatc ctctcagagt tcagtccgct ttacgtcttg tttcatgggg aggaattgct 1440

tgttcaatga ttgactcggt acttgatgag ggaaagatac ccagttgttc tcatatcagt 1500 gagcttctgg gggaaagccc tgtgccgtca atccacaagg tggacttgat cgttaccttg 1560 gtttctccct gtatgttata cgtaaatgaa agtgatgaaa gctaccattc gtatattcta 1620 aaactgcatc gcaaaccgta agagtagtaa gagcacacgg gcgtaggcgc ttcatatatg 1680 tatacaagca gtccaatggg tatcaatgat caaaattctt gcatacacct tatccactca 1740 cataacgagg cacctccctc cgtttgtccg cagcagcagt agtagtctgg taggc 1795

<210> 2903

<211> 2100

<212> DNA

<213> Aspergillus nidulans

<400> 2903

gaatgatgcc tactcatatc aactcccggg tgccgttcgc cagtgacctc aaggatgatg 60 gcgaggacct cccgggaggt catgaaaagg gcttcctggc tggtgtttgt tcgcttgacg 120 accattctct gaaccaagaa tagagtatac agataatcga ggtagatgtg gcgtctcgcg 180 aaggtgatat taggcgattc tccattcggg atgtactggt catgtcgtag gtaaacagga 240 catgactgcc attggttctg ggcggtttgg ataagctcac tacagagagt cagtcggtac 300 cacagegggg ttggagetag agectaetea ettataettg etcaaaateg tettgteate 360 ataattcccc agcgcaatct caagcgcctg ctctctcagc actgccaaat ggaaccgtaa 420 acgcaacagg cttccccgca gcgtgttgcc tttcgtattc caccctgagg agtcqaqatt 480 agccattgcc cgcctgagct gctcctcgcc agcaatcagg tcttcatcct taatgtccag 540 cggcggtgaa atagagcagt accgataatt aataaatggc ggcctcccaa cgaacgtaga 600 aagagacttg tctgcgtaga atgcagcagc gaacgacatt ttccgccact gatgcaggaa tggaggacag ttttgtgcgc gtgtgctttc ctgatgcaga ccggctgcat atatggtcgc 720 tgtgagattg ccaagtttgc gccaggcggc gtagcatata ctgtcgttag tggcaatgtt 780 tgtgtcatga gagcagggcg tactcgtatc cccataatac tgcgtacgca atagcatatc 840 gttgtactga tagaagccca gaagttcatt aaccgacgcc gctgttgcac agaacaaaag acacgtectg cttgeetega ecaagegtga aeggageate teegegeeet gtgegteagg cgccacccgc agaacatcgg ggtcgtcatc tgaggtggac atcattgcga tcccggccgt 1020

cgccaaaaca agaccaacta cctcccagcg caggttctcg tctgtaaacg aggcaaaata 1080 ctcttcgacc gtcatggacg catgcgaggt cagtggatga gccgaggact ggaatatgcg 1140 ctgcaccaga tcgcggacgt gcttttcgac gtctttctca cggtcaatgg cgtcgaagat 1200 ccgtcgaagg gatatgataa tcgctcttat gatgaggttt gagacaacgg ccatcaagtg 1260 gccagcgtag aacttgcgaa tcaggatctc ccatatgttg ttccggtaga gaaacttgat 1320 gacttcgagg ccggactcaa gacggtaacc gtccgttaat ttggatagta ccccgtctgg 1380 ggcatggtta ccctcctcaa aggatatgtt tgcgcggtgt tcgctgaaga cggcggaaaa 1440 gctggtcgag cctagatacc caggtgttgt ggaggggcgc tggtctgcgg ctgcaaggcg 1500 aagtccgtac tgcaccgtag atgcagatgc agatgcagat gcagtacccg acgcagatgt 1560 tggttcaggg cttggcgtac tatttaaatc agttcttttg ccttctgctt cctccactaa 1620 gctggtgaac gtacagtgaa gattccgtcc ttggcctctt ggcaggacga taagatggag 1680 gctgcgatgc atccttggtc ataggcgcag gatgataaaa gcatctctgc gtaatgtttt 1740 tcgcaataca tcgtccacaa actggccgtc catggtcaca tttaagcttt gatttgcgac 1800 aaggctcgca agattggagc aggccattgc gacggattgc cggtgttgag tcagtcattc 1860 tcaaacgcgg gatatcacca ccggggctat aaagtggacg attcgatcac atataaaacc 1920 atctcgtctt catattccat actgaaccta aagggcgttc agtttgcagg cgaaggcggc 1980 aagaggggcc ccagtgggaa acgcaggtgt cgaccagaga agacatcctc atactaatca 2040 atatccagca cctcgctcgt ccaatcatac gaggcgatca cgccgcctag cggaattgca 2100

<210> 2904

<211> 3532

<212> DNA

<213> Aspergillus nidulans

<400> 2904

agggctgaat taatctaccc tatcactatc taattatgta ccagactcat gtttgtacag 60 tccaccaggg cgcaccaagc acttgctaga ttccatcaat gtccttgcgc tggaggtaag 120 caagttgaga tggatgaaac aaatccatgc atacaaaaca ccagacgccg ataccaatca 180 ttaacaatga aggaaaatat ttagggaatt gggtatctcg tagaattctt gcccgttaac 240 ggtggcatac gtccgctcc tccgatggcg gcccgaaggt caaagtcggg attattctcg 300

agtaggacgt cgcgcttctg ttgaacagct tgtgccggca tagggggggg acgccaccta 360 ggggttgatt ggccgctccg atattgacgt gaaatggctt acttcgctag cagcaggtga 420 gcccggacgt tccgccccat tttccttcaa tttttgctca ccagaattgc ctggcgtcaa gacagagggt actcctgagt taccaactgc cgactcgttc cgactcgtgt acaccgggtc 540 ctcatcttcg taatacatac tacctgactg ggaacgggca tgccgtggtt gattaggttg 600 atatggcaag tttggctcgc tcgattggta tgcttgcggt ccccaatttc tacggggggg cacatatgac ctgggtgaag cgattagtta gctatttttt gagaaacaga gaggttgaac agccatactg tgtgcggcta taaaggctcg tggggctaac aggctcgtgc tgattatcaa tggaaatggc atggagttgt tgctgctcag gtacttcatc ctgagcatcc ggctcatgtc 840 gcggctgcgg catcatttca atagcttggc cagctgggcc cggagctgct ggcgccgcca 900 ttggcccggg agtacgctgg cgtgacgaag gtccacgata tccgtactca tcttcaccca 960 ttgcgcgtgc gttaccatat ccgcccgctg ccggttgcgg ccggtatcct ccacgtgcca 1020 tcggtcctgc aggtccgccg cgcattgggc ccatataacc accccgcccg gtgagaggag 1080 cacgagaatt gggcccgtac ggcgtccgta aggtccgcca cgaccatatc ctccgcgagg 1140 tggatacccg ccacggccac gtggagcaaa tcctgtaggg ggccctcttc gcgggtccga 1200 atattggtcg cgcactctgg agtcaggagg tgggggtcca ggaggtccag gcgtacgcat 1260 tctaggagcg gagttgtagg ctcctggtgg taacgggttc ccgaaatcat ctcgaggggc 1320 gttataagga actggatctc caggaatccg cgactgatac ccagcgtctt gggcgctcgg 1380 atcgctgtgg ttatttagag gtgtacgatc gtcgtcactt gaacgcgtgt ttgtgcgaaa 1440 ggtggcgaac gtaggcccgg actctgagct ttgagttgca gcgacgaagg tttctttggc 1500 ttcaggcgcg attggcttgc tctcattcaa tgcagccgca gcggcgttct gacgattata 1560 gtagttctgc ccactcattt cggcattttc cgcgatgcgc ctcttgcgag ccttgcgact 1620 gaccagagtc cggcgcatgg cacaagtgac aacaccgcaa gtgaccagga taatagtcgc 1680 ggcgagaact atccagccac cccatgacaa atgcggcaca aagagcagta tatcgaccag 1740 gaaagcaagc aacgagacga gaagagtcgg aaggagcaag atcaacaagg ccagtaagta 1800 gcgaggcgaa tgcgacggag cgtgcagatg agccgcagca gcgagacaaa ggcagatcaa 1860 agtgagaaaa gcagcgatcg ggtggacgat aaggatagaa gaaagtgatc tccgcgcgtc 1920

ggacgggagg ttaaagtcgc tgtccgtact tccagtgttt tcgatttcct ctgcgctaag 1980 attagcgacc tcagacctga ggggtaaacg caacaaacct gtggtatagc cgatgtggat 2040 cgcggtgcaa gtgccagctt tgcaataacc gaagacccca tattcgacat tgtcaaaagt 2100 tgccaacgga atactcttaa caataggagt cgatatcacg gagagaagaa ggaggacaaa 2160 ggcgatcagg agaaggatgg tcaatggggt tgccggtttg agcaacattg cgaccacaag 2220 acaaccgccc gtcggacaga gtgtagggaa acgaacgtca ggtactgccc ccagacagca 2280 gctcgcccaa gcggaataat aaactctaaa agtatagcat tgagcgtagc attgattgca 2340 gcagcgcttc tcctggaaga aactgtgggt gaaaggaggt aagagggcga aagagagcca 2400 ggagggaggg cggcagtacg gagtagcggc aataaggcag aagcgaagag ctcttgtcca 2460 gacaagagaa gataagaaaa gagaaaaaag agcctgaaat gaatggagag aatagtgtac 2520 taaggtagta gtaactggct agcgacgatg gtaaatggtg gaataaggta taagcatgac 2580 ggcggcttga ttgattgctt aaggatggcg tcggcaagtt ggaggaaaga ctgaatagtt 2640 aagaggcggg tcttagtcat cgactgtctc aatttccatg atatgcccac ttcctttctt 2700 ctactattgt gggatctaca gccaaaattc acttgacaac aagaacatct tcagaatgtt 2760 tggtagaccg tgacctgcgt ctacataaag acgctagaat tcttcctcga gtaggcgtcg 2820 cttcctcctg tggtggctga gcccagatta gaacaagcga taccttttta atgcatccac 2880 tactcacaga cttcaccatg attcgctgtc cgctaaggag gagagcacga gtttaccagg 2940 tegagtteea ceactgettg cegagaetgt egetgtgegt accagetege tgeagaaqaa 3000 aacatcacga aaggtagagc cttgctgcat ccagactcag tcagctgatt cacatgctgt 3060 gacacagtga atgttccctt ggatatcgtg tcggccagcg cgctaagagg tggctgcttt 3120 tgcggcaaag acgcttgacc caagaccata cccgagtaag atcagctata cgataattac 3180 gatcgggtct ttaaccggtc ctgtggaaat taatgacgcg acgcttttct ccacgacgga 3240 aaccggccag ccttcctgca atcaatcttg agagactgaa acaaatcaaa tggatggact 3300 tcgtcgtgat acgcgaagat acccttgggt ttgctccttt tccctactat taaacaagtg 3360 ctgatttgag aaaatggaac gtggagctca cactttaatg ccctatcctg tttcactacc 3420 ttctcttttg ccctaccccc tttctaaaag gttctgaact tcaacttgtc cctcccttat 3480 atcttttatt gcattttatc cctgtgctta ttttcagtta tacgcttttc ct 3532

<210> 2905 <211> 1356 <212> DNA <213> Aspergillus nidulans <400> 2905

tgtgtgattc aggcaactag ttgcgaatca atgcgcctat ccatgggtct tgctgtagta 60 tggtgcgggg catagagctt cgtcatccga ttccagagct ttgtacgcaa tataagaata tcctggttct gtcaacatgc atcggtcgct cgatacagaa taatcaaatg accgcataaa tgtcatgcaa gcgtagtgcg tcatacatct aatattttga tgtaggttgt gagactgatt 240 aatatcacga tttcatcata atgcgccggg gtcattgaag atccatgcta cagcaaccac 300 ttcagaatcc aggaattggt ttatgagaag tgtgtagaat tctctaacgc aacggcccat 360 gctggagaaa gaggtaaacc agtatgcgaa gaatgcatat caaacaagag taaagtggtt 420 gaagcctgca actgcctcaa ggtccgatgg gttccaccgg agataccgca ccggaaggat 480 agggcatett acgaccatga acatgggeec tggaaatete aggggcaagg atggatttt 540 gaatgcagga tcgatccgtc cccaatggga gtcaaatata ccctagctgc aactgggtgt 600 cgcgcgtctg actcactcat gtcgatcaaa gaaagatata gtgactattc aagcccttct 660 acttcatcat cgttgcggac cgaacaggtg aactttgcct ctcaagaaga gggtctcgta 720 tagaatcgat ttttaagcgt ggactttgag attatcgtcc cctcttcctc attggagact ttcacgcagc gtctcttcag cctctcttca ttcgatacac ccgacattat gatcattttg acaaggttet egactacega aagttgttae eecagtteea tgegetgtag ggateatttg gtacgagatt gaaaagcact tggcatttag attagcacat ttaccagaca aaatgagcag cacacgaatc cagaagccga aggatatatt cttactttct ccaaaagcac ctagtgtttc 1020 atccatatag gagtcgatct gatgatagca gctattgtcg ggtataccaa gccctgggtt 1080 gaggttgcct ccttcatgca tgggctcgat atagaggtca cccgcgggca cgcccgccat 1140 cggaaatgaa acgtcaactg ccggttggct ctgagttggg ttggctggtg gcggattgaa 1200 gtgacccttg aatgttgaag aactgcatgg ctctgtcggc ggcagccgcg gtgaatgaga 1260 aggegaggeg tgttgegaeg gteeetgtte etgetetetg gggtttgtgt egetaceaga 1320 ttcattacta tttagagcat tttccaactc ctgatg 1356

<210> <211> <212> <213>	2906 882 DNA Aspergillu	s nidulans				
<400>	2906					
gcagttcaaa	tgttccgtct	gcatgtgtac	aagactcgct	actatgtcgg	caccggactg	60
gtttcggtgg	taggaacttc	gttcgcaacg	attacagttg	caaccgggac	gtttaatcag	120
atgtactcaa	ctggatactg	tccagtcgat	ggctcaggaa	acaggctgcc	ctgtccgaaa	180
ggttatgggg	cactcctagc	cacctcctgc	ctttgctcgc	ttctcgaaat	cgggctttcc	240
ttcatgagca	gcaggctgct	caaagctctc	ttcccgccaa	tcgtcactgg	cccaactgtc	300
ttcctgattg	gtgcgagtct	aatcggcaac	gcaatgaaag	actgggccgg	cggttctgga	360
acctgcagca	gcaatccggg	caatggcgct	ctttgcccca	gcgccgatgc	accacacccc	420
ctgccttggg	gcagcgccga	gttcatcggc	cttggcttcc	tcgttttcgc	caccatcatc	480
ctctgcgagc	gcttcgggtc	cccaatcatg	aaatcctgcg	ctgtcattgt	cggcctgctg	540
gtcggctgca	tegtegeege	ggcctgtggc	tacttcgacc	gctccggcat	tgacgccgcc	600
cccgtcgcat	ccttcatctg	ggtgaaaacg	tttccgttaa	caatctacgc	cccactcatt	660
ctcccctcc	tcgcggtgta	tatggtcatc	atgatggaat	ccatcggcga	catcacggcc	720
acctgcgatg	tttcccgtct	ccaagtagag	ggtgctactt	ttgactctcg	cattcagggt	780
ggcgtcctgg	gaaacggcat	aacatgtctt	ctcgccggtc	tctgcaccat	taccccgatg	840
tcagtatttg	ctcagaacaa	cggcgttatc	gcctcacccg	ct		882
<210> <211> <212> <213>	2907 1251 DNA Aspergillus	s nidulans				
<400>	2907					
cttatatatc	caccactctg	cggtacagta	tgtgtatcca	tatccttgtc	cattcatctt	60
ttttctgagg	aatttgtaga	ctcggtacaa	aggttcttgc	tgcatttcac	caatggctgt	120
tagatcgctg	ggcacctgtt	ctgcgtgagg	ttcatcatcg	tcgaaaaagt	cattattgtc	180
catgggttca	tcatcatcat	aatcaactgg	ctcaacatca	tcattgggac	catcttcatc	240

tatgaagtca ttgtcatcat cacgttttac aaagctgaac gcacgacggt ggatagctgg agggatcact ggggggactc tccgatggga tatctggctc tcggtaggca acgcagacac tgcgactgtt gggaccttga cgcagtcaag cgtcgaaaga gtcatccacc ctccatgtcc 420 ataagaacat gcacttccac aagtgcctgg catacacagt tcaagcgaag tcggcgtgct 480 ggtgacagtg gttgtagtcg cagtaaccga gcatccactg gtcgtaatgg tggtcgttgg 540 atagcaggcc gttgttgagg ttgttgagtc accaaaagtg accggggtcg gctcacagag 600 gacagtgaca tggtatacgg ttccttcaga agtacaagat gtcgtcgtgg tggtctqcga 660 ggttgacgtg ctagagtttc cattatcctc gtcactctca tcatcagtgt catcgctatc 720 atcctcggca ttgttcccat tgtctttatc accaaagtcg tcattagaat ggtgttcgtt 780 gcgatcctca ttgtggttat catcgtcatt gttatcaggg ccgggaggct tgctagttgg atcaaggaca ggagtatetg etatattete gggtgeaate aaategtgea teatettett 900 gacaccgtcg atatcttgct tctcaattgc atccttgagg tggcttgtta tctttccqat acageceaat tgeeteaaaa gtttgeeage gaegtegeea geageaeeeg caatgteett 1020 ggctatattt agcgctccgt caataagacc tcgttttctt agtgagtcgc agctgggagg 1080 cagctcccca cctaggactt tgatgaagtg ctcaatatca tcttctacac catcgattcc 1140 cttgacggcc tgggtttgga gagaaggact cggcttttcg acccaggcgt cgatgatcgg 1200 taagacggac gcaaagtcat cggatatgcc agacatgctg gaagcgagta c 1251

<210> 2908 <211> 1458

<212> DNA

<213> Aspergillus nidulans

<400> 2908

cgacctagaa gaatgtatat gtccgccacc atcctggcgg cccatactat gattatgccg 60
atgtacaaca gcaatatgga gggtataacg atccatatgg cgcccaacca gtgattcggg 120
atgttcaagc tcgccggaac acacagattc aaaatccatc tgtatttccc cgacaaggaa 180
acgctgggat cgcgcaaaat ttctaggaga aaatggattg accattttt ctttcttata 240
tatacttact cttactaaag gatcatatat caactcttgt tcgcccagca cggttgccac 300
taatggagtt gtgaggggt tttagcgcag cactgagccc taagccttca tattactgtt 360

atcaacaggc cagagtcgat tattcattca tctacacgga actcgccgag ttctttttt 480 ttttttttt tttcgctttc tattttgtga taccaatttc actgccatct tcgccgatta tettteecet atttgtteec tegetatett ggtettgtet tettttttgg tgtacattta 540 cgactgctcc ttatcatgtg agggacctct ttagttctgg tttgtcttca atatctcttc tatacctgaa cagacattct acttcaccta ctctccatct ttctttgtct ggatgtcctg 660 720 ctttttttt tttcttggtg ggcatttgct cctctcagag aaggcaagga gtgtgtaaag 780 ctctatactt agctagggat ccataatgat aaactcaaac tcatagcgaa accaagaagc 840 agacttegta geattegata ggtttaatga taeggegtet etgtaateae attgetgeet gtggagtcat gtaaggagcg cgaagaccgg acagcctatc agtggtcggg cttctagatg 900 aggctacaag aagatcaggg cttgtaaccg ttagcatcaa tctcaggcga ccttaaccac 960 ctttcgaaga tcttgcggag ctaataaata ctgctcttgt gtagggatcc cggccagtga 1020 catcatccga attgagtcga atcgcacctg tgtagtacca agtgcatgct taacctgaga 1080 aagatgataa gccaagcatt cagtaatacg ttaggcttgt tcgagcagtg cacgttgtga 1140 ttgacgcggc tttggttggg ttgttctcca gggcttgcag ctttagcgtg accgtggggc 1200 aggaaacgtg ggtttgtttg cagcgttgat tgggcgggaa ccagctcccc cagagctctc 1260 caccttcagc tcgcccttcc atcttttgac atgaacacat tactctcagc gactgtgtct 1320 aaccctctct acgctcgtgt caaatctact tgtcgttgat ctcctagtcg ctttccatat 1380 aggtatgtcg ttgaggggtg tgatccatgg ctcccgccgt gagccggcct ttgtcgacta 1440 1458 tgaaatgtcc gctgacgc

<210> 2909

<211> 1648

<212> DNA

<213> Aspergillus nidulans

<400> 2909

ggtccactgc agggggtggg gttgcagtaa ctggaggttg atgaaatgca ggagcgggtg tcgacgagaa cgacgcaggt tggctagaat ttaacgaacc gaggatatca taatttgctt 360 420 ggaatgcgct aggattctgg ggtatttggg gcgccggaga gctcgcttca cgaatgttag taaacaactt gtgcaaagga cagaaaaaca tactctggcc taacgagatt ccaccggacg 480 gaacaggete gtegattgat agtecaagea agteattete gatagageta gacceetgtg 540 ccqqctqtcc tgcgccgttg gaactaggct ctgggtcgaa atcgatcaga gacagctcgt 600 660 tqttqqcatt cttaqaaacc cctgtagtag tgcccaacgt gcccttggga atcctcgtcg caqcqtcqaa atcaccactc ttcacgagct tataccgctg gattgtgcgg tgtatgctgt 720 cattgatctc caacagtttg cgcacagctt ctgggtcatc cgactcctct tcacacatct tctggatctt gggatgcgca ctctgaaggg cattcgcaag ttcctgcggc tttgttagaa 840 qacttettea ttacqqtqqa ttetteatee tacettaaae acategeeet eegegateeg 900 atcacccggc gcctggctct gcagcatttc ttccaaaatc ttggctttct cctgaacttt ggccacctcc tctgccgcct tagcccggta gtcggtctta tgccgggtgt cgtatcccgc 1020 cataaccttc atcaaccggt ttgcttcctg tagatctgcc ggcgttcctc tccgaatcag 1080 ctcctgcagc ttcgccgact gcgcttctcg ctcctcctcc tccatctcct cagccgaacg 1140 cagattctgc aacccaggtc aacacagttc tgacatgcat ccgtaggcca acatacatcg 1200 ctagggttca aaacagccgc atcctcgcgc cgaatttccg gaaatacata gcctttgtac 1260 agtagtaacc ggtgcatatc acggatatgc cccagatcat ctttataccg cgatgtctga 1320 cagattgtct gcctccactc ttcaattgac tcgagaatgc gatgctggac cctcgtgggc 1380 cgcagaggcc ggcatcgggg aagcgacgga ccaactcatt tagaaattcc ttcgtgctga 1440 tctgaagatg gaacgggtat ccgcagtttt tgacacagat gtccagaagc taccggaatc 1500 gatctcgtca gcaatgcgcc attctgcgat agtcacggag ctctgtctta ccgccaatgc 1560 tagtaacgag acattttggt tccgggaatt gatcaggcgg acaatttcga atgctgcttc 1620 1648 tcgaggacta tttcatccaa gcagtcag

<210> 2910 <211> 1470 <212> DNA

<213> Aspergillus nidulans

atcatagcag gtcatacccc tctctcccct ctcttccgcc ctaacccctc cgtttataac 60 ggcctggcac gtcaaacgat ctgctgctgg ctctcagcat accctgacga cgtagaattg 120 aacacaatgg caggctacca tctcccagtc gacctcaagc agttcaagaa gctgcagctg 180 gatcccaaca gcaagaagct gtccgaccag cagaaaaaag atctcctaca caacattggc 240 300 atcttccgcg atgccatcgt cgccttcaca gccaccggtg ctgcccgtgg ccaggcaggc cacacgggcg gtcccttcga cacggccccc gaagtctgta tcctgctagg ctttatcaat 360 gccaatccgg atgccttcta tgatgctatt ttcgacgagg cgggccaccg cgtcgcgacg 420 cagtacctgc ttgctgccat cgacggtaag atcgagcccg atcacctact caactaccga 480 540 gatgccaact cgaagctccc cggccatccg gagctggggc tgacccccgg cgttaagttt 600 agctccggtc ggctgggcca tatgtggccg ctggtcaacg gtattgccat ggcccacaag gacaagaagg tatttatgct gggctctgac agctcgcagc acgaaggtaa cgatgctgag 660 720 gctgcgcgta ttggccgttg ccaacaacct caatgtcaag ctgttcctcg acaacaacga cgtcaccatt gctgggcacc cgtcagtgta ccagaaggga tacgagctcg agcggacact 780 cactggccac ggcatgaagg tcgttcgtgc ccagggtgag gatattgact cgttgtacaa cgccatggtc gaggtcgtca gtacagacgg cccggccgct gtggtcgtgg accgcaagat 900 ggcgcccggc attgaaggaa ttgaaggaca gactaaggcg cacgatgtcg tgcctgtgga tattgcccgc aagtacctca ccaagcgtgg ctactcgcaa gagtcgctcg ccttctacga 1020 ccagatcaag gccacctcca acacgcacca gtacctgggc tctactaaag agaagggcgg 1080 caaccgcgtg atctttggtg aggccgtcaa ctctgtcctg gacgggctca gcaaggaaga 1140 ageggeeege egegteatgg teategaete tgaeettgag ggetetaeeg gteteaagge 1200 tattcaccag gcccacccgg aggtctacgt atcatcaggc gttatggagc gcggcaactt 1260 ctccgcagct gctggtttcg gcttcggtag tgacggctcg cgccagggtg tcttctcgac 1320 cttctgcgcg ttcattgaga tgctgatctc tgagatcacc atggccagac tgaacggatg 1380 cagcgtcctc tcgcacttct cacatagtgg tgtcgacgaa atcgccgaca acacctgcca 1440 1470 tttcggcctc aacgccttct ttgccgataa

<210> 2911 <211> 1388 <212> DNA <213> Aspergillus nidulans

<400> 2911

taaatggctg ctatagtcct gctgcgtctc gggccatgga gatcctactt cagtacgcgc 60 acctccagga cgcacggcag ctcatcccag tgtcccgcgc gcacatcgac gcctgcattt acaccggtcc ggcgagtata ctcattgcgc ataggtttct ttcccaaggc gctcacgttg 180 ctatcccaac gacgctgaac tcgatttctg tcgaccagcg ccgatggcgt gaagttggcg 240 ttgacaagaa cttggcgagc gacgcaaccg cctggcgaat gcatacgttg ccatgggtgc agagagcaca tttacctgcg ctccgtacct tttagactct ccaccaggtg ccggcgacac 360 aatcgggtgg gcggagtcaa tgctgtggtg ttcgcgaaca gtgtccttgg tgcacgcacg 420 caaaagtacc ctgacctgat tgacgtctgt atcgcactta ccggtagggc gccgctggct 480 ggagtccaga ttacagagga acgcgctccg agactctgca tcgatgtgac tgtgcaaaag 540 cacgaggcac tggaggatgt attttacccg ctgcttgggt acgcggtagg aacagtggtc 600 gcgggaaata tccccctaat cactggactg gagtcgacga atccgactag gtctgacctg 660 aaagctttca gtgcagcctt tgcgaccacg gcttctgcgc ccatgttcca catctctggc 720 atcacacctg aagcaaagca gttcgatcta gctgggctta agcgtattcc actcgccgac 780 gataacctgc tctccgctct caacggcctt atcactgccg cagacgactc cgtcggcctt 840 gtctcactcg gaaacccgca cttttctctt gaagagtttg ctcgtttcag tgaactgtgt 900 actggccgcc gtaaggcgga ttcagtccag gtgatcatca ccaccaaccg acagatttac gctcaggcgt gcgctgcggg acatgttggt gcaatcgaga ctttcggggc ccaaatactc 1020 acagatacct getggtgcat gatgtcagag tcagtgatgg actettetgt ggtgaacete 1080 atgaccaatt cggccaagta cgcgcattat gcgccgggaa tagtccgccg gggggttcat 1140 tttgggacat taaaagactg catcgccgcg gcggagacag ggagagcaaa gtctggccta 1200 aattactggc tgtcagctgt taaatcagcg tgatgttgag tctgctctcg atgccatcat 1260 ctccttcaaa ggtcccgtgt gttcgaggat ttatttgcta cagatgtgcc tcccgcaacg 1320 tagtcttggc agagctgttc tacatttggg cattttcaaa tcgccattct ccaaggggct 1380 1388 ttgattaa

<210> <211> <212> <213>	2912 535 DNA Aspergillus	nidulans				
<400>	2912					
gctcgagcat	gcactcttta	actccagatt	cagcacatgc	tgcacctgtt	gcggtagttc	60
tgcaaatctg	ttcttccacg	aacgactccg	gaatggatga	aaggtccaac	atggcagaga	120
gtacggcgct	cctagagaac	cacacagagc	tgctggtcag	aggtgagcga	acgcacggcg	180
ttgagacaag	ttgaagcagt	gaagacgcaa	tagttagcga	aagggctatc	cgatggttcg	240
gtagccatga	cgcgtccggt	tctttcagca	gctgctccag	ggtcacaaac	ccgtccgaat	300
ccgccgcgag	gtgcattgaa	ttgctgtgga	cggaggcctg	tgggtaatag	tacatcaggc	360
ggtttccttc	cgagacctgc	aagcagaatg	ccgcccttcc	atctctggcg	cgccgtataa	420
actcgcacag	gtcatccatc	gcggtaaggc	ggggttcggc	ttttgttggt	ggagtgggtt	480
gttgaatgac	taccttgctg	tacgccgttc	tctgcgtaat	cctagtggaa	gaatt	535
<210> <211> <212> <213>	2913 2102 DNA Aspergillus	s nidulans				
<211> <212> <213> <400>	2102 DNA Aspergillus 2913		and	agtggaggtt	caacqqcqtc	60
<211> <212> <213> <400> ttttccgaga	2102 DNA Aspergillus 2913 tctcaatacc	gaagatgggg				60
<211> <212> <213> <400> ttttccgaga gagctccaag	DNA Aspergillus 2913 tctcaatacc tccgccactg	gaagatgggg atcttagtta	taaatcaagc	tcaaaacgag	atgttgaggg	120
<211> <212> <213> <400> ttttccgaga gagctccaag cattgggcgg	2102 DNA Aspergillus 2913 tctcaatacc tccgccactg ccgtggctgg	gaagatgggg atcttagtta agcacccgct	taaatcaagc tgaaaaaaagg	tcaaaacgag	atgttgaggg gctcgaaggg	120 180
<211> <212> <213> <400> ttttccgaga gagctccaag cattgggcgg aagtagtcaa	2102 DNA Aspergillus 2913 tctcaatacc tccgccactg ccgtggctgg gtgtcgtcgc	gaagatgggg atcttagtta agcacccgct tggatctccg	taaatcaagc tgaaaaaaagg tgatctcgca	tcaaaacgag gatgagcctg tcgtttgttg	atgttgaggg gctcgaaggg aagcggctgt	120 180 240
<211> <212> <213> <400> ttttccgaga gagctccaag cattgggcgg aagtagtcaa gaatttctct	2102 DNA Aspergillus 2913 tctcaatacc tccgccactg ccgtggctgg gtgtcgtcgc caggcagacg	gaagatgggg atcttagtta agcacccgct tggatctccg ataccgatcc	taaatcaagc tgaaaaaaagg tgatctcgca ccctccatac	tcaaaacgag gatgagcctg tcgtttgttg caacccttga	atgttgaggg gctcgaaggg aagcggctgt cagagcagtg	120 180 240 300
<211> <212> <213> <400> ttttccgaga gagctccaag cattgggcgg aagtagtcaa gaatttctct cgcgacgcca	2102 DNA Aspergillus 2913 tctcaatacc tccgccactg ccgtggctgg gtgtcgtcgc caggcagacg actgtgaccc	gaagatgggg atcttagtta agcacccgct tggatctccg ataccgatcc caggacccag	taaatcaagc tgaaaaaaagg tgatctcgca ccctccatac cactgagcgg	tcaaaacgag gatgagcctg tcgtttgttg caacccttga atgccacggt	atgttgaggg gctcgaaggg aagcggctgt cagagcagtg ccgatgcact	120 180 240 300 360
<211> <212> <213> <400> ttttccgaga gagctccaag cattgggcgg aagtagtcaa gaatttctct cgcgacgcca atctgattcc	2102 DNA Aspergillus 2913 tctcaatacc tccgccactg ccgtggctgg gtgtcgtcgc caggcagacg actgtgaccc gccgtctcgg	gaagatgggg atcttagtta agcacccgct tggatctccg ataccgatcc caggacccag	taaatcaagc tgaaaaaagg tgatctcgca ccctccatac cactgagcgg gggcatagag	tcaaaacgag gatgagcctg tcgtttgttg caacccttga atgccacggt aattcagtac	atgttgaggg gctcgaaggg aagcggctgt cagagcagtg ccgatgcact gcaaggtcac	120 180 240 300 360 420
<211> <212> <213> <400> ttttccgaga gagctccaag cattgggcgg aagtagtcaa gaatttctct cgcgacgcca atctgattcc caatgaacta	2102 DNA Aspergillus 2913 teteaatace teegeeactg ecgtggetgg gtgtegtege caggeagaeg actgtgaece geegtetegg	gaagatgggg atcttagtta agcacccgct tggatctccg ataccgatcc caggacccag ccggcgaacc caagcttcca	taaatcaagc tgaaaaaaagg tgatctcgca ccctccatac cactgagcgg gggcatagag ccgatctgtc	tcaaaacgag gatgagcctg tcgtttgttg caacccttga atgccacggt aattcagtac cagccattga	atgttgaggg gctcgaaggg aagcggctgt cagagcagtg ccgatgcact gcaaggtcac tgtcgagcga	120 180 240 300 360 420 480
<211> <212> <213> <400> ttttccgaga gagctccaag cattgggcgg aagtagtcaa gaatttctct cgcgacgcca atctgattcc caatgaacta	2102 DNA Aspergillus 2913 tctcaatacc tccgccactg ccgtggctgg gtgtcgtcgc caggcagacg actgtgaccc gccgtctcgg	gaagatgggg atcttagtta agcacccgct tggatctccg ataccgatcc caggacccag ccggcgaacc caagcttcca	taaatcaagc tgaaaaaaagg tgatctcgca ccctccatac cactgagcgg gggcatagag ccgatctgtc	tcaaaacgag gatgagcctg tcgtttgttg caacccttga atgccacggt aattcagtac cagccattga	atgttgaggg gctcgaaggg aagcggctgt cagagcagtg ccgatgcact gcaaggtcac tgtcgagcga	120 180 240 300 360 420

acgaagccgc cttaatctag ctcttcaact agctccaaga gtgcctcagc accgacgacg 720 ccqqttctga aacttttccc tgacgccatc tctccccgta cttcgagtaa gcaggccctg 780 cqtatctcta ccggcagatc ttggacgccg aagcagtctc ttccctcggt ccctgcctcc caaagtaccc caacgttgcc ttcggttttc gagtcaaatg atcgcgagtt tcgaacttca tccaacagct tacccaagat tcaagaacat gtttcggatg cgcatggtac aaagcagtct 900 960 ggttcacgtg cgccggaacg accttcagca aattctagag agaggctcga accgcaagat tcacagacca agcatgctcg tcgtccatcg tctctgccgc cgggcgctat cgatgccttt 1020 cctatccccg caccagccaa acctttgcct acagtgcctg aaccaaacac tcgaattgac 1080 gatgtcaaca agaagacgtt tctgaatcaa cagacaactc agcttattaa tatgagaccg 1140 catattgcag agcttccagg aagtatgcct cctggcatta gtatttcatc tcctagcagt 1200 cctgaggata ataacagtgc ttcgcgtggc cgtgattctc cgtttcccag actcttgggc 1260 tecatggace cagegacaac egattttaca acegaaggac ceceggtace tatecaacet 1320 cggcgcggct cactaggcaa agctggacga agccgcgaag ccaaggtccg ttcgttgata 1380 atgaaagacc tcgctagaag tcgtcatttg aagagcccaa gtaagggtca aatcattgac 1440 ttacagaagg aggaacaagc atcccaacct cgcgagagtg aggattctgg ttcaggagct 1500 caagggcgat atcgaaaagt ggtctctccc gggccttcct cgccgcctcc cacgtctcct 1560 ccaccacaag acccaccgcg acatactctc cagggtcgtc aatactgtac gcctccggca 1620 ggtgcgatgg cggcaaattg agaattatga aaacctatca aactccactg ccagcagaaa 1680 gcaccaatta tatcggaaga atagcgtacg gaacttcgag atgaagccag agaagaaatc 1740 catgaaacaa aaatccccgt gtgaagaaga aacacccctt ccatcctcgg acgatgaagg 1800 gccggtgggg gacttatact ggaacccacc tcgtaagacc accagaagac accgaagagg 1860 gaggccggaa cctatcattg tcgataagcc tgtgccggaa cgagggcgat cggtgaagaa 1920 acacttaact acaaacagca tgagtccagc aacgctacag aactacagca gacgtagtat 1980 tgggaagacc ccccagacgc atctcacttc gcgtgatcac cacacttatg atctccgtag 2040 ccgccactca ccggagtcca agcctaatcc tacacttgaa gggcgtattg agcatcttga 2100 2102 gc

<210> <211> <212> <213>	2914 848 DNA Aspergillus	s nidulans				
<400>	2914					
gttgctgcac	gtagatttag	tttatactca	acttcaagtg	ccgaaaagac	ataccattgc	60
actctccagg	tctcttgtcc	acctcgccgc	ctccgagaca	tcacctacga	gcagactgat	120
cctacccgat	aattcgacca	gcgtaccagg	tgagatttcg	cttcggtcct	gtgcttgatc	180
ttcttctggt	gttctagttg	cgacttcact	atcttgttcc	ttttctgtct	cgcttggtcg	240
acgttgggag	gaggctgtgg	gacactccag	ctgcgccgct	gcacgcgcaa	gacgctcata	300
agaccgtccg	acgaggataa	tacggtcaac	gccctctctg	agaaagcgct	ccgcgattgc	360
gaagccaatt	ccagagctcc	cacctgtaat	catgcatgtt	cggccggtga	gtctgttaga	420
tgggcggaat	gaggtgctgc	cgttgatttc	tggatcatac	gaggtgaaat	gacgggtttg	480
gagaacggct	atcctgaaac	cgggctttgc	acggaaatgg	atatgcgtga	agagggaacg	540
gactggagag	attgtgaccc	cgcgtagggg	gagattggag	atgcaatgca	ttgattggtt	600
tagatagcct	ttggagattg	cttaaggtaa	tggaaatata	gaaaagtgat	gttgtcgtag	660
tagctttgtc	ctcatgcgag	tcatatagcg	cactaatcag	gttaaaattg	gagctaccgc	720
ctaatagtaa	gtgacatacc	tgccaagtga	aagttaacag	ctttcctaca	tttcatcaat	780
agtgtatgtc	atctcgtgag	tcgatcactg	ttatcgcggc	aggcctgcgg	aaagcttaga	840
caggcccg						848
<210> <211> <212> <213>	2915 1295 DNA Aspergillu:	s nidulans				
<400>						60
	agagacaagg					60
	cgcggagacc					120
aaacatgtat	caccccttct	ccgggtttcg	actccgtctt	gggattgata	tagtgacaat	180
tggtcgccaa	tgtcagatta	gcccaagcta	cgtctaaaca	ccttactgga	gttcaggtaa	240
tggcggcgtg	tgatggggcc	gtaattctat	aggtgcattg	catatgcact	atacgtagag	300

ggatgaggga aagcgtagtc atgtcctcat ccaatagtcc tattgaggta cacccgctaa cgacatgatc attctccgca gccaacaggc tggcgctaat ggtcgttgcc tggactcact 480 ttgtttgaac ctgcatacga atactctgta tccaatccag ggttagaggg tccgtgggac ggtgggaagt tggctattac gtgcattact ggttatgtct tgccttccat tgcttatctt actaggctgg aatgattcag tgttttgagg atgaagtacg aatctagacc ttcccagaat 600 660 aacgatactt taaacccata gtatggttgg tttttctgga ccaccaaatt agctctttca 720 tactqtttcc tcatcgatcc gatcttaggc gattgtacag attcagtgtg ccctggcgtt qttaccaccg ttccagttca agtataacac cgtctgcatg ttatcaatag tcctatatac 780 tacctggtac tagcttggcc ccaagacaat accgcaactc tttgcgtatc ctgcataatg qcaattqaqa ccccgatgtc gaaatagcac tgcggttata catactctag gcatgtttgt tccgaggcct gtagatggta atgcgtttgg ctaccaaaag gaattcaaca gcctggtagt ttagcaccgg taagttggcc tgatggctta ggtttgaatt gggtagtgtt cgtcagattt 1020 gagagetege aattgagetg gaegeeaaag cataagetgg tgetttgttt egtagttgtg 1080 agaatttgcg acgttggatt gttctgcttc tgcacgatgc tacagatacg agcagagtta 1140 gcgagtacaa aaggagtgta agactgcacg aaaaacgatg tcattgagag atctacaacc 1200 tatctagcct acagatgatg tagccctccg tccatgcacc tcatcgccac gggatagaaa 1260 gagaagaggt gtttggtaat aggaaggcat gaaat 1295

<210> 2916

<211> 1644

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2916

getttettea eegacaaggg aatgtegeee gegategtag tegeeggeat egtagtggge 60
acegtagtgg tetteetgtt tttggagagg gteagatgag tteagggata eggaggtee 120
agaeggttag ggattaegea eetttgeeea gtaaattteg tagtaggega atggaaaate 180
gteaaagegt eegacagae acaggacatg ettgtetteg tggagaegae geaggtaete 240
geggtgtteg teeagegtge eegtetegtt eeaacettte gegaegeggg ggtegttetg 300

360 ccatcggttg aaccgcttca ggtgctcttc gttctgccag tccacgacca tgagtgagaa 420 qtqtttgtcc aggtgcggga tgtagcgact gtagacgagt gagcccgggg taggctttgc agggcgaacc gggtggcgcg catagatgcg ttcgcgggga aatttcatcg aaaactcgta 480 540 qttctttqqc atqacqqqqt attgactgag agatttgcga gccaggccgt gcgtcccctg 600 qtcqaccatc caqataggcc gcgggccgag tggcgagcca gcgccctgcc agaaagaaga gcgcagcagg atcagggtgt cgatgccgga aggctcgctc tcgttgccga aggggactcg 660 tggagacgga taggggacag ccagtccagt gcggatgcat tcctcgcgga cgatctcatt 720 qccaqcqccc ttcagatcga gacggagaac ctctcgttgc ggatgtgtta ggaagatggc 780 qtqqattacq ttccagattt gtgcgaaaga aggtggttcg gtgccggtcc attggaatgt 840 900 ggttcctggg gctcgctggc tgcgtgccca agggctgtta tcgttgtctg gaatatcttt ggcggattcg tcgaaggcaa tgtctgtgta ggtcaatgca tcgttgtgta gaggctccgc 960 cagcggctct ccaggaacct gggagtcatg gagtcggagt tgaagcactc gtggactgga 1020 atcggagacg atgtggattc tgtagttgta agataaggtg agggagtttc acccaaggat 1080 attgttgttt ggcagccatt ttattgaatt ctgaggggat tggagagatg aggagaaaag 1140 aatgggctgg cgcgcatata tggggagacg gggagcatag agtggagaaa tgtggaagaa 1200 gcgcctggac cagcgaaacg gccgatggcc ggacacacgt gggactacag tactttaata 1260 tgctgcagct gctctctgaa gacttctagg aatccatacc taccttcaga gcgcagtcaa 1320 catgcaacac ccaacagtcc aaggatgtct ggtctcgttt cctaccccag agatcctgct 1380 tctcacactc aacaggcccg agaagcgtaa ttctataccg cttgctataa gcgcagacat 1440 catacggcta tgggaatggt tcgatgcaga gcctacatta cgagccgcaa tcatcactgg 1500 tacaggtgaa teettetget etggageega tettaaaggt attteecece ageateagat 1560 tccatgcagt atctaaacgc accacttcac tagaatggaa cgaactcaat gcccgcggan 1620 1644 ccgtcaataa aatgaccgcc ccgg

<210> 2917 <211> 2368 <212> DNA

<213> Aspergillus nidulans

<400> 2917

tttctgttca atttagtgta tataaattca tcatcacgtt tcaagcttgg ctttgttaga 60 cgggcgggtt ttgattaggg ttcgtttttt gccatatgga tctgtgttag agctcccaaa 120 180 gagtcaactc gctttaaatg cctctgatct tgtatcatgt tctgaagtta cctagtgtgc agcatgcaaa agaactatat acgacgcttt cagcactaaa acatcaacgc tatgtagcat 300 aatgcgtagc acaagttcta atcttgcccg atattgctag tgtgagatgc ttggaaatgg atcccatggc tatagtacct atgctttctc cgcgaacccg tgctcttcta acccctcagc 360 ccccgtatca ggggttgcaa gatcagactg ggactctaca aacttctccg cggcgacgtt 420 tagtcttcca taagctggtg gattacggcg cggttgagcg gggcctgagg tggggatttt 480 540 qtaqccacqq aqtctqtaaa gaccaaatac tgtcagtaca cgtcgttata cacagtggat gattgtgtca agctctggaa gaacgtacct cggcccttga cccgtgatct caggaaactc 600 agccacgtat gtttgctgga atgtgcggac atctgcctcg aatgtaccgc gctcaatgct 660 720 cttacggacg ttagcgaaga agaggtccat agtataatag ttgtgaattt ggagaagggt ccatgcgagc atttccttag cggagaggag gtggtgaatg taggcgcgat gatggctttg 780 acaagcatag caagcgcatg attcacttag tgggccagta tttgtagtat ttgatcgcga 840 900 ccaaaqatca tcaqcqaqaq gaaggggttc ggtggatgga tttgatgctg atgcggtatc tgatggagcc ggaaaggaga aggtgaaagc catccctgca tccgacgaat cggccagaaa cgggatcgtg aggaggtctg caccgagctc aacttcgcgt aggagatcat gcggagttct 1020 tggcccgctg aaaagaaggc gcgggaggtc acccagcgac tcggggacga tagagagcga 1080 cgtgggttcg tagagcgcca ggccagaaat ggatggccgc aagtccgttt ccagatcttc 1140 aaggtaaagc tgctgctggg tgttctcaac gggcaatatc ggggcaaaat acgccgctgt 1200 cgaccgactg tgttcagaga gctggggccc gtagaggtta tccgtcgcat gggtggtaaa 1260 agcgtgcgtc cggtcgacca tcttcactcg ctgttttgta cctggcttct ggcctactag 1320 cagatetgee agecegaeee egatgtetgg getgaggege tgaatagete egaegtaete 1380 gttcgcctct agctgcgcat agcccaccga tgtaagtaca gcaattgacg tgtctgtatt 1440 tgccggtcca gaagcaattg gaggttcgcg gcgtgcgccg aaagccagga gcaggtcatc 1500 ggcggcacaa atgaacttgc gcaaagccga ttcatgaggt gcggttggga catgcaccca 1560 ccggcccagg tagtgaagac tttttatact gcaggtgctg cttctctatg actgatatct 1620 gagccccggc gggcattgac ttgtcagtat gcctcgcttc gcctttcctc aatccagga 1680 cacgtacaat cttctaggcc aatatacaga ctaccaatag aggtattatc gcgcatcaca 1740 tcatgtgcta gatgagggac aacccctcgc gatgtcagag ggatgtagtg gggcgtcaag 1800 atgggctttc ggcctgcgat cgtcagtctt cccagccgcg gggagagcac tgcggctgag 1860 gacctcgaga tgctaaaatt gagcatttca tgtggcgagt gtagtggtgt atctgatccc 1920 atggcgatgc gcagctgaag gagtgagtat gtgcagctga aagaaaatgt caagttgttg 1980 gcagagggctg ttatcgataa gtacttgtt cgcgactcaa attcctccag atcacggtgg taatcaataa cgagacccct atccacggta tcctctgca gcggtgcac tccctggaca 2040 accttaataa cgagacccct atccacggta tcctagattt aagccattac ccgctcgac 2160 agtacgatta ctttcgattg aagtacattc aatcacaat atgagcgtga atggcacgca 2220 tgggggacgc ggggccctga ttgtcgtcga aggcctcgat cgagcaggca aatccagcca 2280 atgcaagttc catcacaaca ttctacaaga aggaggccgt cccgtgaagt acatcaggtt 2340 tccaggtgat acatcttttg ctggaacc 42368

<210> 2918 <211> 1168

<212> DNA

<213> Aspergillus nidulans

<400> 2918

cgaatatatg ttcatgtgta acactctagg ctgccgagta cgcctatata tacattacga 60 aggccaagtt ttttagatca gtagtttttc gttcagatta ttcagtagaa tataatcagt 120 agacgaatac tgtcaagttg tgtcataata acaaaacaag cagccgtcca gtatagcctc 180 gatcgaagga tctgtagatt aggttagttt tccatttttt cgatttttct ttccattccc 240 ttctcttttt caggtggctt tttttatatt ttattttcat attttattt tatattttat 300 ttttatattt tatatttgtg ttcttatttg agtttattat cttttccctt ttttcagaga 360 ggctagctag ggagggcgtc agcggccggt caggagtgga tgtgtccact tttggagcgc 420 acgggtcgat ctggccgcca gtatacccga catttaggta tcagatcacc cagttgcata 480 gagtacaagg gatcaaaaat cgagtccagt gaggctaatt tttttttctt atactcaact 540 gacctatctc tcgtgccggg tgacttatgc tgaaacaagg aggacttggc tcgggttcaa

ggtgaaggat tcaagtttat ggcagaacct tattccaggc ccgataatgg aggtgttcgg 660
taaattaggt aaaaatatta aagcagaggt gagaaatagg agtaaaaagt gacttccaag 720
ccctatgatc ttacactttt ctcttggttg acagactggt ggaggaaaag tttaccgtca 780
cagcccgagg gcccacgaga ctcaggttat cggcaaccct aagtacctgc agatccagcg 840
cggtgataaa catatctgcc tagattgacc tccgcatagc tgatctggca cattgcttat 900
tcaggctaat gcgcgattct gcagcatgaa ctcatgatcg gccaccattg cgtagggtat 960
ccatccaatc gcgctagggc aggtgtttgg ctgaccagac agttctagc caataatgtg 1020
tatgggcagt cggtgctgaa tctggcttca aaggctcttg tgcctgatac cgggttagct 1080
gagagtctgc gtactaaaca gtccgatgcg agggtttgtt atgcagtcga gggagtggaa 1140
gcgaataggc gctcagcacg tcaagcct 1168

<210> 2919 <211> 1078 <212> DNA <213> Aspergillus nidulans

<400> 2919

gatggtggcc gtcctctgtg atcttctttg cataagccgc attagcgatc tatttgttta 60 aaaccatatg tagagtctaa cctgttggtg ttgctggtat caaagttctc tgtaatatgc gagctgaggt cctggacgga gtcctcccag tggtatttgt ctggtatagc tttcgtggcc 180 tcctcattgt tgctatcatt aagcaatatc tcacggcgcg aatgtgcacg gttgacaaag 240 tcggtttcgc tcggagccag ctgacgcgtc ccgggtcgtc tgtcaaggag ttgctgctca 300 agattatctg ggaacaaagt ataaagcaat tcggtgcggg tacgttcggt gttgttcatc 360 gacgcgatga acgcttgagt cttcatctca agaaaaaggg caccttgctg tttgagaagc 420 cgtccacctt cggggacaaa tacgtcgaga aagttatcat tgagctcaga gaagctgatc 480 tcctgagtac caaagatgct ggagacaaac gatgccaggt ttgctttgcg gatgatgtcg 540 acttgcgaag gttcagtgag ctcgagctcc gtgggcgaga ggaacgattt cttggttgaa 600 tagacctttt ttgtgtggtc aaacagtgac cgcatcgtag cgtacgcctg accattctcc 660 gactccggct cagatacgaa ggaggtaata tcttggtacg tggacttggc cagcagcgac 720 780 agaatttgcg tggactgcaa attagcttcc taaccaaaac tctgagcctg aattagagaa

ctcaccagat tatcaagaat gggtaaactc tgaattttta gatgcgaatt ggccttgaca 840 aaaaccatcc ccttgggagc gccctgaccg gacaaatccg gcaactgctg gggacccatg 900 gcgcactgct cctcgacacg ctcggaatga ttcatgatgt tcgagatgac agtagctacg tccgagtcga tattcgtgtt ttgctcttgc acaggacttg ctccgatctc ggtctgacca 1020 1078 ttcttgctat ccgcagtttc caccgaatcg acgacccccg cggcaagggc cgatgcaa 2920 <210> 941 <211> <212> DNA Aspergillus nidulans <213> 2920 <400> catagtttat tttgtttagg atagacagtt ttcctgttgt gtgggagtgc ttcaacactg 60 gtaacatata gatttggact atgatagaca catgatacac ctaatattat ttcgtgcgct tggtcagtct tctgcactgg tagtcaaaac ttgaccggca agcgtcagtg cggagagcca tccgctgccc agagaaaggg caaaggtcta gccctccctg gcctgccagg atgatgtcac aacttcgcgg ggttgggtag tcccaggtaa ctctagctgg tcaggaacag gttctttct 300 ctgcatttcc gtatataatg ccctttccgc ccagttttct aggaatgtgc gaagttaatc 360 acgctgtaca tccgcgcctt cgcaacgaca ctctccattc ctgatcgcgc agcagctgga 420 gaagtcaacg agcgcagctt attcgaaatg tctaacgaga ccttctactt gcttcccttg 480 aacgacgatg gctctccgga cgtgcctggg ggttttatct atcttccccc accagaccat 540 ccaaagtatt cgctccgatt ccttatcgag gggagcagct caatatgcag ggatgggacg 600 ctttggataa atattcctga gattggaaaa tcgtttgatc gtcaatcgtt tcggcctttt 660 aagtgagaga tattttccct ttttgcccac tttctgttga gacgattgtg ccaggttata 720 tccggacttt agcagaaaca ttcagatcga tgtcccagtc acctgtcccg ggtctttcgc 780 atactatgta acctactcgc cactcccgga gtttactatc acatccagcg cgccggtgaa 840 gccagcaagg actccgactc attacattga tgtgtctcca aggctcagtc ttgcgggcga 900

<210> 2921 <211> 4625 <212> DNA

gggtatacca ctcaatgctc tatcaatatt ctcggtgaat t

941

<213> Aspergillus nidulans

<400> 2921

ataattggag acgctttgtg tatggtgacg cgctgccaga ttcatcaaat agctgataca 60 ttccagtaga cgacgtacat acgatttaga gatagaaatg acgtatacaa agatttgatg 180 tggctgggct ggtttctgca gactgattga gccctggctc ctgatggaca ctaaaccgga 240 aaagggaacc aagatgtaca ttcattatct acaccgatag tacgtcttga agcgaagtac tctgtactaa gcgactcatg actaatagac caagaattgt tatgtaaaaa catgccgata 300 tccattaagt agatacacga acagaaatca agaaaggtca agcaaggaaa aggagaatat 360 gtttgagtgc ccgcacaagg agacattacg gaacatcaaa tcatgcagct atcgctcaat 420 cctctcagca cctagaaagc aagaacagcg gcgacaccgg cagcaacagc accgaagctg 480 acgacgttgc ggccagcagc accggtgaac tgaggaggag caggagtgaa agtaggggtc 540 caggcgggag cagaggggt cgggacgagg gtgctggagc cgggggggat gacaggaaca 600 660 qaqqtqqtaq caccqccagt gggctggtcc tcaggacagg tggtggtggt gacgacggtg gtctcggtga tggtggagga aggaacctgg gtgggctcag gagcagtgct ggtaggagcg 720 780 gaggagctgg actcgccctg gccgtagttg gggttgctga taccgaactg ggtggaccac tggtaggcac ccttgttagg gccggactcg acaacgagga gaagaccgta gtgggtgaca tcgggctcga gctcggtgct gggagtccac tcatagtgac cgctgttgcc aatgttctcg gcaatggcat acagaggctg gacgttggtg ctggggccac ggaggagaac cagagagacg gagccctcgg tggtgggatc ccaggtgatg gtgtagggct tgccagcagg gacctgctcc 1020 tggagaccag gagccaggat ggcgttgccg cttgggccga cagagtagtc gggggtggtg 1080 taggcagtag ccatggccac gagggcggag atcagaccgg tggagaagaa acgcattgtg 1140 gtgatgtgtt ttgaattatc gtgaagagat atagagtcgt aagagggcca ggatccgcag 1200 ggatagaaaa agagcgactg gtcttcaaag gagagactgg atgtagggat gtcttgaaag 1260 aatgactgga gggcgcaatg cacgtccgaa ttggatcaat gagggagagg ctgagtagga 1320 aggtgggagc gaggagagaa aagaaagacg aaagaggggg gcgcagggaa acggctcata 1380 ttaacagcac ggagttcagg cacaaggtga caaggtccat ctcgcaagct aagccgacac 1440 gctactctag tgtctctagc gggagtcctg tatttttgct cgttatttcc tgctcaagcc 1500 tgcggctcat gtttgtagtg ggtcggccgc gagattacac gaggaacgag acggtgtcta 1560 attgacgggt cacagacacg agcgagcaat tggatgtaat ggatgtaacg acaacgcggg 1620 atcagtccag agagtctgag atagtctgag atccctgcat tgttcgtgtt aagacaggat 1680 actgttggcg acttggaagc tggaatgtga ttgacagtcc tgggcgacag gttcgcgcgc 1740 aatgaaggag accaagggag gggcaaggag gaggagaagc tgagaggaga agctgagatt 1800 caacgttgac ttgctggacg ctcactgggc cagtccaccg gggaaaccat tttagtgtgt 1860 cgttgggctg gagcacgaga tgaacccttg aacccaggat tggtggagat tcagcctagt 1920 atcagcaggg aaattacaca tttagcatga ctgtgctatt ggggctcagc acaagtcgcg 1980 agaattgcag aaaagttact tttgcccagc ttggctctga ggatctcaga gccagcagag 2040 acttgaaacg ctcgttcgtg gattggtagg cggttgtgtc tgaattaatg tgttattaca 2100 gttgggactt gacagctttc actgttgacc agcatcctct atcgaacaaa aacaagccgg 2160 ctgattctcg ggcgctgacc gcacgattca cgcaatggag actctctatc tggtcctggg 2220 gaacttggcc tgttacaaat tgtcattggc cagtcgaatt atcctcgtat ttatagtaag 2280 cgagttaagc tgaaaggtac catggtacct ggtgatagac tggcccgggc cctgtaagac 2340 acacctacat aggaatcgac catttcttga tgagatcctc gttcgctggc tgaaagcctc 2400 ttttattatt tataaagctg cgctacgaag aatgatccgc aaggggcacg tatcaggata 2460 gagccgatga actcgatgaa ctcgatgaaa tcgataaagt tgatgaagtc atatcatccc 2520 acgttctgaa gagatattta gaagcgatcc ttgagagcat catctcctgt tcctgggcgc 2580 taaatggggc agtggcgcac tgtcggatct taggcccagg tccggaaatt gtctcagaca 2640 attgaaatga ggctaaggct gccgataacc tgattggatc gcctttgaat tgcggaagag 2700 ccgattgatt atgatgaatt gggactgggg ttattcttag catatttgag tcggcgggca 2760 ttcaacctca aagccaggaa gaccagagta aaggccaaaa caggaccaga aattgccagg 2820 catactgcac aaaaaacgtt ttgcaaagaa acgatctgtg taacgctgca ggctctcgct 2940 tacaacgttc atcaagtact ggcggtctag atgtccgttg ggtcgttggt ggaatagagg 3000 cgtttcgctg cgcctgtcct gcgtgggtgc cggctactgc atctagcgat gcgcccagcc 3060 cattccagcg cttctaagtt cgaagaggtt tcctaaactg gacgcgagac cggtccctga 3120 ggctcagatc caaccaatgg ccagcgtggc ggtatgactc agtaatgtgt gcgaagttct 3180 gcagttgggg gcgtgatgtg agatcagaga cgtcggtgtt tgcttttaca ttcagtccta 3240 ttcgggaagg agggtcaccc gccaggctgc cacgataatc tcgtttccct cccacaactt 3300 aagcatcaca acttccacat caattatcct gaaactggat gatctctctc ggcccgtttc 3360 cggtccctct gtcatttaga cgttaatctg actgccgaat gacccgtgcc gttggaaatt 3420 tctcgcaaat tgcgaatttc cgcctgatct tgatgggatc tcgactttca agctaaattg 3480 cgactaaggc caaaaagatc agaaatttaa gcctcttgac cgaacggaag ttctccggga 3540 tacgattctc ttggtcgact aggcaaacgc tagccttgcg tttagctagt taccactgta 3600 acatcagcat ggcttatgac tcgatttgag attcttataa caggtaccgc gcactccgga 3660 gaattgaatg gccccataat cgtgggagag acaaagtggg cctccaaagc tgtccatgat 3720 gccattttgc ataaagtttg attgattgtg gatcgttcag gctgttgtaa ggattcctcg 3780 tececetgaa caggeaagee gageetgeag acaceaaggg egeaggeaga gtgaggtagg 3840 tettgaacae aacttetgtt acegtaecat egetaaceet geageataga taaataatgg 3900 tagactattt tacattttga cgccagtgtg ccgttgtctg cacctatggc acagccagtg 3960 atctcgccca gggttgtcgg gaaattcggc ctgcgattcc ggactgcgga tacaacgtac 4020 agaaggtaat ggagcgctag ctttgagccg aaaatcggag atgccgttat ggataaggaa 4080 agtcgacaag gtcagcctcc aggcccaaaa caggctcacc gggttcgagg taccatgggt 4140 ccacctcaag actaatggaa taggtcacat acacacatgc taactccagt ttgtttatgt 4200 atacgcttgg ggaggatgtt cgttgctggt atcgctcata tatgtattgc ttatatcgtc 4260 aaatcgtcct gaaagcctgg tatccatcat actatgggcc tatacaatac acccgtagtg 4320 agccagccac tactccagtc atcagtgagc ttcgcctttt actccaccca ggtaatggtc 4380 tttgtttgaa gccactcgtc atagccagcg gtgccaccga agcggccgaa tccactgctc 4440 ttccatccac cgtgaggcag agtcggctca tcgtggaccg tcattgagtt gatgtgaaca 4500 gcactggcga ttctagtcag cacattgctc tttggagaaa aatgggtaag aacagacgca 4560 cccagactca atctgcttgg ccaccttaga ccctaaacag attgctcgta acactgccga 4620 4625 tgtga

<210> 2922

<211> 1488 <212> DNA <213> Aspergillus nidulans

<400> 2922

cgacgacgac gaatccgatt ctcctccccg cacatctttc agacgtgccg catcccgttc 60 agaatctcct ccgtcagcag gtctaggtct gggtatgggc tcagggatgg gccgtggtcg 120 cggaagaggc ttaggcatgg gtcaaaactc ccggaataac aatgcgacca agcagtcctc 180 240 cggaaatggc ctcgcggcac actccttcgg tgcccgcatg ctagccaaga tgggttatgt tcaaggccag ggtcttggat cgagcggcca gggtatcgtg aatcccatcg aagctcaggc tcgtccgcag ggtattggtc ttggggcggt ccgcgagaag agcaaggcag cgcgaaccga ggagaaacgc gccgccgcct tacgaggcga atccgtcgaa gagagctcag atgaggaatt 420 tacaagaaag aagaagagc agcaaagaaa ggaaggtggg cgtgcggagg gtgaggcgcg 480 gcctgttgga agaaagaagc ctcagttccg cactgcccgt gaaatcgagg cggatatggc 540 aggtcttgag gtgcccaacg tgctcaagtc cctgatcgat gcgactggca gggaacataa 600 ggtcttgacc tccaccgcag gtctgatgac gccggtcgac tttgtgaata ctgaacaaag 660 cgaggcttac aagattgcac gccgggctcg ccaggatttg gaagctttcg cggatgaatg 720 gaagggtttg acggagagga aacaatacat cgaacaagac gaagctcaat tagtggatca 780 actggataca aatcagcgcc aaatcgacca attatcggca ttggtcgctg cctttggagc 840 tcttgaagtc atccccgaag aaaacggtga tagcccgcaa gcaaaattcg actatgtgac 900 tgaccagttg gagtcgcttg aaattcagta ccgggccgaa attgtgaata taggctctgg gaaacagcgt tgcggccatc caccctctat tccgagaagc catggaggac tgggagccgc 1020 tcaaagcccc gaccttcttg gtggctaacc tacggcgtct ccaacctatt ctatctcgta 1080 aagccagcga agggcaactc gtgcagcgct cgtcgacctc tccttacgaa actatgatct 1140 ataccttatg gctaccacgc gtacgctccg ctttgctcaa cgaatgggac gttttcaatc 1200 cttctccggc caccacgctc atcgtctcat ggaaagaact cctgccccc ttcgtctacg 1260 ccaacgtcct tgaccagcta gtggtcccta agctaacaag cggcctaaac tcttggaaac 1320 caaaacggtc atcttcttca tcccactctc aacagaactc tcgcgtcccc tggtggcttt 1380 tcacatggct ccaatacctc gacgaacgac acacaaaccc gaagcaagca acaggccttc 1440

<210>	2923	
<211>	2813	
<212>	DNA	
<213>	Aspergillus	nidulans

2923

<400>

tgtatcgatc acccaaccct cacttctcta cgcgtggccg ggtgtaagca cattctggaa 60 tctatatacc tgcctaagtg atgcccctgg gcatttgaag cgtttctgtc tctttctcct aaccgggcta tttctgacga catggaatct tcctcgtaag tacccctcct ctccgctggg tagcaagctg agacttgaag atatacgaac tctaaacgac cacccaaatt gcgatcggct tgcaatgaat gtcatgcggc caaggtacgc cctctctata ctgttcgcca ggcgtatctg 360 accgagtcca ggttcgctgc tctggcgaaa agaccggctg ccagcgctgc tcaaacctcc 420 gtctgaaatg cgccttttcc atctcgcgca ttggcaaggt cccaggaaaa cgaagcaaag ccaaccgggc cactgtgaca ggatcaacct cgtcgtctgc gtctctctcg atttcttctt 480 cetetetate gacacegate atgtegeece etetteegat gacgtettae teatatgaca 540 gecegeggge ctatgaagca agaaatgeta tacceattee tgegteecat cegtttacce 600 atgagtacgc ggccggactt tcactggcga acgagacaag ttatgcccag tcctctccaa 660 gctatcttac ccagtcacgc ccggaagaat cgtcgagcct aaacaacctc tgttgggcgc 720 cggagttgga tcagttgggt gggccaggcc ttttgagccc tgaatgggag attgacgcag 780 aagaatettt tetteaagtg eeceeteage egeegaeete tgtaeetaee taegtggatg 840 tcacttccga cggtaggaat gcctcagagg cttatgaatc cccgactgag agcattccac ccagccaata tccactgtac cttcatctcc ttcaaagcat tgaccatagc atgcgtctcg cgaatcagtg cagatctcca gggcagcaca cttctacaca ggatatgatc ctggctgcga 1020 cacagagata cettacaace etectteaga etacegagag cettagettt acacacacet 1080 acagcgagga acaccttctt ttctctgtgg ccctggataa gataatatat ctgctcaaag 1140 tcggctatac agatcttcgg cgtcagtgga agtttcgaga gtatgtgtta aggcgtcgcc 1200 gagccagcca aaggctgggt gcggtacggt gcatttggga tggacgtttt cgagcaagtg 1260 tcttactgtc gcaagctatt cgtggaggag gtgaagcggg caggactctg cctggatagg 1320 ctgatggagg cgatgggata tctggcgatg actggctcta gctcatcgtc gcctggtagg 1380 cacgaaaggc tctgtgaaga gatgaagaga agactcgatg gattgatgga cagtctagag 1440 ggtgatcagg gtgcacaggg ggttcatttg gttggttgac tacatcgttc ctgacttgat 1500 atcagactgg cgtacaaata cttacagctt ccacatattt tacccatccc cgtgctcatt 1560 gcgtattgtg tcgaatagag tacgatgata tctttcacct gccactttca agatctgtaa 1620 ggaacgtgaa ttttgaaccc tagcaatggg tagtcccgat attatccggc atatgctctg 1680 tttctgtgaa acctaaactg aattatctat attcccaaaa gtctcgctgc cattctatct 1740 tatcagtacg acatgcctca cgctggcagc cggtaaagtc cttacagcga cgtacagtgt 1800 tcctgccttt gaagtctacg caccttgata aaatgaacgg cccattatga gcaaagggtt 1860 tatcttgagc ggctacaata gccaaaacga attctatgcg ggttttgatg gtactgcttt 1920 tattcgcagg gtatgtgaag agctgccagg tacggttgca taacacctcg ccatttccaa 1980 aaccatgcgc atactttgca cctagtctaa atggctaggg tcatacaagc ggccgttgga 2040 gaaatgagtc agtctggctc cgaaatgggc aatagagcat cagtagatgc gcggagactg 2100 taggtataaa ttctcctgat actggataag taggtgatta cgcgcttaga aacacaaggg 2160 ttcatccttt ctactagcaa gagaaatatc cttcaaatgg ataaattcgg cattctgagc 2220 agtttattat acqaccaatq tgagttaaaa tctagcccct aggaacattt ataattgcat 2280 gaagatataa cggcgggcag atacaactgc atttagatag gacatccggt acctagtagt 2340 cttgtgaaaa tccccatctc cccatatcaa accaaagtaa atcagtcaga agatagaaca 2400 atgctgttga cagattgatc tgtctcagtg tgatagctgt gttttacagt actctggttc 2460 ggtgttacat actgatggct accagtcttt aatgctaaag gcctccgccc ccaatcactt 2520 agageteett getettgtat aaatatgegt geagggggee attagaetgt atetetacea 2580 actcctatta taatcacgtc tctctgctct tctatggcaa gggagctgcg agaagtcgta 2640 aaatccacgt gtgagaccca cgagttggcg caggctgtaa tcaatatgcc accatatcga 2700 ctgtggaaag ggagtattca gactcagtat atcttgtgct accaactagc ttcaaccaac 2760 ttaataaaga cggggtctga ggcgggtaat actacttatc ctcctcctag ggc 2813

<210> <211>

<212> DNA

2924 1435 <213> Aspergillus nidulans

<400> 2924

ccggtgtgtg cgagttatct aaaaagatca ttggtgattg gcggctaccc cggaaacccg 60 120 gaacaggete aagaatetee atactggtgg acatatgeag gaagattegt caagggeget ccgtaagcgc gcgaagttcg tgtcgagcac gatcaagcat ccggtgttgc gcggaggggt 180 caaggagaga ctcgaaggac agcattccac gctctttaac ctgatcacac agaacgacag 240 300 cctgctcagc acaagtatcg cgcaggattc gcgcgaaatc gccgcggcga gtaagcgcga cagctcgagt atgaaaatca ttgcgttctt gacgaccttc tttctccctg ccacatttgt tgccgtaaat ccaacagcct cccatgggaa aacaatagct gaccagccgc tagacattct 420 tctccatgcc ccttttcgat tgggaaaagc caagtatcaa ccacgttgca acgcgccatt 480 tctgggtctt ctgggcgctt gctggccctc ttacactaac cacgatggct gggattgtgg 540 cctgggcggt ttggcatacg aagaatacaa gaaatacgga gaaaaaggaa agactgaact 600 ttagccaggc gatcgccgac gaggcgatga atttgaagag ggcggctacg atgcggagta 660 tgcaggaagg gggtgtgtat tgggataagc ctgccccaga tgcagtctaa cgtcggccgg 720 gtgtatactt gcatgctgtg tggtttacaa ggcttacgag tccatgacca agatgtagtt 780 tttagatatg tccaataata gacgatatac ccactcaagc tatcttagtc cagcgtgatc 840 ggatgcatct tcctaaacac attcgtggga tcgtacttcg ccttgagcgc tttcaaccgc 900 ggcaggttct ctccgtagat gttgcccacc accgcgtcgc cagctgccag tcagcatcga 960 ttggttagca ctgtcggtcg gtatgttaga gacgaaggga cagactcacg ctctgcataa 1020 ttgatgtact gcggcacacc ggccttccca gccgcatcga gattggcgtc cgtctctttc 1080 tcgagcacgt ccttccaccg ctcctgcacc tccctcgccc acgcccggtg ctccagatcc 1140 ttagtcgcat ccgaccagcg cagcgtgatg ataccgttct gcgttgtgcc gcgcgatgca 1200 aatgccgtcg ctgcccgggg cacagagacg gtcttggtca tgtcgtagaa ttcgagtagc 1260 agegegeteg eggeeagate gggateggat ttgacettag eegtaaacte ttecageate 1320 gtctttgcaa actgcggcga cagtggcggg ttgaagaaga cacctttgaa acttttgcgg 1380 tcgccgtaag tcgccatggg attttgaagc tgttcattgg ctgtacggga acatg 1435

<210> 2925

1326 <211> <212> DNA <213> Aspergillus nidulans <400> 2925 gctcgcgcct gaccactaca atgcatccat ccaattgttg ccgtcgaagg ccactgcaag 60 tccgtactcg aggtaagaat tgctcgaacg tgagtggtta ccgctgaacg ggccaggcat 120 cgaatgtact ttgttatgtc tgctgttggc ccgtggagtc aacggccagc tcaggtattc 180 tcctgccggt gccggcattg gtgagtctgc ccagtcagtt caaggttaag tgggcttaga 240 acacgtataa agagctattc tgatcgtgca ctgcagtgcc ttccacgcgt tcatctcaat 300 ccatctggtc aaccacctac gcaacggtct atcgatgttc ttgagcccat taccgcgcga tectetgtea gtacceggea taggeatgge tacaacaace acaeggeate etttgaccaa 420 gcgcaacctg gcaatactgg atcgtcttct tcagagtgta agctcctatt gcagctgcat 480 cagagtacaa cgaggcccta actgtgaatt tttgcagaaa cacacttccg agacaatcac 540 600 ctcatgggct gaaaaggtca tatccgaaga acagatgcat ctgctttgca cccagccggc tacctccctc gacggcatgc acccacccgc cggagacgat gccaccgatc tcaaagtcga 660 gcgtgacatg gccatgttcg ttcagtcggc acgcagcctc cccactgtgg acactaaaag 720 gactgatgta gactcttcta aggttatcga ggtggagaca tcacgtccgt tcatgtgcct 780 tgagagtccg ctagagcggt acctaacccc cggatctagt gagccgagtc actttagccg 840

caaacaacgc cgttctctat tccaaacctg catgcaataa cttatctgag tagccttgga 1260 ccaaccctta aatactgaca acacaagtat gcctttaagg gttttcgttt ttggccaaac 1320

ttcggctctg gcgcacgtgg ggcttcagta tggggatatg gaggggaaga aagagagac

tgagatggcg cgcggacatg tggaggtagc gagagacaat gctcttcagg cgcgagaaca

agcgggtaaa tagatttgga gttctggttg agtggcttgt acatcaagac gttgcatgtc 1020

agggccgttc tgcagaatat acttaggacc tgtaacatgc cttccagcat catactggct 1080

ctgcgcatac tgcaaaaatg aaagattcag tagtgattat tgcattgatt gggtattatt 1140

agcggagcgc ctaacgcttg ttttaatctt ggcgcggtag acgaatctct cccaaggtga 1200

900

ccatcg 1326

<210> 2926

<211> 2995 <212> DNA <213> Aspergillus nidulans

<400> 2926

gaaaaaaata agagtataaa gaagggagag aagggagatg agaatgatgt gttgagtaga 60 aagattaagg gaaaaggggt ggaaataata agagtatcgg taggtttata aaaggaaaga gaaaaggaga gaaagagtga tgaagtgata aagttataag aaagattgag gattaaaagt 180 gagctgaaga gttagaggtg aagaaaaaaa tgaggtgtgg aagggccggg ttgctaggga 240 ccttgaggct gtagcagtta gcagaaagaa cttggaggtt tttacgaaaa gtctggaaga 300 gacgccgcca acataggttg gtaggttggt acgccgttgg ttatacccta aggcggccaa 360 420 agtgcatgtc caagttctgg ccatgaccgg agttcaacag ggtgtttgaa atcactattg caggataaga cactttaaag ttcgggtaac agcaccaatc attcaagaca tccctgatgc 480 gcctccaaat cattgattaa caggccttcc taatgagtcc tctatgttgt caaaggcgca 540 tcgaatcgct ctacgcagga gtatgatcat atcgactcta accacctaag attgcggccg 600 caagetttgg tecatggtee attagettet gttgeetttt eccaecatag ettgatatgt 660 gtgaatcgaa ggtgagggtc tggcttggtt tccataagca gcccagttta gatcgagtcg atgggcatag catcctaggt tggacaaatc cctcgacccc cgtaatgtgc aggcttgaag taccgggctt cttatttccc tctcgagtct gttcttatgc taattcagcc ctaggtgaat 900 aacaacatgt atgctttagc atactcattt ttatagtcgt ctcatggaaa ctgcttgcac gacactcctg tcagatgaat atagggttga actgagccaa cctgtcaagt actgtgaaac gaattgcgac ttgctgcaat gtccgtatgg aaaatgaggc agcagaagac aatcgcggac 1020 tggttactga aagtgatatg gtcctcttat aagggttcca gccctttccc tagcttcgaa 1080 cctagtggaa caactgcctc ttgggccatg ttaaaatgga aaccgttcag aagggcgcca 1140 gcttttcgta cagagtttta ttcttgtctt cgtgagacgc gtcttatgct cagcgggttg 1200 gctgtaatcc tctgggacat accgcagcgt catttctgct gtttacacaa gcaagtcata 1260 ggactccgta ggtggaatcc aaacagctaa agaaatacaa tttccataaa gccatcgact 1320 cgagaaaagc agacttgctc gacccattcg cgtgatcttt cacgtaaccg ggtaaagcaa 1380 tcatggcttg tgaaaagttc gcgcaatctc gggtacttcc caatattatc cacgaaaagg 1440 ttgggaccaa gcttcccctc tgatggttac cctggagctt gaacacagcc attgacgacc 1500 tgcgaaggct gctcaacatg gccaaacgct cgaacttgcc gtcgctggta gcttttccta 1560 ggtcatacgg gataacacct ccgtgggtct tgccactgac tcaacaccga ccacaacgtc 1620 cccaaatctg atatcggtcc ctatacaaaa ttccaccaca aatgccaacg agaaacctaa 1680 acgatggatc gaaagctgga cagcgacgcg atgcgctatt cttcgctcga catagggctt 1740 ttcgatcctc gcgagagtat aggcatcagg attgtttggt ttagcttgac tggtgagttc 1800 tcgtgtatct ccatcattcg ccgcagccat cttcagtgga agtgcacaaa tccaacagac 1860 catgtattcc tcgtagcgca ggctcgttgt cgtcaataag actatatgct cgtccctgat 1920 ctcactacgt cgtattcgct cattgtccac acagtcgttt tattgtcaat atagaccgtt 1980 cagagetggg tgtgaaagag egacagtgag ggaaaaatag gettegagge tgegeecaat 2040 ttagctatcg agtctcgtta gtcaccaatt tgcaccgggc tgtccaagta cctctccata 2100 ttatctcagt acatgcagag taattagtag agacgccaga ttaaggtata ctaatgctta 2160 cgatcggggt gaatcctgag gccgcagtct gcagatctcg ccgagagggc agtgtgccca 2220 cctgagcagc tacgtcgctg gccttgatgg agctccacta ctacgtctaa ttcaaaatac 2280 aatccgcata tgcccctgcg atggttccag ctgctcaaga aaagtctttg aaatcgtaag 2340 gatctaaaat aacagctacg ctaatggttt gtttcattat tttccctatc caatcccaac 2400 gccaggcacc cgcgcaaatt cgaattaaac ggtcttgaaa gctaaatacg gagaatcgga 2460 agaatgtcga agtgaagaag ggggtcgaaa tggcctcgaa tggaggggta tctcaagaaa 2520 aaaaaaagaa gtcgcttcat ccaagtcgca tgcctttata aaactccgcc gggaaggttg 2580 atctgcgctt gtcgcggctc aaagccagca ctgttcggcg ctgagccccc gctgggtgga 2640 tatgcagtgg tactttcagg cgcctgttgt tgtttccgca gcataaacat cggctttcgc 2700 ccttcctttt ctagctgctt aaagagaata agcggccgtt cttctagccc gagacaacgt 2760 tcctgatcgc catacacaat gtaaagagcg tactgcttcc aataccggtg atgtaaactt 2820 tttaagaccg tcgggaggcc cctgagcatg gacatcaccg gaacccaaag gattgaaaat 2880 tccaccctgc agttcacccc ccgtttaact caaccccgag ggaatttcac cccgggttaa 2940 aaaagggggt caacgccagc gggactgaat gggttgctca tagtccggat tggca 2995

<210> 2927

<211> 1508 <212> DNA

<213> Aspergillus nidulans

<400> 2927

gcacctggaa tccgcgagat aagcgcgcac ggtactcgtt gtaatcttca tatttataat 60 aatcaaaacg caatgtgttg aaatttgcaa tgaaagacga aagtgctagg gtgcagatgg gggccgctga tcacaatcag tagactaaac tagctgaccg gccctgtctg actagcgatg 180 tagcctcgcc ccaaacctaa actctgaata tgttttggcc acagccatca tgttcaaata 240 tcaaaacgct ttaagagatg acgtgaatcc agccttctat cccgatctaa tgcagtcatt 300 atcatgagtg tcgtagcagt gtacacctga ccatcatgcc ccgttctcac ttagcaacgg 360 cgccggcaga gcagggggag gaggaagatg atcatgagcg tagtctggcg gaggagcata 420 tggatcgaac gacgttctca tcagcccaac gccctccttc aggtatagca ccaaccgata 480 agccgaattc ccgttcagat agtaccgatg cagacgctta ctgcgcagga atccaagccg 540 600 ttcataaagc ttcattgcag ccgtattcgt gatctcggtt tcgagggcga tctatcgaac ccqtcattaq aatcaatccq tgaatttttg aacaggataa accgcaatta agccagaaat 660 aagcaagaca agcagaatcg atacacacct cgtccgcacc acgcttctcc attgcgtcaa 720 ttgccatcct cacaagtttg gtcgcaaccc ccttcccgcg atattcttct tgcacagcca 780 acatagcgat ataaccgcgc atcggtccgt gtctgtgcgg ctcgagcttc gagaccacga cgccaatcat ttgttcctcg ccggttgttg agtttgtgtc cattgccagg aagcagaggt 900 cgccccattg gtaaaggaag tagcggtata cgtagatgct ataaggctcc gagagatctt tggaaattag ttggcgcatg gcggcgacgt aggcatcttc gtgagcaggg ttgtagcgga 1020 tgtagcgaat tgaggaagga tcatcgaacg gtcggtgtgt cgttgaggcc attttttat 1080 gtagagggag gtagtgggga tgaagggcgt gtattcgcat tcattgcatg agtgcctgag 1140 acttgaatac tgtcagccgc gtagacctga cgggacatgc agtctcggcc ctttactaac 1200 gctagggcct tccccataca gcggccattc ccatgtaaga tataggttaa aaaccttttg 1260 taaagcggaa actgggtggc cttagtagcc acatggaatt atccatggtg gttacttggc 1320 atttgtgaca atatgccgtc ccatttcccc tgacaaccgt gtcagttttt cgttaagaat 1380 ccttttttct attcctaaaa agagtgggcc ccttggttca acgcctttta aatattttt 1440

cccccttgg	gccccgctta	ttccgttttc	cccctttcct	taaacattgc	aatgtcaatt	1500
tttttggg						1508
<210> <211> <212> <213>	2928 1696 DNA Aspergillus	s nidulans				
<400>	2928					
ggc ga taata	cgactcacta	tagcggatct	cttgaagcta	ctgttcagta	gtcttttttg	60
tgttttttgt	gttttttccc	ctgttgactg	tcctttgttt	actctggaat	ctggatatat	120
atatttggac	accgaatcgc	agcaaccata	aaagatacca	aggaactgct	cccgctttcc	180
cgtagtccag	gcacaaaata	tatagaagga	tatatacgtg	aaaaaatcta	tgaaaatata	240
ttcaaggaat	catggaatat	aataatgtag	actgaattaa	tcaataaaat	ttttttatat	300
tgcaccttcg	tcagattgtt	ccgtattccc	taccctgtac	atagagaacc	ggtgtgctgg	360
gaaagtctgg	gctagaccga	gcggaatgca	aggcttgaat	ccgacgccaa	gactgaaaat	420
caaccagcac	gcgagcttgc	aagcagatca	tgctgttgag	gcctttcttc	aaggttgctt	480
ttcaccgcct	gctgaatcta	gtcaaagcca	tgtgattggt	cgggtaagct	tgcctgaatc	540
caagttgcaa	aattggacct	caacctttgt	ccacgatcca	cgcttttccc	actccgtctg	600
agacgtggtc	tgaccttttc	cgacctcgga	gcctggaaga	cggtttggaa	gccattttga	660
aaacgaagtg	gaaagtctca	gcagactgtc	gaatgtagtt	ttgaaaatta	agaactgggt	720
agtaattgtg	tagtgaagtt	ctatgtgtat	tacgagacgg	acggtgaaag	ctgcgttgag	780
cacccaaaag	accggcaagc	tatgacgcat	caccttttaa	tagaagcttg	actggcccta	840
aaagccctca	tcagaggcaa	aattatgtaa	tttcgttcac	aacagggccc	agaaatcgga	900
gaagagtttt	ccacacgcgg	ccaaactcac	cagagtcggt	gaattgaccg	tccaattgga	960
gagctccgtc	cgcccgcatc	ctcaaatttt	ttattctgcc	attccagcat	ttctcgctcg	1020
tctgagtccc	cctctcttct	tcctatattc	ctccccgtgc	tgaagcagca	aacaaaaccc	1080
ccctctctt	gtcctccatt	gtcgctcaag	gagagttttg	gaggctgctg	atgctacggt	1140
agagtgagta	cctaccgaac	tgtcctcgag	aggaccaatt	ttcccctcat	aacccccacc	1200
gcacacgact	atcgagaata	tgcctgagac	cgtcggccac	gaggagccgg	ctcttccttc	1260

gageceteag getggaggag cegttgeeta caacgegate ageaaggaat tgeaaceget 1320 teececaacg gagactgeea atggeggeat tatteeteet geatetteaa ggategaggg 1380 tageacaggg egactgtgtg egetegaget tgaggatggt acagtetaee agggetaeaa 1440 etttggtget gagaagagtg tggeaggaga actggttte cagaceggta tggtgggata 1500 eecaagagtee ateacggate eeteetaeeg eggeeagate ettgttatea eetteetet 1560 gteggeaact atggggteee etegggag aceatggatg agetgetgaa gaeattaeee 1620 gageaacttg agtegaceeg gattaacatt geagttttgt eggtggacat atgeeggaga 1680 gaaceactet eaette

<210>	2929
<211>	1604
<212>	DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2929

ctcgtccgct gaccactctg atgtgcccca gtaaaaggcc cagccctttt caatcacgaa 60 attgaacgct ctcactgtct cttccattgg tgtgagtcta tctgggcggt gggcataaat 120 180 gatgtcaacg tattccagct gcagccgctc gagcgacgct ttggtgccct caatgatatg tttgcgagag agaccatgat tgttgataag gatctcccca tttgccagtc cccaattgag 240 ctgacgacgt gttatcgcgt tattttacag gccagcttct acggtgactt ctgaactcac 300 360 tttggtgctg atgacaatgt cgcttcgttt ccacccatat ttcttgattg cctgccccat cacaatctcg gattggccat tagcgtagct ttgtgcgtca gtctttgtat gtttacagtt 420 cccggccagt ggctggccta cctttctgcc gtgtcgaaaa agttgatacc gcagtcgtac 480 540 gcctgcttca tgcatttgaa agcaacctct gcatggcata agtcagcctt ctcccctgct tcactgcgaa caatttaaaa cagtaccgtt gtcgacgtgt cctccgaagc tgtgcgaaga 600 agatgtcaga gcccagacct ggataagagt gtcgggaaaa ctcacgttaa ccaaccaccc 660 agtcccagcg cagagacatg caatcccgag ttgcctacgc ggcggtatat catgtccttg 720 ttcttgttgg gccacgccat attgatcggg aattaagagc acaacggttg gaaaataatg 780 agggtttaat gcggttttac gtgggcacac accttcattt aaaagggccg tccctcactt 840 caatnonnot tggcaattga cgagcotcgg cgaaatactc ggagggtcga aacggtctcc

accgaggctgt ggccctggtc gctctggagt tgttctacgg agccgcact gcgcccaacc 960
accgcgggag acagtcgcaa ggtgaggcag cgacctccat ctacaccacc cagaccagca 1020
tcgatatata caaaaagtgg accctgtgat ggcgtgttga gtggggtgaa agacgccatc 1080
gctgcttcag ttcaagatga accgaacgcc caatcaccgt cgagtcatgc actgatcgct 1140
gccggcggga cgtttgaggg ggcgagtgtc tccaacctcc gcaaactctc caatcaacc 1200
gtcttgacga gttgctttt tcggttccgg caaagcgatg aatccgtca gggggcggt 1260
tacaaaaaaag gcttgcgatg gctgcaaagt tcggaaagtt cgctgtggtg gagggaatac 1320
cgtgtacgcc ctgcctgaat gcgccatcc agtgcaccta caagcgcatg caccagaccc 1380
gaggtcctca gagactgcgc gccgcacca acgatgagac tcagaaggt aatcttctac 1500
ggccagctgt atctgacgc ttactaaggc agatgcagtg taccgctgag tgcgatggng 1560
ccgtgcttat attgacatgt ccgatgtacc cgttgggcg atgc 1604

<210> 2930 <211> 6917 <212> DNA

<213> Aspergillus nidulans

<400> 2930

gaccagcgag gaagagaagg gcgaatcgaa cgtcgcggaa aaggttcctg tatagtggct 60 ttgttcagcc atcacagatg gacaaaggga ctgagaggac taggtaccat tccacaaaag 120 cggatttggg aattggcgcg cgctctttta ttaagagcgc tgctgggatg cccgttgcta gggttatcag ccccagagct ctgaatgtcc atgcgaggct ggtgccttgg atgagagcgt 240 ccacaatgaa actgatgact gcgccgccga gcccgccggc cgcgtagacg atgccgttgg 300 360 cqattccgcg cttagctctg aagtactgcg ctggtgtgac tgagacgacc tatatgaaag cgtatggtgg tcagaaccac aggaaatccc ctcgtttcag tcgagagtgc ctcaccataa 420 aacatagact acaataatca gcaaaccagt actactctct taatggctat gagattcata 480 cctgatccca actcccataa ccgcccccgc ggtaacaaac aatcctccaa tactcctgag 540 cgcgaacccg ctcagaatct ccccaacacc aaggaacaca atcccgagca cgccgcagac 600 ccgcgttcca aacttgcgaa tcagcgtcgc attcaagatt cccaggaacg agatgcaagc 660 cacagegaac gageegacaa atgegagagt tgaegeagae gagaeteegt egtteaegag tgctgcttgc agaatgcccc aactgtagga tgtcccggtg aaccaccatg tcaacactgc gcagccggat actgccaccc atccatagcc gccgtctggg agctgcgagt caacttcggc 840 900 agatgcttgc atcatgcttg tatcgtgggc ggagagcggg gaagggtctg ctcgatgcag gcgttctcca gtgccagtcg tcgaggacaa ctccacagat gtggtcgagg actggacggg tatcgccatg attgtgatgt tctgcccgta gcaggctgag ggaatgatgt tgatgagtat 1020 gagaagcagt gaggtgggag tgttgaacct caccagcctt tatcgttcca tttccgggtg 1080 tggggctcgt ccgtcacagg gcgtgttgct tagtgagaaa gttgatctga ttcttttctc 1140 agtttccggt aataacaaga tgtggataca tatagaagat gtggtggacc tttaggctta 1200 aacaagttaa gtcttgacaa gagtgtcacg ctagctgctt ttcgttgtca attagtatat 1260 ttactctcca gggtcgtagc cctaacaagg ctcagatcta ctgtatgctc ctacagtcaa 1320 ccgaccacgt ataatcaata gtccagagac aacagcgcaa atttgatact acacgaggcg 1380 cgggcagctt atcgtccagc cttgggattg tttccgtata agactcatac tttcatgaga 1440 taggettage tagggaetet egeetgaage ateaetgeaa egagetteag etttataget 1500 atttacttat ttccccgtag ttccgatgat atatggcctt tacttaccgt aatcctggtg 1560 gagatgaccc ctggattccg ctagaatagg caaagccgag gacactagag gcaacgattt 1620 cagaggccaa ttctggatgc tgagtgcttt ggcatgagct gtcgagcgtc cagacatcta 1680 gcccgcgaca tggtccgtat cgtgtatgtt tgccagaatt taggttttgc atacggcagt 1740 cccggtggtg tctggatttt ggagtcaaag gcgatcggat tctttagtga ttcacaaact 1800 ctttccttcc tttcttttt tcagattcat atcgacggct tctgctgagt tgagctgtac 1860 ttttcaattg aacgcacagg agcagatcag ctttctcgtc gtcctgcgac accgctgcga 1920 ggcattacga ctgacggcca tttcaatgaa actcacacat tctgcaacgg gcattcgcgg 1980 tttccttcct tccacaaaga tcactattgt tatcttcaat caagatgcgg ccataagtgg 2040 caatcactcg tctttgtagc ctggctcgtc agcaaagaaa gggttcgtgc tctggacctt 2100 gacatcgaaa acgaaagtaa tgtcatcgcc atcatagcaa catgcacaac tgaatgatac 2160 tggttgaaac tagcgtcgat aaaaaatgcc gctagtacag tagcatatga aatgatgagc 2220 caataccacg gcaacgaaac aggacagatt ccaggaaagg ttcccgagtc gtggtgggaa 2280 ggtgcagcga tgttcatgac gctgatccaa tactggtact ggactggagg taccgtctat 2340 agcgacgtca cgagagaagg catgctctgg caaaaaggca gagatgattt ttttttcccc 2400 agctacttct ttggcaataa cgaccagata ttttggggcc agctgctatg acagctgcag 2460 agctgaactt tgctgagaag gaagaccagc ctttgtggct ttcacttgcc cagggtgtct 2520 ttgacgcgca ggtttcgagg tgggatgaga ctcgctgcgg tggtgggatg cggtggcaga 2580 tttggccgtt ccagggtggg tatatcacga aaaatgccat ctcgaatggc ggattgttcc 2640 agetegeege gagactggge egetatactg aaaatgaaac gtacattegg tgggeggaga 2700 agatatggga ctggagtgcc acgacgcccc tgctcaagtc ggataactgg actattgctg 2760 acacgacaag tatggaaaat gattgtcagg accatggcga ccagcagtgg acatataatt 2820 atggcactta tagcgctggg gctgcgtaca tgtacaacct cgtaagtgcc ttcatatcca 2880 ggtgagcgaa acgactgaca ttgtggaaga ccaatggtgc ccagaaatgg agagctgcaa 2940 tcgacggctt actcgcaaca acatgcaaca acatggagaa catttatcgc cgaagatgcc 3000 atgtctgagg tctggtgcga gcaaaccatg tcctgtgacc gcaacagaga catgttcaag 3060 ggcttccttt catcctggct gacatttact gccaccattg ccccatacac cgctagtgac 3120 atcatcccca aaatccatcg atccgccatt ggagcagcta gacaatgcct aggcgggcga 3180 agctgtggac gtcaatggaa cgagggcgac tgggacggta gcgcaacgat ggaatccgac 3240 acgagcgccc taagtgtcta ttcctcatct atggtggcct tttaaggacg gagcgcaggc 3300 cttgacccac gcaacggacg ctaccagtag aagctactcg gactctggca gaaggaatgg 3360 taagataccg ttcactaagc gtcctgtcgc ggctcgagat agactaagcg caacgtttgc 3420 gacaattcta ttccttgctg cgtggtttag agggcttggc tgggtgctcg atgggaatga 3480 gcaggtagag tagttgtaat cgagtttcct gttctatggt ctaagcagcg ttcattttca 3540 cgtcttttcg tctgctttgc ctgttcgttt ggcgtttgac tgttgagcat ggtgttcgtt 3600 agctctatcc agagttggtg aatttctggc gcattccggt acattcgagg atttccctgc 3660 gagatctatc aatatctgat agacggaata atgtaacgaa gctgagttga tgtcaatggt 3720 ttctggtcag tcggtctggg attgttgtaa ttgtaaagaa tagtgtcggc ggtgaaaagc 3780 aaacgagcgc gtcttcatcg gctcgggtcc gttccgcgct gagattcctc aacactgaca 3840 ctaacagtgg cactgacact gtcgggctca gtcacagtgg tgacagcaac agcgagctgc 3900

gaggccatta teceteteag teageceatt caatttetea eeagecette etettegeag 3960 tgttactcca gtgtttctcc ggtgttgcct cccctcacca cttttcctct ctcctccgca 4020 cctcccagct ccaacaccag aactgtttca cgaccttcca cgatttgatt atgttcctaa 4080 attettgaat caggegaage gattaactge tagacataca accetagget ttegacatgg 4140 ttttcctccg cctcaccgtc aaggtctacc ctcgagagca aacccagccc tccaactcct 4200 tctctttccg ctcgttgttg ggtgatcgtg aacgcgacga tgacagtcgc aattcttcca 4260 gcacggcgac tgcgaagccg gctagctttc tgattgtgtt ggagaatccc gaagacgtta 4320 cgctgggcgg actggcaggc atgatcagag cgaaatggag gaaattgagg cctggtgctg 4380 agtgagtgtt actcttaatt gcacaatttc gcttgtcctg gtgattattg cagtcgctaa 4440 ttggttgctc gtaccagacc tctctcgatc aagaaactgc tagacgatga ccatgaagct 4500 gacgaccttg ataccgatat gactgtcgcc gatgtgtttg ttgataaggg gaaagcgcgc 4560 tctgacggac atgaccaacg gaggactgtt cgcgtcattc agaagccggc cggaggcgga 4620 gagtcgcctg tgcgattccc ctcggttgct caagactggg atgcggcggc cgagcactac 4680 gaaattctgc gtcagaagaa acaaaagcag gaagccgaat ctgccgtcaa aaaacttgga 4740 gctattacgg aagagtccgg ccaaggcttt ggatcagcgt cgccctttgg agcaggtgat 4800 tgggctgatt atacaccaaa tcgggtccat cgcagagata ttcccgtctc ctcagtggaa 4860 aaggatgtcg agatccccgg ctcgccatta cagtcatccc agccgatagc caagtcgcta 4920 actcgaggaa tgtctcaaga tctcaatggt gaggggttga gtgcggcgca aggccaccgt 4980 gcgggaagtg aagagctcgg ggattcccct ctatctcctc gcgcgacaac gccaaggaag 5040 cggtctaccc ccagacgtgc ctcagtacat agccaggcgt ctgctgatcg atctgatgcc 5100 ggggattetg tegeegttga tteaceegee etecaattaa eeegtgaaca tgeeeacteg 5160 gtgtcaccgc agaaaagacc tgctctagag gcgaccaaac ctgatgctgt tactttagct 5220 gcagaaacag aaagtgaatc tgattctgaa tccgatagcg atgacggttc ggagactagt 5280 gatagtgaca gggcaagtca ggacaaagat ggcgatactg caatgcgcga agctactcca 5340 aaacagaaac cagagtetee cataactgee aagaageetg atgaggeaac cacaegtgeg 5400 cctgctgtaa ccggaagtca acctcgtaaa cggaagaaca gtgccgatca gttgtcccct 5460 aagaaagagc cacgcttgga taggactact actactcctc cagagaatag tgaaaggcga 5520

ggcagcgaac actctgcaga cagaccgcag ttcaggccgt cgggaagact acttgtgagg 5580 aacaacagtt tttactggaa tcggcgcgcc gcctcacctt tacagatcga acatcagagc 5640 ctcctagcca ggggctggga ctcggcatca cgaagagccc gagcaagaag ccatctgccg 5700 ctaccaacct ctctcaggag tcgacacagt ctactggagg tgtcccacaa agcacgccga 5760 taccaacgag cagcgcaccc accgtcagaa ggggatctgt ctcgcgaaac gtctcaacac 5820 cgacagatct ccatacaccg gttgataagg cgaagaacct acattcagca ctacgaaagg 5880 acteceteae aageteegee egeegetetg tttetttege tgaaagegat gattttettg 5940 tegeggatte geaaceegea ceaacateea eccetateat aaceacaaag ecctetacea 6000 gcacaccggc gtctcagact cctagctcgg agaagagacg ctctagcgtc tcaatggtct 6060 ttcctcctgg agtttctatg gaacgcattg ctcaatatga acgggaagcc gaggagaaag 6120 tcgagcgtca gaagaaggaa agagcggttt ttgaagaaaa gatcaaggcc gctgagaagg 6180 acaatgcaaa ctcggagtac ttaaagaaac ttaaggccgc gtttaatacc tggcagtctc 6240. ttgtcagcag ccgtagcagc caaaggaagg gcatcgcaga gcgactcgag agactacaag 6300 ccgagctgaa gaagatggaa gaatcttcaa ccaatgtgtc atctcagggt aaaggaaaga 6360 aatctcagga gtcgaagcct gccagatctc agcaggcctc aaagaatgat actccagcgt 6420 caaagacatt gacttcgacg cccgtcacca acggggacag taaaatgtca gtaacacata 6480 gctccggttg gaacgcgatt aacaataaat ctccttcaag cgatcagaag tccgttaccc 6540 agaccattaa cggaaccaat cccaagtctg ctactagggc tgcgcccaag gaacccgtcg 6600 cgcgcaccga ggcaaccaga acgctgtcaa aagcatctca gcctccttcg acacaatcac 6660 gaaactccac cgcctcagaa gagctcgact tgcctgcatg aaagttcaag cccgcgctac 6720 tgccaatgct acaaaaaagg cggccccca aagccagttg aggtatcaac ctcgtctgag 6780 agacgtcgca gaagaagctc tctgaagatc ttcgctttga tctgagtctg atctgcttga 6840 ggcgaagcag acaatatccc gttctctgta acactactgc tagcgtacaa accaatcaca 6900 6917 ccctcgccac gacttaa

<210> 2931 <211> 645

<212> DNA

<213> Aspergillus nidulans

60	ggggaaatgt	agagatatct	gagtcggcat	atttggggag	aagagatagc	acccagaacc
120	atagatatag	attccgaatg	cagacaaagg	gtcctcttat	gatacgtgac	aataggcatt
180	tccacaacta	caaacctatc	atttcgtggg	ggaactgccg	taaagcaaca	acaagcctta
240	gcggaaattg	caaaatcagc	gccatcatgt	aaaattccta	cccattttcc	tccttatgtc
300	caatgcatac	gaacggtgca	ccacagaccg	gctggagacc	cgctgaggag	agcgtggact
360	actctccatc	tattcatgtc	gctacgatcc	ccggggtctt	tgcctagaaa	agtagcgtgc
420	agggggtcaa	cggtctatgg	ctgatgaacg	cggcagtgcc	catacggaac	gccgctgtcc
480	cgccgtctcc	atggctgtat	tgtattctgg	gctcgttgtc	ttgtcgggct	ttgtccatgt
540	gtcttattgc	tatatcactg	tcttcgggcg	gtacccatcg	tcgcatcacg	ttggccgagc
600	atatggctga	cacgggttgg	tctccttcat	atccgcttcc	gccgcaagag	ctggcaaagg
645		gcatc	acttcgcgtc	ttgtcggtca	gactattacc	tcggacactg

<210>	2932	
<211>	1772	
<212>	DNA	
<213>	Aspergillus	nidulans

2931

<400>

<400> 2932

ttgagaaaag agaaaggata aaaaaaaata aagatagaaa tgacaaaata caatgacgta 60 agacagaaaa aaataaagaa agttgtataa agcaaaatta taagatcacg agtatattaa 180 tgaattaaca tgaatgatga atacaattaa tagaagaaca agaaatagta atgatgtctg acaaagaaag aaattaaacg agaacaataa gaaaatgaaa cacagaaaag atagatagat 240 300 aagaagaagg gtctgaaaat atattttaag gaaaatgaaa agataaagtg ataatagata 360 taaaaaaata aatagaagag agtggaaagt caataaaata aataggtgta atattgccac agcaacagtc acattgtaaa aatatgagct ggtcaaaata acatctacgt aggactacaa 420 480 tgctttgttg gattctatcg agtgtaagca gaaggcttac atggaactcg ctacagtata 540 tgcttagaag aagctttaga acctaaatgc tagggcttgg ttgagatacc gcaactaatt ttcaggaaag gcccgaagtt cctccatgcg gagccagcaa ttggcatcat ccatgatccg 600 660 agggtgggca gtgggcactc actactgggt ttaattggga ctgggccact gcgagtcttg

ggactggcgc agacttgcag tggtgccgca catcaagcgc tcccctcagc acccgaggcc gatctccctt catccctctt gttgagcagc tgacatttct ttccaacact gactacgatc 780 acgatcgact ggccttattc tatttgcttg cgttctactg ttgccatttg tcgctgctat 840 agcctccatg ctgagcccag acttctgact ccgtcgtcaa acaaccgcct gcggtccgac gtttcacgcg atacttgaac catcgtagct atgacctagc cgcactactg gacctgcctt 960 ggacgtcgaa ctctcacctg cgaacttgga ataacttgtg cacggcccgt cctctactgc 1020 tgccagactc aatccggcct cggtagtcta ctcagcctta gaagcctagc agacctcaac 1080 cacctacgtt gagaatcaat caaggctgtg attcaactga cgcgcctcca aatggtgacg 1140 ctcaattgga gtgtaatgcc ctttgccaac gtttccctcg cgtctgaaca gtcagcgata 1200 actttaaatt ggtgctgcta gcccacgatg cgcctcgcat aatcctacct gctccttggt 1260 tgtgagtacc ttcagccttc gttttccccc tcgttgctac ctgttaagag cgcatttgtt 1320 tcactcggcc tctatcacac tactgaccgg cgcgtatgca attgctggca tcgtttcgct 1380 gtagtgcttg agatetettg agegttaeae cageeageee geaettatee geeteeatea 1440 acccacctca gatctttgct atagccgccg ctgacatcgc gccccaacgg ccttaggcac 1500 tctatacgtt gtatttctat caaatcttcg catctttgag atccgacaca tcgacctttt 1560 gagtcgactg gagacacata tatcacgttt gcctcgaaat aaccgacagc tccatcgtcc 1620 ttgtcgatta ttgggctctt agcacctgcc ccagaaacaa gaaactctgc cagtccggcg 1680 gccccttgtt ttgtctctac ctcgcaaaat ctagacaagg agaagctcca gctttaaggc 1740 1772 gcaaaacaag tatcttccag tttcagattg aa

<210> 2933 <211> 1979 <212> DNA

<213> Aspergillus nidulans

<400> 2933

cgggtgcaat gcaggggtac gtcgattgaa gctttggcgc gtgttgttta cctgatctgc 60

ttcccttttg ggaccacttc ttggcctcgc tccctgttgc ccttatctct tttgcgtttg 120

cataatctcc catgttctct ttcttattaa ttatgcattt acttatttcg acctacaaaa 180

gccctcgacc ctgttgtcga agaatctccc cttaaacaac cccaccaaac gggcgatcgc 240

cacgccaaag cggctactcc agatcccgat gtcgcggaca ttacgggaac cacttttgta caagagccgg agacagactt tgaagcggga attctgcttg acgcgcttcg tgacattgag 360 caaaacggaa acgatgtgct ggagctcctt attcctagca agggcagatt ggtggacgcc 420 480 gtgaaaaaag ccaaccagct cagtgacccc aggaacactc aaagcaagcg cctgctccgg ttactcaaga ttctcgatga agatatcaaa atctttggta gccataccta tatcgacgtt 540 600 gatggcgtcg ttcgtaaggt ctcttctgca cttgccgata ggcgtgagga cttggaggac tggagtccgg ccccgatttt gcaaatggca aactgtgcac ggttcgcatg cgagatactt 660 720 ctagcaggca caaatccaaa ctcacagagg caagcaatca ggaacatcca aaaacttttt cctcggccgt ttatgacggg cctagctggc gctggagagg agaaagaggc cggtgagagt 780 gttctagaaa aagagacttt gaatcttgct ttagagattc gcacccagtc tttgatctca caattggagg ataaccagga tagccccggt tccgattcca agaatttcgt cagactctgc tttttcacgg attcgtcgcg aaaatcgcca ttgcgcggtt tcaatctgcc aaacttaagc aatgctgatg gcactcttcc cgcacagtat accgatgacg ttcagaaccg ctacgaggaa 1020 atcctcctgg gcgaaatgga tggagtattc gatgtaaatg agttgagaag ctcttataat 1080 tggcagcgat tcgttctgca cgcagcgcat tgggtccgca aaaggacaga tgaactacat 1140 gtcgaggtga agaagcggat aagcacacag gctgttcgct acacgttatc taacgccaag 1200 gcctccagct tcggcagcac attgggagct tcagaggcag aacccagtgg tgagcttcaa 1260 gaagctggag gagataccac gagacaggat gctgttgcag atggattccc tgcaggacta 1320 gagccgcaga cgcaaccgca accacagcaa gctgagtctc gggatgtcca tagggataca 1380 gageggagge getettegag acegtaegtt accetecaaa getgagteea ttgtttetaa 1440 caatcttgca gttcattctt gaattctgct tcaatccaac gcattacaca aagacaagag 1500 cgcctccgat ctggaaccga aacatctgag cgtcgccaac aacctgatac tgtccagcca 1560 ggaaccccga cagggaacga actgcctgct gttgatcgtc agataccctc aaaccgctcg 1620 tctcaacata ctttgtttca tgagcgcgtc ccgtctcttg atgatggtcc cacgctggtt 1680 actgaagaac ctgagctaaa ttttggcgaa gattcggagt ttgccaacgt agacgagagc 1740 acccatatag agagateteg cagecettet gttgccceta gaaggacage geettggega 1800 ccggagccta cttccagcgc tcagacgaca gacagcttga tgccaactca gagtcagatg 1860 gtatgggagg ctgtcaagga tggtttatct agacacgccg gtttcgagcc cacgccgcag 1920 tgttacaaaa cgattcataa ccgccaacca gatgccgcgc gggtatgccg atcctacat 1979 <210> 2934 820 <211> DNA <212> Aspergillus nidulans <213> <400> 2934 tgacttgtat atcgcagggc catttgcccg acatgtactc cgatggattt tttactcaag 60 tttgtgtcca tgctaccttc gaattggccc tggctcacat catttagtac cttcatagtc 120 gcgagataat ctgcgacatg catattgcag agcattaaag gttggttggt ctacaaactt 180 gatgacagct gtcagggact gagagttccc tagcgtacgt cggcgcgacg tatgaaagcc 240 ctcataaggc ctggcgacat agatacactg ttcagtcata tgaacgcgaa gccagccgct 300 ctggctctta ctaaccccgt tgtgcccaat gctcattctc aaggtaggct gggctcgcgg 360 gtaagtgact tttttctatt ttgttaatgc tatctttagg caaaattccg gaatcgcaac 420 ctcaacttca cgcagccttg ttatcagtac tcgacttctt tcgtcaagct acaacactgt 480 tagtcatgct atgcgatgca gcagaatctc gctgacaata tcagttttgc tgacgatacc 540 cgacatcqca ttctggacta tatccttcgt cttccactcg ataattcctt gactcaagat 600 660 ttcacaattt gctctgcaat agaaagaaca ataactgccg tgctcgatgc tactaccgat gagcatgctg atgaactggt aactcactcc tagactctcg agggtttatt tcactaacag 720 cggacaggcg actaatattt gcaccgctgt tcattccaca ctgaaagacg cagagctgca 780 820 gagtcgactt ttggagcaca ttgcgccggt gaatgactgg <210> 2935 1358 <211> <212> DNA <213> Aspergillus nidulans <400> 2935 cttcttcaag accggcaatc tttgcgtttc cgatatctga ataacgttag acttagtcag acaaggtgta cggttaaccc acttgaacgg tctaggaaag acagcagata aagaagggcg 120 aggaatggga cgagcctgcg gtcaaacttc tttactacct gctgctcctc tacagctgta

tacttcggca ggcggggacg atagaatttc ggctgcgcct cgtcgttgta attgtactcg tcggcatcat cttcagaaaa gcgatctgga acggtgccaa aatcagtctg aagcttcaac gaactatttc ggccacgcct tgactgctca tccaccgatc catcagacac cggggtatat 360 420 tggtcattcg atgttgatga gatggaagct ggcccagcca aggatcgaaa agacgccatt tagagaagag ttggtatgcg tacgcaagct aaaggcccat gactcattgc acgagataac 480 tagagaaaga aaaaacagga aggaaagaaa taggacagac agagcacaag agcagacgaa 540 gagtgataaa aaaaaaagaa atagggcgcc tcaagcttcg gggaggcggc acatgaatcg 600 actccctggc cacgagtgcg attctcgtga tagcaccttg cgccaacttt gagccaatca 660 tgttctgatc tacacattag taattcacca attaactact cccttaacgt aaaagcaaca 780 acaggagcag atatccgcag tactagggta gaaaaagagcg aagaataaaa tcaaaataca cgagatcctg gtcctcatgc gctatagcga cgattagcaa cgggttcgtt gtgagtcgtc agaaacgccc tctcctcagc gaccaacctg gggacggtag gagtcaataa tgcgacgagc togottattg cotttgctct cagtatgctt ctttcccctg ttattctcaa ctcgatgacc tttagcccaa gtgtctgggc cctcgtcaaa atggcgcttg cgaccccata gaagctgggc 1020 tgtcttgtcc cttgcaatgg cgaaggtctg ttctaggtca ggaacataga agctgtcaga 1080 catgccgttg gcatgaaggt agcgaagagt gttctcagcc gagtcgcgga ggaagcggac 1140 ggcgctgaga ctgtctaccc cttctctcgc ttttgtgtta aagtagtcct ccttggcctg 1200 atggtagaca tctaaaagac gcgccacgcg gacatcaggc ttgcacgctt gtcctatcgt 1260 gctgaggggt tgtggtaggt atggggttgt cctgatcgta agcaggcgaa tcgggggaagt 1320 1358 ggcgtgagta ctcgccatcg atgtagaagg ggcaacag

<211>	1429	
<212>	DNA	

<213> Aspergillus nidulans

<400> 2936

aagagcatga aaccaacata tcagtcagcc cgataacggc aaagaaagct atagagtaaa 60 gatatttgta gggacctacc ggcgtctaag cctgcaataa tgcagtacgt ataaacttga 120 gcccaattgt cactagaaca tcgcaggcac aagcagagcc gacatacaat tagcatggaa 180

caactcatca ccccttcccc attcctacag ccacaaatgc caccaggccc tgcaacgcct acaggcactg ctcgatcata atcatgagag atctttcgag gcactcaagt cgacatcgag 300 catgatgctg tcgtcagatt cgagacccgg tacaacgagc tcgggagcca tgaaacggaa 360 cagccgttat ttgacgcgca actgggtgag tcaccgggta aagaggtgct tttgtatcac ttgaagggcc tgcatcagac gcttgagaga aggtatgtcc agtctgaacc ctgtcggcgt 480 tgctgataga cggagtaggc attgatcttg ctctgtatga gatgaggagc ggctttgagt 540 atcgtgcttg ttcggtgctg gctgagtgtt tgcgtgtcat tgttgatcag accagtcggt 600 gcttggttgt ggatgagatt cttgaggtga tgggcttaga gggcaaatta ccctcgcagc 660 720 cacggtgagg ggctaagcca attacatcag agggattcag aataatagga gcggtgtatg atcctatgct aatttgctat ggctctccga gttaaagata cctgtacctg gcgagatttg 780 gtacgagetg ttatgetgte caggeegtga cettececag acaageatgt etcaatagee 840 gtgatagaaa cctagatatt gacagatatt cctagcctga ggtcttgaag aaaaattcta gtcaacgaca tttgaaacct aagcattgag gttgtctgcc gcattccctg ctgcaattta attgcctgga ttctaccacc ccagctctga agagtttact ataatcctac gtgccaaata 1020 ggtatttgga aggttgatcg ttccaagccc ataaagcccg aaggattgaa accctcactt 1080 tctgaagtat taataggtat tattccctgg aaaacattac caaacccggc ctatttcttt 1140 ccatttttgg gggcccttaa aaaccgggct ttgacccaaa cctttttgat ttttcccgaa 1200 gccttggaga taatcaaaat cactttaaag gggaggcctt ttgtgagggc cccccgaatt 1260 taaccaacac cctttcggat atcactttta tttttccct aatgcccctt cctcacttag 1320 tgtttttggg acttattttc ctctaagtga aagggtcttc tcttttttcc ttctttttga 1380 1429 gggggttttt gttttatttc caaattataa aatttccctt tcttttgta

tccctatggg tggagaaaag gtgggaggcc ttacctctga tggccgccta atcgccaatg 60
ttttttggat cgctgtctgt cactcagatg gttcctgtaa gcgccgactg gagaccactg 120

<210> 2937 <211> 761

<212> DNA

<213> Aspergillus nidulans

<400> 2937

```
tacagtagct tgcttcgaat tgcggcgccg catcacatct taacacgacg gccgacgaaa
ctggaagcta taaaatggct ggcacacccc tcctagcagc gttattctcg gcgcctgttt
                                                                    240
cccagtctca tcttaccacc ttgttattac gttcttcgcc tacattcgta tcaaaatact
                                                                    300
gtgaagcagt gcacaatctc tccgtttaaa ccaaacccgt ccccgcatct ggatcttata
                                                                    360
ggtacaaccc ttccagcata agtacaagac atcagtcttg ttcaaaaattc tggcaataaa
gccttccatt tgctgcggcc gcctgtcact gacccattca acaggatata gggtatatgt
                                                                    480
                                                                    540
gctttgagcg cctatagtac accaccatgt cgcagcatca gattcactat cctcccccac
cgactcaggg agcttcgtac tctcgtatgc cagcgtacca cacatagata atcttagggc
                                                                    600
taattatccc gcagaacctc aaaacgctcc atgtatgcca ttagaaacca gactttgtac
                                                                    660
atgacccagt ctcatcgtcc cgtctagctt tcccaccgcc tcctcaaccc tcccctggct
                                                                    720
                                                                    761
ttcctcatgc ttcttccggt tatccgcaac cttccccggg t
           2938
<210>
<211>
           996
<212>
           DNA
<213>
           Aspergillus nidulans
           2938
<400>
                                                                     60
ccctttttct ctcgaagcat ccacgtccga agtcgcaacc gcaacgagag cggcctcgcc
atcattcccg tggaccggtt tgagcctatc acggatccca acactgtttg gaaatctccg
                                                                    120
                                                                    180
cgctctggcc tggtctatcc gcagcgttgg gaactaggaa tcgaagggcg agggttgctg
                                                                    240
gagatcagca gtgtgttggg tgaccaagaa atggtggatc cgggcagcgg cgcggttacg
taccttggat ttgtgactgt caagggcgtc attgatggca aaaatgttac tggatatggg
                                                                    300
                                                                    360
agtgcagagg tgaagtttgt tcagcggctg ccctagatgc ttgggtctat cgacgcaaaa
cctgtccgtg ccgtcacctc ttatgttttc aagttattgt tagaattgca gagatcaatt
                                                                    420
gcagcgtcgt gctttcaagc accggctgtt ttaggaagtt tatagacaaa catatcttgt
                                                                    480
tectgaactt egatgaatte ttetttett egegeaacat acateeeegg eetggtttet
                                                                    540
                                                                    600
tactcccgac ccaagaaatg cagacaaaat aatgctcacc aagtcgaata tcgctgcgac
tgtccgcaat accgtgcttg aagtgacgag agaagatcga cttttaccta atatactatt
                                                                    660
```

cgctgggact gcatagaacc gcgggtcctg ccccagtcta acttagatat gcctcacgtt

agccagtatc	gccctgacct	atgtctctga	agtatcctgc	acttgcggac	ttcggcggag	780
tccaccgttt	acgaggcagg	aggttgaatc	tggttgccat	ggacgcagtg	accagtatat	840
ggtaccctgg	ttgctgggca	gacataacaa	tcaccgactg	gaggaagaag	cagtggtgtg	900
gccgaagaaa	gtaccaccga	tgtttacact	agagctaccg	gtatacattc	atttttcact	960
gggttatcgg	tatgaatacc	gtgctgttgt	tgttgt			996

<210> 2939 <211> 2116

<212> DNA

<213> Aspergillus nidulans

<400> 2939

ttatattaag catgagtata gcaacagaac tagatacaaa ccaacaaaat catcctacat 60 aaactggtca ttatcaatga ctgggcctta aaagggtgta gcgccatctg gaagcgagca 120 aaagtatata gtagtattat actacttggc catgcaccaa tcaaagctca cagaaatcag 180 atataaaggc cctgagcaat gaagtgggga aaagccctac aaagcatgcc acatcaacag 240 caactggtgg ttacctggtt tttgcaccta atctatatat aagcttatag tttatttgtc 300 gagtcctcag cagtccttgt atacaataat aaggtgatta gagggtgaaa gactccccgc 360 accaccctcc tatagaataa tagtcataat ataaaggcac tgctggaggc atttgagtat 420 attagcagcc tagttatctg gcacctgctt agactttatc ttttcttcaa tttatctctc 480 tctatgcatg aaagaacatt attaaatctg atatggtcct tcaacaactg gaagagtaca 540 agccactatc aagaacagac agaatttctc aattgattgt ctggcacatt cagcattaat 600 ttaatataga gcacggccag attcaaccta atgttcttat tgagatcttt cgattgttca 660 720 taaccaagaa ttggatattt gaacaaataa aatctgcata caagcaagga ttgtcggggc ttacccttta attaacataa gaaagaacct ctagagacct gatatttata cttattatta 780 ctacagtatt taccagtaga aaggtctgct gcacaggcag caaatcttca agaatctgaa 840 gaacaaggaa gtactctata tcaagtacaa gtatagacaa gcacccggag cttggaccat cctggtattt agaggtggta ttcttctaga taatatagag attgacaagc cttaccagga catctcaaag caggctatgc agaagactta ctacagtcat ccagaacaaa gaagaagttt 1020 acacctcttt atctgccctt aactttagca atctgagcaa cccaaagctc ttcagtaatt 1080 ttcagcagct attgttcagt acacaagttt attttaaatc ctccttcaac aaaggcctat 1140 gggccccaga ttatcggggc ttgtatgcca gatcttgcac tttctgagaa gagttagcac 1200 ggctgagcaa gctgcataat cttgtatcta attctctaag atatttaagt aaagggaata 1260 ataattaggg cacaactgtg ttacagcaag cttctctgct ccacagctct attattcagt 1320 gcagttatta tcaacaattc acagatatcc tcgcaatttt actcctgatt agaagggcta 1380 ggcatgagaa taagtattag tctataaagg atgattttat taatcaagca attactgttc 1440 tttcacagaa tgatccacgc agaagcatgt ttgaggctct agaccatctg gaaatagaca 1500 ttgatggcca tctatatatt acttttaata cttactgttg gtccctgtag atgtcccaga 1560 tgtcaaagac caggctagac aagatcagag ccatctactc ctataatcaa gccagcttcc 1620 ccagagccga cgcaggagag ttctatatta cattcaagag gctgacaagg gagcagatgc 1680 tgaatattct tcagagaatt gacaaggaac tctacctata cagtcacaag acattttctc 1740 ttaccaacat gctatgcaga cgtttgaacc agcttgaaaa taactttgac tatgcttaaa 1860 acaaataatt aaaccttgat gcttcactga ctttctatct ccttggtcag gcctataaag 1920 cactgggtta cttgcacagc gcactgttct tgttcaagat attaatatac ttgtaagatc 1980 aagttettge tgetageace etggataeag etaaagtage tgeattaeaa aagtatatat 2040 tattggcttt gagactgggg gagccaaacc gagtaatgca tggcagggaa tctatagagt 2100 2116 gaatgcactc tgtagt

<210> 2940

<211> 1371

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2940

cgagggtcta cccgcggtgc aatcgtagtg cttggatcgg cggccccgca cgtcgccatg 60 cccggagtag cgccgtatac ggctgccaaa cacgcttgtc gggatgatta agactgccgg 120 taagcgactc gggcagcagt tgacatttcg ccagcgaaat attccaatcg ctgatggatg 180 gacgcatggc gatcgataac atcccgcatg gcatacgcgt caacgtcgtc tgtcccttgt 240

300 ttgtgaatac accgggggtc caagccgctt ttgaggatga cccagagctg gaagaagtga tcagtaaaat gcacccgctg ggccgtatcg cgaatgcgga agaggtcgcg gatgcggtta 360 gtttcttgtg tagtgatagg tctagctata tgactggatg tgctcttctt attgacggcg ggtctacgct cacttgtctt gttttacgga gggttcgata acgtctgttg ctttcgtccg 480 aggaaattcg ttacattctg gagcccgctg aaagtgacct ggcggtgaca cgattgtacg 540 600 catgaacatc tctggacata cgtggatact ggaggatact gaggatcagc tgtaatatag tcatcagact gcagtgccac cgtcaacgcc tacctagcaa taaccggcat aagctgctac 660 atcaatgtcc tggaagtcac agatacgagg cccccaataa tagtactttt tgtaccaaac 720 ttcctcatac ccgtcatcat ctggttcttt gataatctgt acgaaaacga atacttcgat 780 tatgggttcc aacctaacct tgaccccggt gtgcacgagc caagccaaag agaacagaaa 840 900 gaataatact cacctgcccg attccctcat tcttggggtg ttgctctctc caatggactt ccagtagaaa ggcttcaacg aaggctacct agcccacaag acaccccttg aaaagcagga gtaaatcaga gcaagggcat caatccagcg ttaaaggcca aggcggatga ggcaaccaaa 1020 ngnctannag ggctatgggc taagctggga atggaaccta ccgtttgatt gaaataaatg 1080 agettgggag egtaetegtt tgtatetaaa ecaategtga etetttaetg gaeatttaea 1140 gctgacagcc ttacatgagc tgcccgtgga tcgtttcaac acagcctgct gacgccgatc 1200 tettgteatt ttaaceggeg gaccactgge caategeatg ggaategteg attttegtat 1260 caatggtttt agacaaccat cttgcgtgtt tccactggtc gcctaactat agaattggtt 1320 gccttgctta acgaccagca cgcatncacc tgtctcgcat ggataaaaat a 1371

<210> 2941

<211> 1090

<212> DNA

<213> Aspergillus nidulans

<400> 2941

cctccaaact ttggtcgaca atccccatg ctcatctctc gacgaagctg cttcaccgct 60

ttgatgtgtg tctttactac gtctcgagag catgaaactg tttgtgactt ttgaaagttt 120

tgcggcacac aatgcactca atatgctccg tctcaacttc ttcactatct gcctcctctt 180

cttcaggacc ttcctcggat cttgcccaat cttgtagaac atgctctcgt aacgtagcct 240

gatttgctgc tcgtgatttt gctgcctgag aagcagcaga ttggcggaga gcttcgcgtt 300 tttgagacag gctatcctta taaatcttgt agcgcgggtc tcgcttcttg gcgaaagcca 360 caagggatct cacggcctca ttaaactcgc gaatagcggc ttctcgcaag cgtttgtttt 420 ctttttccat caaacgacgg actcggcggt ctggagcctc ggagtaacga tagacgtcct 480 540 tccatgcaaa ggactttcta gttgagaagc tgccccatac agcgtaaaaa tcgcgcacaa cttgagaccc gtcatgacgg gtcccaaacg atggatagtc aatactgtct acaccttccc 600 ageggeatge catetectee teetgegeaa getgtgegaa egtetegegg aggeeaceat 660 aaaatccaca gggcgcatca gtaaagtcca ttcgaggact gaacttggaa aacaaattca 720 gaatatcggc agagctcgtc atgcgggcgt tatgcgagta gtcagccgcc tcgccccag 780 cgtcaccacc tagaaacgca tcacggtgcg agtcatacca cgaccgctcg tgggggtctg 840 aaagcacctc gtaggcgatt tggatttccg cgaaaaggtt tgtcgccgct tcaacgtttc 900 caaaatttct gtcaggatgt agttcaagag ctttctttct atacgccttc ctgatcctgt ggaaatagcc aatgcatggt cagctcgtta tctagccggg acttgtttat gggaacaaac 1020 tcttcgggcg acgcattctg ttccacatcg agaagttcat aataatcttt ctttgcatca 1080 1090 ttcctttcgc

<210> 2942 <211> 1166 <212> DNA

<213> Aspergillus nidulans

<400> 2942

60 cttcggtagt gcagtgatgt tcgctgctta agacgcacca cgtggagcta tctgccaagc ttatatcaac cagcctggta agggcccgat ccgagtgcga tcactcgact tggctagtcc 120 atcttttcat cattcgttgg tcgtttcttg gtcaattttg gtcaagagtc gagacggcga 180 ggtatgcagg agccctggat ggatggatcg tcacccatac attccgtagc gaccacggtt 240 300 360 agattttgcg gtcttgaggt tctaagtttt cgttcctggt ggtggcgtcc actggaaacc 420 tgctagtcgg gcaaggctga aaccgccgtc tcttccccag ctgttaccta ccgtatctct gcagtcaggt ttcactcagc tcttttcttc gtccagactt ccgctcgcac aaacaaaaat 480 aaacccgttc gggtcttctg tcgtttcctc tccttgtctg tctttacttg gtctctgacc gtctgttctc ttcctacccg cgacgatcgt tggcaacaca attgcattat tggctcacgc 600 660 gacttcaaac gagtgaacga cccacgacga gtcgacgact cacgctcgct ctccacaggg gactacgatc ttcgaatcat cctttcgtaa gaggaccaag gttggtacca aggttgtcga 720 780 ttttatgacg gtctaactct tgtttagaag tcgctagtcg atccccctca ccctatccgc 840 teetttatge tetetgaget cateaggtet tteeegaget gtegteacte tttaacttte aatgtccgga cggcctggcc tggcagagaa gcgtctgtcg tcccatcgct tccagcaaat 900 960 cccggacact atgcctaatc ctaacgatgt tacaattgat atcccattga ccagtgtttc cagtegeggg cagactggtg egeggaacaa tagcacaaat atteceaact eeccateagg 1020 gggctactcg gctggagcgg aacacaatgg cggcgccgag aagggcggct tgacctcgag 1080 tecteccage agetegeteg gttteggtea tegeegeegg aggaceatea acgacaaaac 1140 1166 cggcttgcgc atgaggacca gaagat

<210> 2943 <211> 1041

<212> DNA

<213> Aspergillus nidulans

<400> 2943

aaggetetae tegeacaaca tgteecatag tttgeatget eegggtgeeg gegeaagtat 60 tgtcaagcag cggacgagga gcaggcggcg attgctggga tagtgcgacc aactctggga 120 tggtgtccca cgcctcgctc gtctcgccgc gccataggct ccaaatcgta tgggcaaatg 180 ccagaaagac gtggatgagc agcaagataa tggcaacgta atcaaaccag ttctggggcg 240 tcatggcgta gccgaaaaac catgcccgca tcatcatctc tgtccagttt cggccttcta 300 360 gaaccggcgg tctcggaaag attttggcag gtttgccatt gcgaaccaag gtccgcgctt 420 gttctgccga tgttatggcc ccccagtctc tgtttttcca tgctggtaat agactccagg tgttgcgttg gcggtgggcg ccgactcgcg acaggccgtc tgtgaagtat aatgatatgg 480 ccaattccac agtgaccagg tcaaggtcca tgtcaaatcc atttttactg gtatttcctg 540 gaaaggggta gatccctagg atcctgtcga gaagcgcagg gtacgcctgg gtgtgttcgg 600 tgtggtagtc aataggatct actcctgtta tatgaagcaa cgaggcatcg gatactctgg 660 geggataacag gtegaaceag etaggttgga tetgaatgtg egtecàcaaa eetgggtett 720 gegggtggaa geeagteagg etggtteta agtagetage accategage ttggtetgta 780 caacgttgeg tgaceggteg ttgaggaage egtgeeeaa aatgeegttt ggaeetgeet 840 caatgaegga ggtggeattt geeeategag eatecacagt geaggteaat ggggetatgt 900 tettteette egeatttate tgetteagta geaggagaee aagagagetg geateacetg 960 cagttatate tagtggaatt gtgagaageg aeggageatg gggeaeggag gtgaeeteeg 1020 eggeeacttg ttgtgaetag g

<210> 2944 <211> 3022 <212> DNA <213> Aspergillus nidulans

<400> 2944

gcaaactaca agcacatgaa agatctgatg cgacttcccc aaagatcgaa cccccctggt 60 cgcaaccgtt cggggactcg ggctgcatat atccccgcac ccaggatgta caaaaatccc 120 tggagcagaa gccagccgag gccaatctgt cgcatcatct ggtcacgccc gtacagttgc 180 agcccgtgga cgacgggaaa cactgctgac aggcccatgc cgacaaacat ggctgcacgg 240 300 aatggacgcc agcgggggt ccggaacttg gggaagatcg ataccacaat gcagccaagg ccaatcgtgc atatcatgga ccaatacagc ctctgcaatt caggaacgca gtagaagccg tagtagacgc taggaacaaa actacccaca atcagtccta caatgccaat gtagtcaaac 420 gtgtttccaa tgcgcgccac cgtcggggaa tggttcgaga tagtatggta aaacgccgac 480 atccctaggc aaaacgctgc tcccacgaag aagcagccaa aagcgcgaat atcgccatcc 540 gtggcggttt catagcgtgg ggcaagggcc cgataaagtt gaatggcggc agggattgcc 600 aggacagatg gcaataaatg cgtgtatata ttaacagtct cgttgtgaat atatgtcagg 660 720 gactggaacg agccgcgaaa cgaatacgac gccggtcgat accctgtatg gatatgctga ttatctcgct gccaatgggg caactcatcc cagtgaacga gtgacctgat agcccgaggg 780 ggatetteaa ggaetgeagt egegaeagag getgtetgae ageeteetgg ateettetta 840 900 tggatttcgg taggacgacg ctgacgaggt ggcatctcga ataagcaatg aatttgaggc gctagatcgc gaccagtaaa ataaaaagtc tagatgctgt atatattata gatggtccaa 960 agtettatta taatettate aataattgtg tagtgataga aatagaagta ggaatagttg 1020 aggctgttga gctcaacatc tgttgggaca aacaagacaa actaaacaaa cacggaagtc 1080 gacccgagtc cgctccacct ccaccttccc cgcggcttcg tcgttgtgga tggttcagat 1140 cacacagget tgtgccatgt attgcacaaa tatcagetge aagacgeett egtteettea 1200 aateccateg tetateetea teaceeggeg aeggaggeee ggaacteegt tetgeatace 1260 atagctgacg ccattctacg gagtataccg aatgtcaacc taaattggct gcagttatga 1320 gtggtcgagc tccttcagca aaatggccgc atagccgcct gaaaccggtg gcggactccc 1380 ttgagtccgt aggattcgtg tcaaagggag attgcaagta tgagaccgat tgtgtagcta 1440 gtctgagttg accgtgactg aattaaccgg attgacccgc agattgctag atcacaaagc 1500 tcagaagaac tattacgaca agatcatggc taggtatatt gagttttgtg ctcgccattc 1560 caagaaccta gatgaggcct ggctgtctct tcctcgaagt gcctcgaacg atgcaacgaa 1620 gaacccgcca gcttgcgttc cacagtcaac caaatgtgca gtgtcacccg gtgcctgacc 1680 tgccacagag ttatccaccc tccttctctc ccttcgcaag cttcgcgaag ccgtattggc 1740 cactgcttcg accacgccaa tctcattctc ccagcgggtc catgtgttct ccatcaaggt 1800 ctccattcaa gctcgacatc cgccgtccta ctttccctcc ctgcgccacc ttcttgacga 1860 cctgcacact ccttctaacc cgttgcctga ttcggaactg aaggatcaca cttcgtatct 1920 tatccttgat tatgcatgtc ggcaggagga tttggtggcc gctttcgaat tgcgggcccg 1980 tgcgcgcagg caatataatt tccactcgcg cgaggttgat cagatcctac aagccatcgc 2040 acatgacaac tggattgtat tttggagggt ccgaaaggag gtcgattccg ccatgcgcgc 2100 aatcatgaac tgggcagaag atcgggttaa acaacatgct cttaaagcag tcgggaaagc 2160 ttatctcggc gttgacattg catggattgt cgaaggctgc actggtgatt cgacttggac 2220 atgggaaaag ctggcagaga gagagaaact aggttgggag aaagaaggcg atagggtcat 2280 catccggaaa ccgagatcaa agccgaaacc cgagggcaat cttacaccca ttcaggagaa 2340 gagcacgggt taattacgat gtatttgtta attgcatagc gtctggagca ttgctggtgg 2400 cgttcggtaa aggattgggt cgtaacactc taatatattc atacatgcca ccctgcacct 2460 tcgtttgagt agctatctta ttcacagttt gaaatcagcg ttcggccgat ccaaatttgt 2520 gtggcctgtg actggttgtc tggccacctt ttcgacaagc ccatgtttca actgcatagc 2580 cttgtcagag cacagctcat agactgccc tagattgaaa atcagactgg aaaaggaggtg 2640 ctgtgcctgg accagagtct ccagagcctc acgtgcctga gaaaagtcag tacttgggaa 2700 tcttcatatc tggcaggcta taatgtacct cgcttagctg accggtatac aacagacaca 2760 cagccaggtt ctgagaaatg atcgcctcgt cggcttccct gctgttgttc ccaaggatat 2820 cacgccattc aataactgca tcattatagc ggccctcata catactgaga aggggcttaa 2880 atatcgcgtc gtcagtatcg ccgaagccct tgaatagctg ccttgcagca tcgacatcgg 2940 cgatcgccag tagcagaagc gtcgctcta ccctgttaat ctcttggctg attcttcttt 3000 ctcagctctc catgccctc tg

<210> 2945

<211> 1607

<212> DNA

<213> Aspergillus nidulans

<400> 2945

gtcaatgcat tcccatgtga ggaagcacga gtgtacagtg tcagctcatg tgacgtgatg 60 agagacgaca aatgcacccg tgtatcttct gcagtcggtc agtcttggtg taacagggat 120 gctctccggt catcgatata tgcacagtcg gtgacaagtg catatcggct gtgtacagta 180 gcatgacggg tcgtgtaatt actctgttat gtaagtagaa gaggatgata tgttaacaat 240 agagtgtaga ggaaggatag atagcaccgt tgatgcaagg agtcaggtgt tagcaacaat 300 agcgaataac ccaccaagta ggtatacttt cggagtaacc gcaaggatta acatcgtaca 360 aatggagcca atagccgcaa atgatactaa gagcgtcttg cggtagcttc catgatctgc 420 agcgcctgac attgatatta tcaggattgc ttgtatgagg acactcacgg agaaggtgta 480 cattgcgaag cttgcggtgt tgatttcggc cccaaggatg taaacaatac attgacctgc 540 agcggcggga cttgaatttt gccagcttgt gtttgatgac tctggagttt tccagatcgc 600 agtacacggt gtcgttttgt ccgagagtag aaccccacgt tctcgggcca tctgctctaa 660 agtgataggt aaaaatgacc ctaccaacca ttagagacgg acttgaagat cttgaaagca 720 gagacaattc ttcttaccca tagcacatac tgtgaaaacc tctgctgccc aaccataact 780 ataccacccc agcagctctt tcttgtttgt tggccgggtg tcatcgcctg ggtatcgtgg 840 gagaagaagc ccaggetcag caattccate tteetgeate ttgaegeaaa tegtgatggt 900 gettatagta atcacttggg tittggaacac attegaggeg cittitettat tecagitetac 960 tetteaatgea tattegetgt aagtagáaga tgatattagt gitatgacacg ggagggateg 1020 tgaatactga tgaaaateac titgacaagac atgetiettge aagetittaa eitigaatata 1080 eggagggaggaga tacceatate aattaggigg tacteaaage aggaaggaata eetgtaatgg 1140 gitagetagee etaggigatge aattataegg tgitatgget eaggegatat egggetitiga 1200 taacgatgaa aaageaggaa egeagegata tattegageee eaagtagaat tattigggati 1260 gitagtattga tattagtaag tacaatacac acataaaaga aatatigitig etgitaggaag 1320 gagaacegtg aggigacgaa aggitigagga ggetaggete eaagagataa acgeaggete 1380 tageeaacte eateaaggae eggiteegge teaaggete agaiteeatgg ettateteea 1440 etgeteeage eacacaagge eggiteeegte tigticeatge atetigeate eagegegeeg 1500 caaacegitet tgatetteat egtaticata teegitigagt tgeaaagate ettiteggitat 1560 teetteeeeat agticeteeg eteatateta titataetetg agaeaat 1607

<210> 2946

<211> 3227 <212> DNA

<213> Aspergillus nidulans

<400> 2946

tatcctgcag cttgttacaa cttatacctg aactgtaccg tggattttta tgcttttcag 60 ttcgcgggcc ctggcagcca ctggtagcca cttgctggct ttgtctgaat ctggggaata 120 cacgtggtaa gatttctgat attgcttggg ctcccagcgc tttgaccaaa cctgacaagg 180 gactggcaac atgatggcca ttcgaagcac caccagtggc ctttactggt tctttttact 240 ctgtggctgg accttttgcg aattgtaaat gttgttggcc aatacatgga gacacagatg 300 360 tacggcaggg agggatttcc tgcacacgtc actgcactga tcttgaagca atgcactcgc cageccaate tetacecett atgegatega aatetaacag teatgaggaa atatagatat 420 acatactttg aacgtctata cgagcggctt cgcgggataa aagtcgacta ccacccataa 480 acgtagcagt atagtagctt cgagctggct aggagcacac atgcaggccg tcgatgttta 540 ccacagtcgc ctgtactttc aggcaagata ctgtaggtac atttgttctt tctgcaggct 600 cctcacatag gacccctgag ccccgtgcat gttactagac tagctccacg tccatgccga 660

720 acctgactga cagcactcta ggagatccaa ggcgctgtga gattcgatgg aaagcttcat 780 tetteatece attattattg gettaegtee ttetgeegtg etgetetett tttttattet aacatcccgg ctactgtgag gcttggcctt gatctatgtg gccgatatgg ctttcccgac 840 900 tctgccqagt caataagaat gactcaatac tatgccttgc gccagactgg cccagtcatg tetteeeggt cagettgett tegtgetaag attteeaaat etatettgga ttaggaatea 960 accgcatgtg teactggeac tetgatgtte cagteagace ttaaaatege atetateact 1020 catacgcaga catgggcctc cctcttccga gacattagtg taatcgctac caaagggttc 1080 qtttqcaatq aqttqtacac cttqaaccqa atacacctga aaaggatgcg ggcgagtgga 1140 ecctggatag egetaacaaa taegetgteg tggatettat tegagaecae tgatggeetg 1200 tcaaaaqtac tggcggaatt ttgaccgctt cccccagaag tgtttgatgg tggaggacgt 1260 tacggtcgtt caacaggctg cctagcagga cacaagccct tccaagcatc gcgcaaacat 1320 tegaececat tteecettgg gateagagae agetatageg egetaaaage aacteegeaa 1380 acgtaategg eggetgeeeg etetacaace geeageaaaa eagaaggttg gegatacega 1440 gcttagcttc ccttgacgcc agccgggata atcgcgctta attggggaga ggagggattt 1500 gaagattgcg gatgcgattg acccaacaat tggccgcaac cacagtcggg caatctctat 1560 ttccctccct agagggatga tagacctggt ggtaacgcat caggtgaatc atgacacttg 1620 catggtgaaa cgtgcaaccg acgttacttc ttgtgaaacg gaacttctct caacaccagg 1680 atgcactttc ttgctgtctg gccctcaagc agggagtttc aaatggttca accgggagca 1740 ctaggccagc atgcgacacg gacgattgca gcctgatgat cttcccagta cagctcaggc 1800 aaaatggaac aaagagtcag gtaagagaat gatcactgac ctctcttgaa tggctggcca 1860 atagggcgac agaatctgtc gctgggaata ttcgagacga ggtcgcatct ggcctagttg 1920 ggatctacca gcaggattgc gacagggacg gggcagcaaa aacaaaagag agacgaagag 1980 aaggggggaa acaaattaaa caaaatgaaa acaaaaaaaa agtaggcaat caaaagggaa 2040 agaaaatacc tactcegtac aggeacatgg geettaaate tggaettgta tecactcaca 2100 ccttcactct agaggtaccg taccgggccc tttcccaata tgcttcgttg atgggaaatg 2160 ttgaacacaa gcggatatcc ctgactactg atcgcatatc gtctattcct tctgcttaag 2220 atttcaaaag tacttctact cccgtgatcc tgccctgctt tttactacat atgtgagtcc 2280

aacggaaacg aaaaccgata tgtttccctc atcactgatg gatgaagtca tggcccaaac 2340 attctaccct gctgatgacg aggtcagctt cgatgcacac tcgaagcggg atgctctgtc 2400 aatgtcccaa cccctccaaa gtgacagtca acaagatatc gtggacagga acttaggctg 2460 tatcaacatt gggagcgaga ttgaggcgaa gacgcggggc gccacaagac gacggatacc 2520 agtcgcagtg ggtaatgcaa aatatgcaag caactgacac ggctaacagt aatagtgcat 2580 gagatgtcgg agacgaaaga tcaagtgcag tggcgatgtt ggtgatggcc agggttgttc 2640 taactgtcgg agcgctggaa atatacaatg tcaattctta agggcaagct agcttcctca 2700 acccactaca acccttgcac ctttcattac gacagaagag ctaactggat gtaaaggtga 2760 actettecat tttgcaggca aaggtteece caggacetgg gtggeectat cetgcaagtg 2820 atatggcctc acggatatac gtgccttccg caaccccttc taaaatgggc ggattcccta 2880 taaatcattc caatcatcgt gtctcctcat catcaagggc ttcagactac ggagtgaccc 2940 cagacactca gaatccctac ggtcgacagc cctttggcat tgaccctacc atcaattatg 3000 atgaggagtc ctcaagcccg tacaatgttc agacatcttc cgcctatatt ctggcaaact 3060 ctcctcaggt atttatgcca aattattgcc agctgggatg gaattccaaa aactgggccg 3120 gagttttgcc cggggagtcg agctcccacc gaaacatgtt ctcaaaaatg atgcagagaa 3180 3227 ttcccttaac catgcctatt tttatatgaa cccccggaca ggggcaa

<210> 2947

<211> 1945

<212> DNA

<213> Aspergillus nidulans

<400> 2947

acacggacat agccgctgac ctgtctacat ctgcatcttc agctggcgta ttgatccact 60 gcacacaagg aaaggaccga acagggctta tagttcttct ctcgctcctc ttaagcagcg 120 tcgtggatgc cgatgtcata gcaagcgagt acgtgctctc cgagaaggaa ctggagaatg 180 aatcgagcga ggagaaggaa gagcggatga aggagatcag agcaatagga ctggatgagg 240 agtatgcgcg atgccctaag gattttactc agagggttgc gaccttcatt gaagaagat 300 atggtggtgt ccgggagtat ttggtgtctg tgggcgttga cgaggagatt ttctagagct 360 tgaggaggcg gttataggcg tgatggattg gatgtttgaa tgtttggaaa atagaggcca 420

aaaggaagaa gtgtatccaa gttttataat taccgttgtc tatataggtc gcaaatcata 480 accytaattt aagcccaagt ccaaagtytc taaagtytat cacyaacccy caaccyatya 540 aagaccaaat gcataagcta cacaaactta aaatgaaact aaacgtgcgc cccccggtaa 600 660 tagttggtgt tcctattggc gttcggcccg gctgaatcct gcgttagggg ctcttcatac accatctcgg gatgatccga gtgggcggag tttatgcgct tctcgccttg aggtacgtgg 720 tttcqcqtqc qaacqqacqq caacaqatcq accacaaaaq agaggacata aaatqtaaaq 780 accagegega ttactatgag gttcatagtc agcaggaatc ctattaaagg aagtgaaata 840 cataccccat togagcaccg cagctgcatt cotgogatgc ggtctatgcc acccgcagat 900 accaaaggca atcgccaggg cgacctcaac aacgatgaag aatgccttaa tcgcaaaact 960 ggccagtaga acacgatgct gggagcggta gaagatgcca atacgaaggt actcaatgca 1020 gatgaggata gcgctgacaa gatatgcaac actgcatggc ggtttattag cccaatgctg 1080 ctgttacaca attttcgcaa tgcgaggcgc aacaactcac aggaacatcg ccagaaaacc 1140 actgtgtaga tgcgaatgtc gaagggtgtc ataqacagat aaaaqaatca aqcccagagc 1200 gccggcgatc gaaaaaaata tagacgcgat agcgcaaaac ttgtcaaatc gccctttgtt 1260 eggtaceage tgeeeggaat geegeageea tegetetgag acaaaegaga ggtegaggaa 1320 cacgactgtg ataacgctac cggtgatgaa cagcggcttg agaccctgcg cgccgacgtc 1380 tgatatatac ctgcgaaacc gttcagacag gtactttgcg attggagatt ccaaattact 1440 cacgcgattg tttgtcctgg ttccatgctc gagtagatag ggtagccttg gacgcaccag 1500 gttcccagca ttgcggcgag catggctaaa acgtgttagt tgctcctgct gtcgattccc 1560 atctcgtcgt gttgacgtac ctatccacat gcacgccgaa atcacgggga agatccagaa 1620 agaaataatc cacatcttgt cttgtgtatg aaactgcgcc taccacctac gattgcgcac 1680 ggtgggtgga aaagaatatt gtgtggtgga gaggtcgaac gcgaagatcg tagggacttc 1740 agtaaggagg acaatcatag tataaaaatc aggagegetg gggtattaeg tatgetggtg 1800 caccatgggt aggtataagt cgggacccgg gtgcgtggag ccactagctc acgaaagcaa 1860 taataaaaaa gcatagcgga agctgcggat gtggctggct cacgacacag tgatccctat 1920 1945 agtgagtcgt attatcggcc cgatc

<210> 2948

<211>	1827
<212>	DNA
<213>	Aspergillus nidulans
<223>	unsure at all n locations
<100×	2948

60 cacaccacga tgctcacagt cctttcctac ttcggagtgc ctcatttatg gctagaattt tttcqtactt tgctggaagc acctatgaaa ttcgtccacg acggtccaaa tgccactgtc 120 ttacgccgaa aaagggggat cccaatgagc catacgctct ccacggcaat gggagaagcc 180 240 gtgctatttt gtatggacta tgccgtaaat cagagcactg atggggcata cctataccga ctgcatgatg acttttggtt ttggggccaa gagaggacgt gcgtgaaagc atggaccgct 300 atgaccgttt ttgccgaagt catgggtctt gagttcaacg aggaaaagac ggggaccgta 360 420 cgctggcaag gggctggcga gaaactgcca caaatattga ctccacctcc tgtgcagcct 480 gaaggggagg atttgcttcc atctggcaat atacgctggg gcttcctgaa acttgactct caagagcgcc gctttatcat tgatcgagaa atggtcgaaa agcacatagc cgagctccga 540 600 eqecaqettt ceqeetqtag qaqtatttte qeatggatae aageatggaa eggetaettt ggccgatttt ttgtgaacaa ctttgctaaa cccgctgttt gtttcgggag ggagcacata 660 720 gacatggcaa tcacgacact gagttatatc gaacacgcac ttttccctgg aagcgacggt 780 ggtggagtga ccaacagcct ccgaagacga tcgctgagcg gttcgatgtc cacgatattc 840 ctgacggttt attttacttt cctatcgaac ttggcggcct gaatcttctc aatccttaca 900 ttccccttct tgccatgcgc gaggatatca agcaaacgcc acaccgccgg attcaaaaaag 960 cattectgga tgaagaggca gcctatettt cagcaaagga gaactttgag aagactggce ctcagaaccc ccaggccttt gtgcttggaa gcaaaagcga atcagccttc ccgcgagagt 1020 teettteeet tgaggagtae atgaaataeg eegagtgett tageegeeee ettttggaeg 1080 cctatcggga cttgatccgc attccggatc aaatcagcgt tgacctcaca cttgctatgc 1140 gtggcatcct aactctgagc gcgacgagga cttcagcgaa aaccatctct ggagactggc 1200 ggagtatgtc accttactgg aagtggacgg ccgagcttta tcgggctggg atggtgaaga 1260 ggtacggtaa cctcgcagcc gtaaatcggg agttcatgcc tgtcggtgtg gttgagacac 1320 tgaaggaggg aaaattccgc tggcaaggct gatttggtcc acttcacttg tatactagtt 1380 tcacgaagtc acgaagtcat gataacagac aaataatcgc gcagagagac ggtcattgac 1440 egtttgatte aaatttatet agageattee acagtegetg tittetetea teteeteega 1500 atattgeett aactgetitg egagagatge tgataaggte tettegatte aattggaaat 1560 getetgeage caagaggtae teatttgaga eagggetaea gaagaageea acategteeg 1620 tetatatggt eagetgagea gaacataata atttagggag aaaeteeaege aaaggatgae 1680 egggeaetee tegtgetee aataceeaaa atgatgateg aggaaeeett eategaaeat 1740 ettegeatgt acattacaag atatgeaeag ttaceaeege tatngtitge gegeaattee 1800 tgataatate atetgeaeat gaataea

<210> 2949 <211> 1326 <212> DNA

<213> Aspergillus nidulans

<400> 2949

acgtcagagg gacgtgcaga tatatcatga aaggatcaga ataccttttg gaatcacgag 60 aggagcattt gagttcttct tgaagtactc gctagccctt ttggcatttt gcgcttccat 120 gcgaaaatcc aactcctgtg gcaacgaaag atccatttcc ttcgagagcc attccaagtc 180 atattccgga aagaagcgct tcaacatcga gaatgtgaac cttgtcagcg caaggtcaag 240 eggtgeecat teegeeaatg etggatgttg cacetteace geaacettet egeeagttte 300 360 cttcaatgtc ccaatgtgta cctgtgctag cgaagccgcg ccgattgggg tcggttcaaa tgtcgtaaag agttcatcaa tccgttttcc agtgtcctta acgaacattt gctcaatcga 480 ctcgaccgac gaaacggggc atttatcttg aagaggtatg aaagtcgtcg tccactctag eggaageagg tageecatge tacteaagtg ttgteccage ttaatgaaga tagageeatt cctttccagc acatgtaggg ttcgatcggc gcaacgcttg tggcaggcgc gaatcgcctc 600 gtttcgttcc tcgggtgtac acgtctcttg cttaagagtc actcgatagc tatattgata 660 720 etgegteagt gagtaattee acctetteta gteggetaae ttactegttg atacaaacag ccagcgtgcc aacaaccctc cccgttcgcg cggcagcgtg gtaaatgtgt ctgatatcat 780 840 cggaaaccac gaccceteca acaacaattg tecetecaat tateccatae cegatecaet tatttctaga ctgagaattc tgagactgcc ttccttgacc gccagccctc tgttgggttt 900 cgaatcgata taaagtcttt gtagaaaacg gcgttcggaa gttgtgctgt gggaaggtcg 960 ccttattgaacctaagtgagctgaatagccaataacggggcggcttgtatgaattccacg1020ttgcaagctctctaggagcgtatggtgaagcagtatattgaagaacggacgccgggtcac1080cgaagagcccgtagtggggtgcggaagcgccaccctcatgccggacatgaacgactccgtag1140agaggagcagccacgagtcaagggagaaaagtctgtcgggtgaagtgttcatccgtacccc1200aaggccattgggcgaaagatagaggtgtagatgaggtagttctgaagggaaggagagata1260gcggatggcggaggagacaaaaattgccgcgtggccgttgcgatgctgatcgtggcatta1320tgtttc1326

<210> 2950 <211> 845 <212> DNA

<213> Aspergillus nidulans

<400> 2950

catgactcgt acgggtggcc gccatataca gctatatgga acttgttgga tgtaggaaac 60 agtccatcaa aaccccgaca agcctggtgc ttgctaacat actacagtac ccggcatgca tcattcccta cggaaaagcg agcaaagaac tcgatccaga gcctatggta gtgggcggtg 180 240 gtcagccagg ttgtatgtca accetacttg ctaccgttga ggtcgaatgg gaggctgaca 300 gtaacagacg atcccgaagc tgtggatgga gctccttgtg ctctccagat tgttgcgcct cgattccagg atgagaaatg tctcgctgca gcgaggatta ttgataggga cattcgagtc 360 tgatccagta acccagtgaa ctttgtcttt atttatatta tttaacgtta ttctacaatt 420 ctaaattatt atatttcact tcttgtatat attatattca ttcattcatt cattcatttt 480 atttttttat tettttaatt ttattattat ttttetteee eecetteget ggttetaage 540 tcggaagccc gccctggaac tatcatttga aagtataact gggtgttgtg ggaaaagccc 600 aggacaaggg ctcggacatg accttcatta ctatttaggg agcagatgca accgatcatt 660 720 cagcccgcta ccccaggcat caataaaatg atcgactcgt ggcagtggtg gcttgaggct 780 840 ctcttaacgt atggaggcat cctcctagtt agcgccgata gtgtgggttt aaacatcata 845 atgcg

<	210> 211> 212>	2951 1073 DNA					
	213>	Aspergillus	nidulans				
<	400>	2951					
g	agtgagaga	gcatcttgtg	aagcaaggcc	ggcttgctcg	tagaaatacg	ccgcatacgt	60
t	gcggacgtg	gagaaggacg	cctgttgcgt	gatccagatc	atgcatgtga	tttccgtgcg	120
t	cggaggtcg	atgcctcgaa	agcagtcgag	gtaggccatt	cggctcgtgc	ccaggaattt	180
C	teggeeteg	tttgtatgct	gcatcatgga	gactgtgccg	tccacattga	cgccgccgtg	240
С	cgtgactcc	gttagttgaa	gcaacacttt	tctggcttcg	tgaggccgtt	ctttgcggat	300
C	aaccaccct	gttttagaat	cagctcggcc	ctgaaaacgc	tggagttgcg	gctaggaagg	360
g	aggggggt	ggttgtacat	ggtgattcgg	gagcaaaata	gacaccaata	aaaacgagga	420
C	agccagcac	ccactgaatg	gcaaacggcc	cgcgatatgc	ccattcagat	ttgctggtta	480
c	cagaagccg	agcgacgcct	acggctgaaa	gctggccgag	tagccagcac	atgttgacac	540
t	gctcagaaa	gtacgcccgg	agcgcgaccg	ggatgacatc	ggcagcatat	gtcgtggaca	600
ç	gagtctggaa	gatgccccag	gggattcctg	atgatggtca	gaacaaacgt	tccattgaca	660
ā	acagcgaagc	gtctcatgtt	taccgcagag	gacctgcgcc	gccagcaaca	ttcgcgtact	720
C	cacagcgaag	aactcgagga	atataaagac	agagagcaca	gccaaggcgc	caaggattgt	780
Ç	gcgacggtag	ccaaagtaat	cggccaggta	cccgttgacg	agcaggccga	gaatctcgcc	840
ç	gaccacagcc	ccggctgtca	ggctggcctg	ccacgtggac	gagatctcat	gcgtaccggg	900
t	tttgacggg	acaggcgctc	catattttgc	cctgaaggcc	gggaatgtaa	agaaactggc	960
. 9	gattagtgcg	gtgtcgtatg	ctgccattac	gattgtggtg	cagagcacaa	tagaccacat	1020
(cattgccttg	gggtagaggc	ggcacccctc	gagaaaggag	agcgctgctc	ggc	1073
•	<210> <211> <212> <213>	_	ıs nidulans				
•	<400>	2952					

cagtetettt gaetggeeet gtgegteatt aetteetaat aactaagage attetgeaat 60

ttattgagtt ttaaagaaac gtttgtggcc ggtatcagtt taggatacca gcattatata 120

ggagatattt tcgatgttga tcgaagcctt aatattaccc catgggtccg tttagtctgt atccagaatg gttggtagtc actcttagga gtatggagaa gccaccgctg ctgttttgcg 240 gcctctttat gtctcgggga catatctgca agtctggttc ctaaagctct acagttcagg 300 cgcgttcctc gcctagttag tcaagactta tgtgatagac aacgggcatg gagttcccta 360 cgtgatcttc actgtctacc ggctttcaga tgtactgcac atatatgttc ggcgaccggc 420 caaattccgg gtttacagca cagggactag taaagatttt ccattttgta aaatatgaag 480 gccgaacgga accggatata gtaggtttac ttgagagtac ggtgtgctag accattcgtg 540 ccgcgcctgc gtggggttat atatcagata attgatattc ctgttactca gtgttgagtg 600 gataacatgt tgagaaaagt accatactag tacttcccag gcagccatcc acttctagga 660 ctgagacatg cgagagatac accagctaaa gaactaacta gctatgatgg aaaaggtgta 720 gccataccgc gagtgcatga agcaatggcc catacgccat ctccatccgc cgcactggcg aataggttgc caaccttaag gttccacact acagtggttg gaacttctct attgagtatg aggtggttct cacgcattcc aaggcatctt ctcgctgatt actgttcgct gcgaggcctt ctagccgtaa agcttctaga actggcacat ctccgaatag ggcgaacgaa cccttgtcag 960 cagcgtaaca gactatcacg acacggcccc agggtacata tcaaaccagc ctgccttatc 1020 actgtggacc aggcaatggt accagatgcg gggagaagaa atacaccgta gagcggcggt 1080 ttcactttaa caacctggct ctccgcacga ggaagcatga ttgtccccgc acggagccat 1140 taaatatacg teetteetat cagteeacta tttteettea ttteegegge catacgatat 1200 aagcettteg tggaateatg aatetaeeet eegataaget gattteagag geaatgeatg 1260 ccgatctgct gtcaatgaga agacaccttc ctacctgtaa gcatgtgatg gttcggcgcg 1320 1331 cattgtctga c

<210> 2953 <211> 1723

<212> DNA

<213> Aspergillus nidulans

<400> 2953

tcatcaataa tgcaattact ccaactttca ataccgtcag taccaaatgc actctgaccg 60 aggattcaac ggaattagga ttgatttacc aggcctgcga gaatttgaaa gcatatacat 120

caactcatcc cttcctctag catatgatcc actggttagg caattcagcg atacagcaaa cacgaaatcg gccaggtaca catgtaaatc tacggccgag gaagacgctg gcctctctat 240 gcgcgtgaaa gtggctattg gagtggttat tggcgtggtt ggggctggga tattgggagg 300 tttggcgttc tggtggagga ggagaaggca cgggttgtcc aagtcttgtc acgttagcca 360 agttgagctc acagacttgt ctcgcggtgg agttcgtgga cagaggaatt gggaacgggc 420 cccgaatgat gaggcgccgc ctccgtactc tccgcgatag agacggtgga atgcgcatat 480 ggaagtagtg aaaatgatta gtgtatataa taactgatac tgatcacgcc ggttcacgag 540 cttaatttga acatgggaat gtttattttt gtatatcagc tgtagtttca ttgaaccgta 600 ctgaaccgta ctgcaataat tacaaatctc aattaaacta ttcccagccc ttgcaaattc 660 catgicaaag tigctateet ecageetete tetigitaee titigegeaaa geeactaata 720 gcagcgtgtc tataacatat acagtcaatt gcgttctagg gaaaatcaat atgaaggtac 780 840 atacgcagca aattcggatg gatccagctc catcacattc aaccaggcca ctagatcgtg ttagtttcta cctgcatgat ggttgtcctt gtggtcgacg gccaggtggg ctactaaccg 900 gtcggcacaa ctctcaggag agaagacctc ctaaaaagaca tcagcagagc tcgcaggggt 960 atcctcagtc cttccagtct ggatccggta cgcaaacagg gactggggca tacatacaac 1020 gcagttctca ccttgctgtc tcttatcaag ggaggtcttt tcaaggccca ccgagggtgc 1080 ggcataggcg agggccagga aggccgggaa ggcggcaatg agacgcatct tgtatagaaa 1140 ttggggacaa tataaggtat agttggtctg gtagagtgaa gatggtgtga tgataggaaa 1200 gaatgatgaa ttcgagagaa tgagacggct atttatgtgc ttcttctcct cccctccagc 1260 tgcaccttcg gcggccgttc atatgaacga agtacagagt aagaattcag gatacgcggt 1320 atgatctcag ctgagtgaga agagacccaa tcgagccatt gtattttcca atgaacattg 1380 taagaaaaag cacacgggat agcttcaaga cgaagaacaa ccttgacccc cggcgtctcg 1440 ggctgggcga ctgaactgat agctccaagc ccaagggcat tgttacattc ttccaatgag 1500 cagcgtcatt ttgtggcgca gatcgtgcgg aggacatccg ccgggaggcc ttacatgtcg 1560 atcgccgtct gatttcagca aataaccact ctcagcgtgg agccaagggg cgccaattct 1620 gggcggatgg gaaagtgacg gaggctgaga agatccggcg aataaaaggg ttttggcccc 1680 1723 tagcaagagt gggtaaatgc ctcaacgtcc gctgttgttt gaa

<210> 2954 <211> 1617 <212> DNA <213> Aspergillus nidulans

<400> 2954

accccatatt atacactgtg aaccaagacg tattaatttt ttccaaagaa aaaaaaaaac 60 acccctttt gttttaaaaa agaagagtt tcaccctctc cccccggaaa aacctcttta aaatatttca ccattccaaa aaaccccgag agatgggcta cacacttgtg ggtagagagt 180 240 ccccgggaaa agcttttcta gaacaagcgg ctcgtaccgg tttctagtca tagtctaaaa 300 caggetgega gaaaaggete tttgeggaag geagetetge cagaaagtta aagettagta tgtctatttc tccttaccca gccacgttgc gagggctaca ggtgatgtca aaacacttct 360 acagacggca ctctgtcaac gtttcgctct acttaaaaag atcgacagga caacgccaag 420 togagttcac gtccccgagc atcgcgctgg accttccgac tacggataat aagcggtaca 480 aaqataqcta cgaqctgttt gcgccgattg acccggagaa atccacgttc aaggtgctcg 540 gcacgaagct agagttgatg ctcgtgaagg gagatggaac gagctggcca gtgctacgaa 600 aggatgatag atggactggg gaacggatcc agattggtag cgcagcaagg gcttaactcg 660 720 acttcgatat cgggtagtag atatgaatca cgatcatatt catgttttgc ttagctccaa ataageegtg taggtagttt gtgtagagta gattegtege aegaegegea aeattggaea 780 cagccgtcaa atttcgtcaa tcgactggca tggcatagtc tagagatctc catcgcaaga 840 gagtectage acaactaagt ttgeggeage gtetgeagag tetgegegaa gtaettgtte 900 cattqtacca qacaqatcaa qaacttctct aqcaatccaq cagaaaactc ttcaagctag aaactacaac ccatcctacg aagccagcaa ataccaccaa gggcaagcaa aatagtggca 1020 cgccccctcc acagccaaag cgcatgggca cgccgaaagg cacacctagc ccagccatga 1080 attgtaaggg aaaaagaagg gcgtgatggt aaaaattcct ctccagagct gggaacggaa 1140 gaaaacccac atagatttct aaaaaaactc acaggataac cctcagcgag ccgcacgtgg 1200 cggagctccg gttttaacga atttacatgt taagtaaacc gctactgatg atggagaaga 1260 aaagaaaaga ataggaaagg aggaaggatg gtgcaaactt ttatatgact agccaagagt 1320 gccgctaggt tgaaagcggt tagtgctgga cttagtctcg gagtttttta gggtagccgg 1380 tgaagtgagg gctagggga gggcttggga gctcatgtga ctaagggtg ggttaggcag 1440
aaatctcagg cggtcagtgc ttaggagggg aaatcacatg caaaatgaat ggctagctgc 1500
atggggttag attgatactg ttaagtttgg cccgtattac tggctttagg cctgatatag 1560
tgagcccgat ggccaaaaaa aaaacccca gacgcccgga caattagcga ctgactt 1617

- <210> 2955
- <211> 1216
- <212> DNA
- <213> Aspergillus nidulans
- <223> unsure at all n locations
- <400> 2955

gctaaaaatt ccggccctat ctgcccgtga gaactgctcc ttcatcactt gatgctcccg 60 gaacgtatca tatatagatc ttcgtaatag gccgcttccc agtcgtatga tcgctgcgca 120 tttgtgagat ccccgtcaaa gaaactgagg aggtttatta agggatccga tgcgctggaa 180 ttgtccatta cggagagtct tgccgaaata atactggatt acgccgccag aggtttcgct 300 cggcaagctg acaaccacgt caccaagacg gatatctgta tcttcacgag gtactccacc gccgataccg accatcaatc caaagtgcag acggggaaat gtcgggagca tctgagcaaa 360 caccgttgcg gcagaggtag tcccgtagac gccagaagga aggcaaacca ctacattgtg 420 gccagcccgt cgaccgaggg tataattgtt gcgatccgtc gagggttgcg agagagaact 480 gtgaatctca tctaacatga cctttgcagc tgccattccc agcggcaatg cgcagatcca 540 ggcaacggtg tagtcatcat gtgataactt cgtgctgatg gtcatggccc acagatactg 600 660 aatgtgacag catagatgaa gtgaagaaaa atagaaagcc tgttgagttc gaagagggaa cagtttcgca gattcgaagg ttggggctga gcatggagag ggttagcaga ctacagtgca 720 780 caggeteaag aacagatata acgatacegt getgtggaat taetetagat catattggta 840 tgttcatgtt tgacaattgt ttccccagtc atggtcaata tcagagacac ccccaatcca 900 gttttctgac gtactccaac tcttctcttc aactcattcc ttgacttcca tttctgcagt tectgageca actettecaa agtateagte egettettee cetgatteta getecatata 1020 tgtagaggac aacgggtata gaaaataggc cccctgcaat agagcccaag agtgtcagtg 1080

acaagaaca

cccattgaac accaagtgac tcgaactaca aaaagaatat aagcgctatg ccagattctt 1140 gaagggtaag attangtacc atacaagttg caaaaagcgg aaacccagag ccggccagcg 1200 agctgaggaa cgtatg 1216 <210> 2956 <211> 1149 <212> DNA <213> Aspergillus nidulans <400> 2956 60 cgtqqctqtq qaqaaqatqc cqaqacaaac ttcqqqtaaq actqacatca aqcqcqtqaa aaaatqqqtc aatqaqctgg atgagcagac tgctgagcaa gctcttgata tcgagacgac agegeetggg etcacagtte etggtagtga ggeggagaag gtgatacaag gageagtete 180 caaaqtcttg aatatccctg ccgagaagat tgccttgaac cgatcgttta ttagcctcgg 240 cogggattcg atcacagcaa tcaagctaat gaatcaactg cgagatgcag gggtgaattt 300 ttcaatcaag gaactgctcc gcgctgggtc aatcggtgaa ctcgccggcc gagttacatc 360 420 catcagtgag ggcgagaatg tgaacccgct attatccctt gtctcccaga agaaagagaa gaaatactca cttctgcgcc tcggggacgc tgaaatagag gcactgctcg cacagcgtct 480 tgctactatc ggtcttaccg atttgactcg ggtcgaggac gtctatcctt gctctcctct 540 acaagaaggt ctttctcgtc gcacaaacca agggcgtagg aaggtacgac gtggtacaca 600 660 tctacgaagt gaccacctca aagacgcatc agtctcggtc aaccctcatg tacttgccaa agcctggaaa gaagttgttc gtcggcatca aattctgcga acaatcttta tacagggtct 720 tgaaqaaaqc actqcattta accaggtcqt cctacgcgag gtgcacaatg ccccctttgt 780 840 catcgaggat gtcaagagca atgatgccaa agccctattg cagaaccttg ccactccaga gtacccagcc ttcgagcctt ggcatagcgt gacgatctgc tccgacgcca atgggactgt 900 ttgttgtggt atccggatgc accacggctt atttgatgcg tcttccatgg atatcattct 960 gegtgaggtt geteaggett ataateagag aettteeaet eeageaeeet tgtaeeggga 1020 ttacatctca tacctgcagg gactacagca agggggcaat gatggcctcg catactggca 1080 ggaatacete aaagaceteg agecatgeta etteeceage ateaacgagg aggeectagg 1140

1149

<210> 2957 <211> 1724 <212> DNA <213> Aspergillus nidulans

<400> 2957

60 aacctetttg ccacatgagg eggtecaega etaegeeteg tetgagegee etageteaee ggatgcttcc cccaccaacc agcccaagaa gaaggaatcc actggacgca aacgcagagt 120 tectggegtt ageggegete aaaccatgaa gegeaeeege tecacacagt eecagacaaa 180 cccattgaag gctgctgtcc agcagacatc cgtccacaac ggccagaaca tccaggccgc tgaacggaac tactataatt gccaccggcg tctccttgag caactcaaca acatcacacc ccaggactcc gccatgcatg acaaggtcaa cgcaagtctc caagaactca ttacccttgg 360 aattacatac cgccaggccc aagccagcca ggccgttgct caaatcggca atggaattcc 420 cgcttgaatc agcatggcca tgagcaaagc aagataattt ttgcatttgc tgccaatttg 480 ttttctcctt cacaaggatg cccactagat caggactgct tggcatattc catggagctt 540 ggaggcgttt ctaaatccca gctacggggg cactgtgcct ccttttatga atgctgaatg 600 aaacggccta caacaaatta ttttcagact gccaggaata atttgcattg cacctgtgtc 660 taattccaag ggttcaacca tgacccaggt ctggtaagaa gcgcaccatg ttcaatcgcq 720 gaaggacccc.gtttggactg gacgggctgg tcttgtcctg gctatccagg caggcaaaaa 780 ccaacttcat tacaggtcga agtcgagttc cggtgcggga ctctagcgcc cttgcgctac 840 ccattattet tteteacatt ateteegaga atgettttta tetttgette tagttttega 900 cccttctttg cgctatcgcc cagtttgcga aggcttgatt ctttatatca tttcgtattc tgctttccta tatttgtggt ggattttgca aattacttgc ttgcttctct tcctgaattt 1020 ctcctccacc gagaatccat tggggaagac gaaaaaagaa tcacaaaaaa aqqqttqatt 1080 caattcggtt cgactgagat ttgtatacag cgacggacag cgcagcgctt tagcgaccga 1140 caaaaacaaa caggacggaa tggaaggaac tcatttcggg atattatagc ttctatatqc 1200 gagtttatgt gttattttta attgtttttg gattggtttt tgtggaaata cttctgatac 1260 ttcttgtgcg atgcagtcgg ggtgcagttg atctgcactt catgagcttt ctgtgctctt 1320 gacgatgggc ctgccctgtc tactttcggg ttatctatat agtgatgatt tcgtaaaatc 1380

aggittatat aaacticact cictictagi aaaaaggigi tettaaeget tiecaaagti 1440
tgatgetteg etatatgeag titeetetaga eaagataage aaecetatta aaeageeeaa 1500
attegeeaaa eaatteegae aggitaatgaa etaetgaaeg ggettaetae egeteeteaa 1560
ceteategge gaaateegea tieaaaaaee tiaeaaaege ateeeetati teeeeetete 1620
ttaaeeeace teeteeetig aeageegegi giggeeeage aatgiaegeg egatteageg 1680
aaateeactg eetigegiaga etitigtaaee ggeggagiig eaag 1724

<210> 2958 <211> 1311 <212> DNA

<213> Aspergillus nidulans

<400> 2958

ttaacataac aacaaaaaa aggggggggg cgcgggttta tgatgtctct ttaaagggtc 60 aaaggggaaa atccgcaaag ctgagcggga acttctccat ccggggggga taagggacca 120 agggacgctc ttaggcttgg aaaacagtcg ggggaggagc acttaaaagg taggtccacc 180 tgggggggga acacttgtgc aagagatcgt ttcagacagt ccagcaagcc cggtcgctaa 240 caaccgaaag ccaggcgtta cctgagccgc ggtcaattct qaqcttcgqq ccqtcqcttc 300 atagtcgctc gtgaagtgta ggatatcggc tttaatggac tgtcttcaca gggggacqqt 360 gcctgggagc ggatggtaat gggtcgccag aagagaggtc ggcagtggtg gcaatgtcga 420 attcatcctc gaaggatgca ccagggcaag cgaagtcagg accttgtcag agaggttgct 480 getttgeacg egataettga taccetegaa ettgacetea tegtetgeaa attgteaata 540 tgctttagct tactgcagga agaaaggatg ggatggagca tactgtcgcg gaaqaqaqaq 600 actttcttga caggagaggc atctttgaag aagttcaggt gcatgaaggt aacctcctgg ctaccggtgt tctgcacaac agccttgatg cgagtgttgt caacctggga gagggtgacc 720 tgaagcccag tggtgctggt cctgatgtcg accggagagg cactgqcaqc ctqqaqcaca gccagaagag cagcgggggc aatgaacttc atgatgggtg aagatctgag gagctgatcg acttgactgg ttgactgatt caataaagta gctgatcgta gctgatcgtt qctgcttatq 900 ggatcaacca caatcgatgg ggatcacagc gtctttatac ttttctcctc cccctcccca tcactgactc taagcgaaca aaaggcatac tcatatctac atccgcggcc aatgctgcat 1020

tgagccatag ccaaggacac tggaaagaca cggctgggcg tgaagcctcg gtgacaccaa 1080
aacagaaggt ggtatcctgc cgtcgtcttg cattgccaag ttcgttctta ctgtgaaagt 1140
atatcgaagc tatttgatgt cccgtccagt agcaaatcca gacgaaggcg caatagattc 1200
accaattagg gcaattggcc gggcccggct tgaactgcct agattcattg caacccttcc 1260
agcatggccc gatataatgg gggactatga acccctgggc aagtagtgca c 1311

<210> 2959 <211> 1526 <212> DNA

<213> Aspergillus nidulans

<400> 2959

aacacaacgc gggagacggc cagtgactgc ctcgtgccca acgagtcacc tttgttccca 60 gaccgcccaa cagctgccgg gctcagcttt tattctggaa gtaatccctc gcttgttgga 120 ggtgaacaga acactgggac ttactgatgt catatctgag ccgaggccta tacattcaaa 180 ttaatgaata ttgagettaa aatagtetea aeggegeett gaeeettgae tegaaaatet 240 tgactctgga ttaattaatt tatattgcga gcgcctggat ggaccctagt cgctgactcg 300 tegeetgeae tegeaaaggg etatetaeat acagaatata ttatageaet gaaegetggt 360 gctagctggt gcttgctggt gcggtgtatt gtggcgtagt gatgtggcgc tggcgtcgtc ttagttggcc catggagacc gaccaagggg gaataagtgg gctgtccaac ggtcgcagag 480 gtcatgatag acgaaactgg ctgcggagtg acggaagaga gcagcgtgcc cactgaccaa 540 gaggctaata actattggcc ttgggaattg cgatttgccg gcaatggtgt caaactcaaa 600 actcaaaagt tettteeata gteteaacta cegeccegtt tetegegtgg gactattgaa 660 taatgateee eeettggaee etgggggtgg actggagagg gttggeagae geeattataa 720 cacgaggacc acctgctctt ggtgcccagt cttggtgccc agaggccggc ctgggctagt 780 cgagcattgg agtggcggac gaaggctgga gtatataatc taagtagtgg agtagactgc 840 ctagtagtac gagcatagcc tttttaacga agcgtattct ggtgagaaga ggatatgtta 900 ccgcttggcc tgggcctgtg ctgtcggtgg gagtaacaaa tttaaacggg atgcagagac 960 gatacaataa ggaccaaagt tttaagttga aggtttgata tcattcatta tcaccctgtt 1020 attaacagga gaggatatta tgtgtgaaga ctgaatgtag acgcctcagt ccctggggga 1080

cttcggagtg ctacctacct tgtcgctcga agtggctccc gcgcggcgca tggcgacaag 1140
tctctcgcgg agaattctct ctcgtagttc ggtgctagaa acgcgtgctt gctgtgcttg 1200
tggttttgga tcggtgcgct ataacggcgt tagtctgttt agaaaaacca gttgaccatg 1260
cttagttacc ctgaagtggg ataagagaac acgactggga tagctgtctt aaataccttt 1320
ctatatggga ctcattcacc cacctcttta gcaggactct tcactttctc aacatcggga 1380
ggcggggacc tggacttgcg tggtgcgtgc tcgttttgat cagccattct ctgtcgtttc 1440
tcagtatgga aaaatacaga agaggaattg cgccttcgtc gcgcgatggg agcatatctc 1500
tcaatggacc ggagacgctt cctggg

<210> 2960 <211> 2077 <212> DNA

<213> Aspergillus nidulans

<400> 2960

aattettgta gtaagtgate ttettaecea eetgggeatg eeeatgtgee teageeeeaa 60 agtaaaaccc acacccatat tagaaagtgc caacgctatt tcatgtgttc ttatgcgcca 120 gategeegea attetteeta tgataateat egtegteete egtgtgtaee tegttegega 180 aaacaaacgg cgcgacaaac tccaggccgc tgaccaagtg tccagtaatg gggtggtcga gatactggat tcagatggga cgcaggttgc acgcgtggtg gataacagcc agatggatct 300 tactgaccag gagaatttga ccttgtaagt tctttatgtt tgtattgatt gtgcgagtga 360 ggagatgctg atcttggttt actatagccg gtatgtgctc tgactatctg cgctggtgct 420 aggtgctagg cgcaaggttc atcacggctg gagcgtgcat tccttgaaga gagtgtttaa 480 atgcgagggc cttttgtatg agatctctct gtgataactg tggcggccag aactacaccc 540 ttgattgtcc actcctttgc tgcacggacg accaggtact gcactggcag taagagagaa 600 tetgeceetg aatetgeece tgaatetgeg titaetgeec catteeaatg ettatggagt, 660 cgcactaaga aggagcgaag atttgacatt attattgtag aataaaagga atgctgatat 720 acctccgcta caatttgtta ttgcgtggca ctatagtgga gtttttcaaa ccatggaaat 780 aacgccgcat gctttcggtt cagcatctag acctctaggc aagccttcca ttgatacaaa 840 900 agccaggtag cgaaccettt ctgaaacaaa atggtcagac aaccetgttc agacaacett

attggcgtcg ttcatcgcat cgtcatggtg gtatctagac tatcatgtgc tttttaaccg. 960 tccatgccac cagggacccg ttcgatctac cactgagccg tataataagg aaatatataa 1020 accteggeet teagggttgt ttgeetgaga agatateaat geteatteee actegattae 1080 cccagtaatt ttgttgactt tcaatcaaga tgcctcatta ttccgagtac cctaccatca 1140 ccccctcaac ctccaaactt gactacatcg aggctctgaa gacggctgtc ggtacagaag 1200 gcttgagaac tcttcaacct gatgaagcta agcctccggg gttcgacgat ctgcaacaat 1260 ctctagcaag ctctactgcg agcactcccg caaggtatac ctgttcaacg gacaaacctc 1320 ttccggttac ccttcgaaat atcagcaata gcgctgccct tcatgtcggc tttggaggag 1380 tectgecacg etgggeaaga gaccecete agacagteaa etttgeggea tttgegaacg 1440 gctacccqcq ccctqtqctc gctctcgtcg gcgcaaacgc gctacgagat gccgctgacg 1500 agtggaacaa gctcgatcta ggagtcaagt ttaagtgggt gaggaaagat tgaacatgct 1560 ttgttcggcc cttcctacgc ggggaacaag ggaacctgct ctcataggct ttttttcaaa 1620 ccaggettee ttggttattt aacgtttttt aatagaette aageeeggaa agaeageaet 1680 gaaaattett tittgeeage etteacegge gtgtteeece cattitteee caccetttaa 1740 aatattaggt tetettttgt eettaaatee ttettggtet ggattgaett tteteatate 1800 acatetqtte qaqqtttaqa etecetatee teatteteee eattgtggge atetteetaa 1860 ctacatetet atttacetee acttacttat teacatteta ttttteettt ettteetaet 1920 cctgaactta tcgcatatct agtctttctt acctcacttc actctacatt tcttttatac 1980 catcattcct ccttttttcc ttatcctcca tctcttcctt atacttaatc cccttttctc 2040 tccatcctat acttactcat ccctgcccca tatcact 2077

<210> 2961 <211> 1149

<212> DNA

<213> Aspergillus nidulans

<400> 2961

tatacagata actettttgt tegtegegge teggagtegg gaggtgggga gettggagge 60 egtetaaact getagegttt gatagageat egteacatgt aatetattat tacaggatta 120 eacagtegae tactgtggta agatggeeaa gttgegaega egacaegeea acgeegaega 180

240 cgctgtaatt ccgggcttcc taggttgatc atcgggttcg tgaacagaca tagcaaagac cccqatqqat ctatttttqt ggtgtactga ctctatacgg agtcgcctat aggctatagt 300 gaagcggaat atcgacgctc cccaccatga tgcaaggcac gggagatgaa agttctctat 360 420 tecatqqtca taqcateete tqctatatet ecacegeget ggacgaetta egttgtggge ttacggagga tggctgtcca gcccattatt aatactgtca gcctcgacct gggaagtggg 480 catgtattat ttgtgctgtg ctccgtacag agtacagtat cgttcaggga cattatacat 540 ggaagaacca ccaccgggtc catttgttac cagtaatcgg attctggtga aaagttcaat 600 660 atgggccac ccgccgctcc agtttgggac tctgggacct tgtacttttg acagcaggag agctcagaaa ttcagagcac gacaagagac ggcagttgca aagcgttacc acgaggcata 720 ctccgaattc ccctcatttt gctttctatc tcttcgcagg acttccctcc ccctctcagt 780 840 acggaggage ggccgtctag aagtcgagat ggccagtgcg ggagaccgta gacgagagac tgccccctg gccggaatgc tgggtcggcc gtagtggttt catctttaaa gtttgggagc 900 960 ccaagccagt cagagcgtcc cactagcgac gataatgtgc gtggtggctc caaccgccgc tctccgcgct gtttggcgcg cccgtttggc cctcatggct cgtggaagat tgccatcatg 1020 gctgttacgc gcagcacgac cagacacttt cccttcagat ggtctcgagg aaggcacaac 1080 accettttgg ttctcgagga gctaaaagtg ttcgaatctg cacggagttt attggtatga 1140 1149 actggtgtg

<210> 2962 <211> 613 <212> DNA

<213> Aspergillus nidulans

<400> 2962

ttggaacgca ttagaacgca tagctgcagg ttgcacaggc gcaaggtttc agagtcgca 60 gcatgggctc ccgcagtacc aagccgtgta ctgcgacgct acgtggcatc tagcggtgtc 120 gtctacgatc ctggaaggtg gagaatcact ggaggcttgg agctaaaccg cggggcatag 180 tgcgtaaaac ggtttctggc gctcgtcata atccatgcac cgaggcagca cgtacgtcct 240 gcttccgaac cctctcccct ccaggaagga ttcaggtatg ttgcgcactg gccaggtggc 300 cgtttgatga ggtcaaacgg ggtggaagac tgactcttta aagcgtcgac ctttctcgcc 360

cgctgcgcgt	cgcatcgcca	cgcatccgcc	gggggcattc	aagattccgc	cgagatctgc	420
caggaattct	agatagctag	ggcctacgct	tgaaaaattc	cggtatcagg	gcacagtcgt	480
gctgcatgga	cggggcagag	gggcaattcc	gggatctcgt	tagcatagga	gcccctatcc	540
gggaggtact	taagaaaatc	cagttcctcg	tctctcatat	ctacatgccg	ttgaggctat	600
atttaacctt	act					613
<210> <211> <212> <213>	2963 959 DNA Aspergillus	s nidulans				
						60
cgtcctcagc	gaatttgcct	cgacctcaac	agaagaagag	cacattaccg	ccttcaacac	60
tcgggaaacg	aacccgagaa	gaagatccct	ctgtcgtacc	cgtcgaccag	ccgccagatc	120
caggcccgtg	cccagaatca	tgttcaggtt	caagttcagg	ttcatgctca	gggccaagct	180
caacgtggaa	catgaacgaa	ggtctgaatt	ttgatatgaa	cgagtgtctg	ttgccgggtc	240
caaggaatcg	ggcgttgaga	cgcaagatac	agcgcgtggg	atgggacgtg	ctaaagcagt	300
gggagatctg	ggggttggat	acgcaggagc	tttgattatg	cttctctcaa	ctgcttttac	360
ttttctaatg	attgaaacca	aacccttacg	agcacaacgc	attatgcacc	tctcacgcac	420
catattcgct	ctttgctatt	cagctgagcg	caattccgcc	catcaaaacg	atacccgaag	480
gagccctgat	gctcttttcc	attatttatc	cacctaccag	catattcatc	taccttgcta	540
catactataa	tatacccagg	ccgcgcaacg	cgtcaataca	gacaacataa	accgtcaaat	600
ccttatcttt	actcatccct	tttatacttc	gcaaacgagt	acaaaaagtc	caaactatgt	660
atctcccaat	gttgctcctt	gctccgtctt	tccttttatt	ctggctgcgc	taggcggaaa	720
ccgggatacc	atactgcagt	catagcaaca	tatcgcattg	tcctgacacc	tgtattcgtt	780
tgtgttccgt	tccgttccgt	gtagttctgc	ggacttgtac	tatgcgcact	gtttatacca	840
ttctgcagcc	ctttcattcg	ccagtcttca	gtccgccgga	gttaggcgca	gctgcatata	900
catgagggat	catctagata	tttgatcttt	gtatagaatt	aggaatgggt	tatgataga	959
<210>	2964					

<210> 2964 <211> 1077 <212> DNA

<213> Aspergillus nidulans <400> 2964 caatccatcc aagttcgcga ggtctccgat ttggaagatt ttgtagatat ccgtttcctt 60 ctcagtgaaa tgcagatgcg cctggatttc gtcgcgcacg gcgcgcaqqa qqqaqtcttc gatcagaggg tgaatgacgc cgtgcaagta actgaacaat cagcgttggg gcgcatcgaa 180 gcaattggtt taacgtacgg cccagattca gcatataact tggtatagtt ctcttgtacg 240 gacggctcga agagaccgtc gcggaagcgc aatgcgactt cctcgctgga aagcgctcgc 300 tttttggtgt caggctggcc attgccatcc acggactctc tgctgttggt cttgcgcttc atttttggcc tctagaaagt gaccgacttg atgagggtga gtttcaaaaa tttttgtgct 420 gttaattgcc aacggtcccg tgccaaagat caggccatgc tcaggctact gtcagtcggt 480 gtggctaagg cattggaggg tccagtcaaa agctttgcga tcatagaata gatataatag 540 caactatttg acatttttat cttgtagttg atagttaaat catgtctgcc cgaggagagc 600 gtgtcaaatc cttgcggaga aataccgcgt tcgcgccatt tatcgtgaat gtcgqqaqtc 660 ccgataagca ctcaagcacg cctccatcca gccaccatct tcacaatact gcctagcgac 720 cctttcactc ttctggggct tgtttggcat gatactatgg tctagacgat tttcatactc 780 aagtacatgt atatggaaag agatattata cctatctgtc gcatatcaaa caccacgatg 840 gaccaacgtc atagcatcag cccagtcaac accaccgcgg tgcccgaatc agctatcaac 900 agacccagct cagactccac aggcccgaca gcatcgcagc aggatcacgc ggaccaggtt aatgagactc agcgtccagg aacacctcct cgcccgccat attcgcctgt aacgcccgtg 1020 ttcgcccatc tcgcgccggt ccaggacccc tctacgaacg ggatgacaca accatag 1077 <210> 2965 <211> 1654 <212> DNA <213> Aspergillus nidulans <400> 2965 cggggtacca ccttgcctac tttacgccag catttctgga gaatgaactc ggtgccgatg 60 gtaccgatac gagctataac ccggcgcatc catttacgcg gcgcatgtgg gccggcgggg 120 aggtttgctg gccgcgggat agtaatggca gtgtgaatcc attgagagtt ggcgagaagg

ttacagagac gacgagggtt ctaagtgcgg aggcaaagac tgtaagaaag accggggagg 240 agatgattgt cgttggagtt gaaaaggagt tcagtaatga ggccggggtt gcggtgattg 300 ataggaggta tttttctatt ctctcaatgc tgtgatctgg ctctgaagct gtatagaaac 360 tgggtcttcc gcaaagccct cccaccacca tcgatacaac aaacccaaga ccttccccca ccaacccctc cctcttctct cccagccacg tctacgacaa cctcctctcc agacggcctt 480 acccacaca gcaccctccg ccagacggcc gtaacgctct tccgcttctc agcactaacg tttaacccgc ataaaatcca ctactcgcag ccgtggtgcc ggcaggtcga agggcacaag 600 gatatcgtcg tgcatgggcc actgaatctc attgcgattc tggacttttg gagggatgta 660 cggagctctg cttgtggggc ggatgttgat gcaaacacat ttttgcctga cagaattaca 720 taccgagcga cgagcccgtt atatgcggag gatgagtacc ggattgtgct gaagaagggt 780 gagggtgagg acggcaagaa gagtgccgtg gagattatta cgcctgaggg taatgttggc 840 atgaaggcta aggttgtggg tgtatagcgt aaagcaggat acgatagaag ctqqttagct 900 tigiatacci tigacgitai igicalcici ccigcciata ciccgiacci acaactcica 960 accagtgctg acaacccaag ctatcttccg ctggctattt gcagtgcatt ggtcagqcta 1020 aacttaccag acaggtatat agaacgcacc cggaggcgtc ctcagagata attctttacc 1080 aggetetgga ggtggtgeaa tgacaaaggt tgtagaggge agaatataeg aatagagtge 1140 aatataagag caaaattcag atccccttcg gcgctgaaat atccccagaa caaaactgta 1200 gcccatcaac ccatatatta ggtaatgctc aaattttgac gcaaactgcc atgacaacat 1260 gccttcattc actcatacaa cacttcagtc gtcaaagtcc ttctataatg catcgacccc 1320 ataccctatt tcaaatgtcc ttcacatgct ccgaagccat caaagctgcc agagcatatc 1380 gcataccatt aaggcagacc caagccgcgg cactggcaca agcccaaacc ccaactcact 1440 gaacagagca acgacaagct taatctgaat accccttgaa caagcaattc cagaaatccc 1500 ccatgaacgc gtaccggtct cttttccacc ccttgacaat aaactttcgg ccgagtttaa 1560 teagtttteg gaettgette tetgteecta eccattegeg egtetgetee eccaaacgat 1620 aaagtgcacg ccgatgtgga tgagcatgcg gtaa 1654

<210> 2966 <211> 751 <212> DNA

<213>	Aspergillus nidulans					
<400>	2966					
aggcgctcag	agaacttctc	aaacgcagcg	acatcggaga	gtcctcccag	gaagaggtca	60
tcatagagca	cgcccacagt	ttcgaaaaca	ccatccagaa	cctaaaagaa	gccgcaaacg	120
ccatcacagg	cacgatccag	tttattgaaa	gccaccgagc	aattctcgaa	gccgaaagca	180
tcacccgact	tacagagete	gcattcttgc	ttatcccgct	ttctttcgcg	gcctctctat	240
tctcgatgca	aatcgatcaa	ctcgcgactc	ccgtccctgt	cggcaacttc	attgccttcg	300
cgctgtcgct	aagcacgtct	acctatgccc	tccgcctggc	cgcccgcagc	gcatgggtcc	360
ataaccaaaa	gcaacgcatc	ctcacttcca	tccgcacgcg	aagctccgtg	ccccctggtg	420
cccctatctc	caacagggta	attttcgcat	gggcattttc	tcatctcgca	ccaacgatta	480
tactgttact	ggtggtggtg	tgttttgtgg	tgccgccgtt	tgtcgttatc	tggaggcggc	540
ccctcgacgt	gggactcaag	attgggctta	cctttttgtt	tctgatattt	atagtcacag	600
ttgttggtat	ggtggtcttg	ttcgtcccgg	agtttcgcaa	cacattgagg	gatggaatgc	660
agatccactg	gtataaaact	gtaatggtgg	aggatggacc	cgctgaggag	agacggccgt	720
tcgggcgata	ttataaaatg	gattgcagtt	С			751
<210><211><211><212><213>	2967 1550 DNA Aspergillu:	s nidulans				
<400>	2967					
cgcgggcgat	ccccggacct	aggcttacct	gggatggtga	gacggtcggc	aggatgcagc	60
cctactctgt	atcgagagtg	gtgctagtct	gaatgtagtt	gaatgtcact	ggatgttact	120
ggatgttact	ggatgttagc	tggatgttag	tattcaggac	tggcgttcct	gatctttcct	180
ttttctccgg	ttaaccgtct	acggaaaggc	ttcttgtgac	cgctcgctgt	ggcgtacggg	240
ggaaatcccg	ggtaccgcca	cccgtcatgg	gagctttgag	acgaggaccc	tcagctataa	300
agctctgttg	cagacgagca	gctccacatc	gggcaagata	ggaagcaatc	cgattcatgt	360
gcaaaaggca	cagtcctaaa	ttaagagcct	gagagctggg	ctagaccagg	gcccgcgtct	420
caggagtcga	atccaggtgt	tgtggagagg	attatgcagg	ggcttgaaac	cgggagaatt	480

aggaagaatt gggaacgctt gcatgttgaa cggcaggcgc agcaacaaag attccgacag caataaatgc ctcatagctg gtgccgaacc tcgataatag atcagcgata gtgctcgtcc 600 aacttgccca tttgcaacat gccaatttgc caatatttcc atttttcca atattccaat 660 ttttccgaaa tttagagtgg cctttgtggg cacaaacaca gttttttcgc gaaaactgca 720 cgttcgcgcg gccggatatt tatcctggac ttgtgcacag tccgtctcgg cgagatctat 780 tgagttggga ttcttccgag atggtgccta acatttgcgt atcgcggcct atgagtcggt 840 aaagactcgg atgccatctc gatgcagtcc gaagcgatag caatcggcaa tccaataacc 900 tegtetetag atategtece etecgatgeg agegatgeaa tgateecata ttaaatgeeg tegtatttga tacateaceg atteaacegg teetegeetg etaaggagat tactgtgega 1020 gcggtttcca tggttgagag gtctgtcgtt cttggtgagt gcagctacac ttgaaattat 1080 cagcgtttta tggtcttctg gatcggccca gatcctgttc atggttgcca atcttctaaq 1140 ttgtagtcta atttaatgcg ttgtgcatgc gctactaaag gcttcaagat ggtccagggc 1200 tgagacacac tttgagcgtg tttcttgaat gactcagttc ttcattgatg tatatcacaa 1260 gaccgccgct agacttgagg agctgctgct tcgggagacg atgtctgcat gtttgccagg 1320 tatgccaggt atggtattga aactccgtca gcgctagttg cgcttcgagc ctcacttaac 1380 caagacgaag actatcagac ggtggggatc ccgcataaaa tagccggcgt tgtgcagact 1440 tgaagcggct ggctttgcgc tgtcgacgtt ggccgcagcg tcttatccga ctattatgaa 1500 tagagatagg gtagcgcctg agatcctgcg cgttctgtct acccgtgcgt 1550

<210> 2968 <211> 359 <212> DNA

<213> Aspergillus nidulans

<400> 2968

ctggccgctc ttatactcta cccatgagtc gttgaccata acaaacaagc tttgtaggtc 60 cagaacatct cagaccggta cggtacaaat tgagcaacaa atcaacgatt aaaatgaaaa 120 tgtacagatt actcgtgtac acgattaaag tgtcaactcc acagctggcg gaagtcaccg 180 aagactccag tatgataggt gaaaacatga atctggaaat ctcagtcgtt gaagttgcac 240 caaatctgtg aatgacatcc aggtctatcg geggcaaacc aaccattctt attgcatgtc 300

<210><211><212><213>	2969 1161 DNA Aspergillus nidulans
<400>	2969
ctgtagtaat	ggaactggat agcccaagga

60 gga ttcgtgatgt tttctggaac ttcaaaccac tgggatgtct tgatactatc ctggccacct ccgacaaggt taacaacacg ctgggaattg 120 aacccgccag catcagcaat tgcctgaagg aaaatactgt tcagtttatt gatttcggcg 180 ccgtcttcag cggtgttcgc tgggggttcg ttgatggatt caaaagcaac caaattgggc 240 ttacacccca aagtggtccc gatctggtac cacaggcgat agaatttctc atcaatcagg 300 tctaggtcgg cgccggaagc agtgacatcg gcccattccc acgaatctat gtacaatgtg 360 aacagacgct tttaacttgg ggaccataaa tagctgctca ccatggtgga cattcacgat 420 ggcatacaag tctcgagaag tgatcgagtc taggacatca gagacgcgtt gcagccatgc 480 cgggtcgaca gtccagtcag gagattctcc agtgaaatga tgggtccagg tcactacgta 540 acgtgagtat gctgtacaac aagtggctaa tgatgtctgt acctggaaga cgaacgctct 600 tgaaccctga ctgtttgatg aggtcgagcg ttgctgcctc aacaggagca ttgttccagg 660 aaccttcgtc tggaatggcg tccagagtat tccctagatt ccacccagga tggatgtttg 720 caacaaagtc ctctgcggtt atgggagtaa agtttcctga acatgtaact tgggtgtatg 780 caacctgcaa gagagcagaa agccccgtga ttgatagtag tctttgcatt ttgactgtgc 840 acaagtccgc ctagatattt tgataagttc ggatcaagta tccaaattta taaatgatgc 900 cagaactcta ggggagattg ttcgtccatt taatccaggg gtcacccata ttgtcgtata 960 tgacaaagat tatcccctct atgtaaaaac cgggacaaga tataccgaat attgcgaaac 1020 aggggtctaa agtggagaga ttccgggtga aatatgtcat tcgagcttcc tgatcacgga 1080 agaacgggcc gttctgtata aaggcccagt taaggcccga tggggttatg tcagtcttca 1140 ccagtcaaga gagtatgagg a 1161

<210> 2970 <211> 1713 <212> DNA <213> Aspergillus nidulans

<400> 2970

gccgacgcgt ggggggatct cgtctggctg cgaggcgatg gtgtctgcag agcaggtgtt 60 gccgttgctc tccagcatct gatccagatc aacgccgacc tcggacccaa atgctgacgt 120 cgacgtcctc tttacggccg gccgtgttcg tccctcgtgg acgtgcgtct gcgcgtgcgg 180 ctccttctct agctgacgtt ggggttgagg ctgtcgctgc cggtcaccat ggctaactgc 240 agccgcagcc gcggtcttcc tctgcatctc caattcccgc aagtacctaa gtataacgat 300 acgcctcaat atcgtcgtta atcatcatcc gcatccagac gcacctttca ggcaccatga 360 ctttgctgac ggtctcgagg aagcggcagt ctacgcggcg gcgctgacag ttggcgcagg 420 gctgttcgcc cgtgcatttg atcttgcttt ggcggcaggc gacacatcta cagtccaatt 480 gtcagctata tctgctttct gtatagagac agggcgaggg agacgaattg tacgcatttq 540 atgtgcgttt cagettaege tggcccgtce gggtggttge catggtgaag gcagttetgg 600 caagattgag acgaggatat atggcagata gcaaggcatc ggggaatgag tggaagtgaa 660 aatgtggcag gcaagagcgt gtatcgtggt cctactccaa tgcaggctag gcagctcqcc 720 ccgcacgagg cgttcgcctt tggagatcgc gtgggggaatg acctgccctt ttgagtgaag 780 aaagcccgaa gattgctgac cctaatctac tgcatgcatg attactgtta aatggttgca 840 taggctgcga catggatagt ggatttggat caggggaggg ggagctacta gagagctcag 900 ctacaatggt gataaagcag acaagccgtg cettatetet cecagggtat cegteteget 960 atcgtgccgg atcctgtgga taccgccgag ctgacgaagc cctgctctag ccctttttgt 1020 acagctcatc agctccttgc actgcagttc tcattgggcg atcggcttgc gaacccgaga 1080 tggcggggtg agggttcgcc cgagatatag aaagtagaca aacagttggc ccaaggcacg 1140 atataaatca ccatgtccta cgcatcctcg ctgtatttca cccgtattag accccaattt 1200 ggaaagatct tgtcactgct caagatgttc gacctcctcg tcgtaggcgc cggcctgagc 1260 ggcctgcagg ccgccctctc cgcgcaacaa gccgggctca ccgtcgcagt cgttgaagct 1320 cgcgaccgcg tcgggggcaa gatctggagt gtcccgctgg cttcggggcg tgggtatgct 1380 gacctgggcg gcgcctgggt gaacacgaca ctgcagaagc gagtcggcgc gtatgtcaag 1440 cagtttgaac tgaagactgt cgtccagcga ctggaaggca aggccatcat gcaggacggt 1500

ccgcagagtc gattcgagtt tccctttggg gtgacgccga gcgaggttcg tccgtccctg 1560 cctcccgtac taccccatat cagcctcgcc tgcagggccc ataagtctct aacgaacggg 1620 tacagttctc agcagaagca ctatgcgtgt ccgatttgct gctgagatcc tagtattcta 1680 tagtgtcacc taaatcgtat ggtatatcat agg

<210> 2971 <211> 2338 <212> DNA <213> Aspergillus nidulans

<400> 2971

aacatcggct tcgcggtgcc aaaggcaaca ttatacccgg tctccgtgag ggctgcgact 60 agccccgaat ctctcctgcg cctcgacgac ctttgcgctg gcagggaacg tctcctcggt 120 cgtatacccg acccagtcgt tcaacgcacg actggttacc agtagcgccg acgacgcggt 180 atgegegace atcceeggtt egggeteaat gaagageegg tttgteattg catggegeag 240 catgcgcttc aggtggtcct cgtcgacgcc cgtcttggcc gcgacgtcgg cgtagctgac 300 ggcgcggtct agagggattg ccggcgcgat cttgaagtgg tagatccagc gcaggctgga 360 catgtcatgg tagcggcatg cgagccagcg gagatgctca gcgggaccag tgagcaggtc 420 gatgagggac tgcgccgcct caatgagaga ctggcgggca tgctggacat ttgcaggggc 480 cgcggggaag gcggccggtg catcaggagc gaaagagggg gtgggatgat tgttggataq 540 cagaaaggtg tcgattagag aggcgcagga ggagatttgg gatgcgagcg cggtcagact 600 caaattcggc gaattggttt cattatccct gttcgccatg gtgcctgcaa ttgaacgtaa 660 tgtatgtgta acctagtact tgcttattct ttgtctattt ttcctttttt tctattcccc 720 ttttggtctg ctgtggacta tgggggagct ttaggccccg gcactgccaa tcagactgca 780 gaagagggcg atggatgtag aggaactgaa ataaggtttg agaatcctag cacgcagcag 840 agcagggagt tcaagggtca agctcaactt aaaacaaaag accaatagct cgcgcaagct 900 gaggagcagg cttcaaaaga ctgtggagtg ccgcgagggt cgggagccga ggggggccat 960 gcgaccactt ccacccactc tcctcggggg aatcggatat caaggcatgg atggggccgc 1020 gtgatccccg ccatcattga tacgcagaca ggcaggccga aggatcttcg tgggacccct 1080 aaaccgcgtt gttcctagtg agacggacta attccccttt tccagccgcg ttgagtgtgg 1140

gctcattggg ctaatgcaat ccccactgcc gcaccggttt tcaatgcccc gatcttccga 1200 tegatteete tgtgggetgt eccatggeet ttgagaatea tegagaeetg gatetettea 1260 gactgcgaga atccgtacac gctccctcct ggactggaca ggatggcaga tcaaccgcct 1320 gcaggacagt gcgccaccgt cgctgtgcct gtggataacg atgtaaggac tccatattct 1380 ctggagagca gagcagtagc ggctcttggt actaactggc aggataaagt ttccagacga 1440 cgatgacacg tacageteag aaatgeaage caageeeete teecataeet eeceetaeet 1500 agagataaga aagaaaagaa cgaaagaaga aaagaacaaa aaacgagaaa gaaaaggtgt 1560 tgagtatgac aaagtcagga cgctaataat gtcttcagtg aaagctatgc aacgtctgtg 1620 aactegteag tgatqaacta ceaetggeag tatggtegae getateatge ttttaaggag 1680 ggcagttagt tctatctgaa ttcgtccttg gatagttgac tgatgcatca ggctacaaat 1740 tececaaega egagegegag caagategte tegacatget geataaeatg tteaggetgg 1800 ttctggatgg caagcttttc ctgtccccct taaaagacgg gccgttgcgt gtcctagata 1860 teggeacegg gaeggggate tgggetattg agtttggtaa gttgagetga etttggatte 1920 ttggataaga cacctaactc tataaccaac tatcagcgga cgagtttccg tcggctcaag 1980 aggtagtgct tcatcccatt atgaagggta aagactaaat tttgtaggtc acgggcaacg 2040 acctgagtcc tatacaaccg ccgtggtccg ttccccatcg gcctgaccta cacccttatc 2100 tagtctggac cgtctgctga gctatctagg gtcccaccca acgttgtatt tgaggtggac 2160 gacgtegaat cegagtggee acceeggeee ceettegact teatteatte geggtacatg 2220 tgcgggtcaa ttgaggactg gcccaggctc gcacagcaag cttacagtca gcatcaagcc 2280 cggcggctgg atcgagttcc aggatttcta tctqqtaqat tactctqaqq atqqatcc

<210> 2972 <211> 4157 <212> DNA

<213> Aspergillus nidulans

<400> 2972

ttctcgacga ggccttggat acagcaatcg acgacaagac gtttaggtct gacgacctcg 60
aattcacatt tgcggctcgc gtaagttcaa cccgctctgg ctggtactcg accaggcaat 120
ccttctatgt gctaacttac ttcccgtcca ggcatggtct gattgtgttt catttggaga 180

ctttgaatcg taccgtgacc gattcgagag aatccagcag tactttgctc cgcggttccc tgatgccgtc aagcttggga atgagatgat gaaaagaatt ctggagaaga ctagcaatga 360 gagttcgtaa cggtggagga ccaagtatgt attatcgtcg gatgctcaag tgaggtctct 420 agacctccct acgcaatagt ttgacaactt ggctgaagga actgtagagc gtagaagctt ctataggtac cctgttgaga taatctaagc gatcccgtcg caagtaaatt catccggtga 480 actgggactg tacctggttc ctgaatagat attgaataga gctgaatgta caggtacgga 540 cccacgactg ggtaattcat gatagctggt tagtcagcag tcccaggttg acttcgtact 600 tcttgagccc gaaaccgact gacaggatat gctttgatag aaggcagctg tcctaaaaaa 660 gaaagagcta atggattatt gacgcccatc cgattgctta gttcgtccct tgtcccgtgt 720 gacttgcttt ccgattcgac tagcgacgtc cgcgatcaca acgccctgtc ccctccaaca 780 categgegge aacactegaa aegageaett etaegttege eagtteeegt etgettttgt 840 atactaaaga tetgtegtgt acteaatgeg getetttaet eeteateece ttegegaeag 900 gtgattgaga cgcctcgttt gcggctagat ggagccccat ggcgtccgga tacaactcga 960 attictctgg gacgtcgatc caacaccgcg ccgccggcga tggacgctcc ttgtctagtc 1020 aggatggcgg acttgcggat ggggagatgg ccccgccctg ctttctcgaa acccgggagg 1080 aattegtegt ttegagteeg gegggagtae tageattgge eeegggggag ggtegettge 1140 gcctttaaca acaagacccg gcagttttag cgcggaactg aaaagcatga agtcgtctcg 1200 aagtaccact ccgcgagctg aagtacggcc tgactacgca cgaagaccca gcagcatcga 1260 ctatgacgac ctaccaacct cagaaqaccg ccaggccgcq ataagagata ggatcgccaa 1320 agagatgaaa atcaagacag gaacggagaa tatgttggaa gtactgttga caaaaaatcc 1380 aaaacagacg cgggagcaga gactaagggc ggagtcggag ctgagctcgt ctaatcgtaa 1440gctcgctgaa ctgcatcatg aacttgagga ggaacaactg cgtgcgcagg cgccatcaac 1500 ccctcctcga agtcgtctct ccggtctgtt tcagggccct tcaatacggt caccctctcg 1560 cgcgaatatg tccgatattg agcggttgga cgataccgag gcggagatgg agtcgccaac 1620 ctatgtcctt gcggagaccc ttcaggcttt agaaattgag ttaatgtcac cggattacta 1680 cgtcgagcgt gcgaacagtc tagtcgaact cttcagacga catcctacac tgaagtatga 1740 ccttgcttgg tcggtattcg gcttacgcgt tcaagttatg cttctaagtg atagcaagga 1800

agttgtggcg gccggatatc ggttgactcg ctatgccatc gcagatcgga aatctcttca 1860 gatgatccgg tcacttcaca cagatgagct cgttatcctg tcattggtca aggaaagcaa 1920 agcaaatctc gagcgtgagc aagctctgaa attcgtgcgt gcattcctcg atgtcaagga 1980 tggagtgaag gagatttcac gtgctgttgt tcggacaatc gtctccgtag ctgagcacca 2040 tgatgatcgt cttcgaaata tttcgcttat gacgctcgcc gaaatcctgg tgaaagaccc 2100 tcaactaata gcgtacgctg gtggcttttc tccgttgcat gacgcattat cagaaggaac 2160 atttggggca tcagagagtt tgataacatg cttcctgcat gtgctcgata ctccccacaq 2220 caggatgcat ttacggggag ggtgtgaact tgaggctgta ctcgcacctt ttaccgattc 2280 attgtccgac aacattcgca acgggcgtct aaagtcatca gcaaaggcaa tatccgcgat 2340 gctaaagaca tggccaggat tggtgattct tggaaagaac ggggcaaagc ctctaaagtc 2400 gcttctggag tcattacatt atccggaccc tcaggcaagg gatctaatca tggaacttct 2460 attegatget etgaggatta agecaccate gtggteetee tegttteteg etggaegaag 2520 acttacaaca tacggccggg tcgcgaacct gagatctgag tctgacacaa gacaactccg 2580 gaacttettt gacageageg aaageeaatt tgacetaact geteaettet eeacteteat 2640 tetegeeget tigategatg etggatigte caaggtaatt tatteecaat tgagtggeec 2700 atgtgtattg acatecegea ggeactatgt gateteattg aagaggagga agatttgtee 2760 ctcaggcgaa aagcgaccct gcttctgaca gaagttctaa agctggccca ccattctcta 2820 cetteaaata teagtgegaa geteeaggtg eteceacaet tgatacegte tgeeattaga 2880 ttcgatgtcg agaaccatga tgtgtctaca tctacaatct accaaataga aagtatcaat 2940 agaacattgg cccggtccct cggtggtctc gccaatggag ccggcagata tagcgtggat 3000 gttgatatat ccgcctctct tttgtccgga gatcagaaca aagacaaact gagcccagcc 3060 atggatgaga cacaattccg caacgcgatt ctggagacgc atgtcttgaa tactgtgaac 3120 tacctgaagt ggaagtggga tttgatccac cgcatcgtgg aaggtcctct ctcaaacccc 3180 aagaggctgg acgaggcaat caagggatca aagttcatga aacgtctcat qqqattttat 3240 cgtcctttca aatacagatt ctcagtgctc ccgaatacga aaccaaatca gcgatatgtt 3300 cycactygtt gcyccttgat ycyctytcty ytycayacyc cygaagycat aaaatattty 3360 geggagaaca aattecteeg acaggttgee gaatgtettg egeaggttga ceatatgagt 3420

ggtttgacat cgtcggcgcc gttgttctcg cgagaacaaa tggcaaacac actgagcggc 3480 ggctactttg ccatgctagg gacgctgagc gccgacccca acgggctcgc gatgatggaa 3540 cgatggcata tgcttaatat gttctatcat atcattgaac tccgggatcg cgacgaccta 3600 atccagacgc tcatcgggaa catggattac acccaggcaa gccatctacg ggttatgcta 3660 tctaaagctc ttactactgg ctccaaagat attcgcattt ttgggacaag gctacttcga 3720 aaatatactg tggggaatgt gtcacccaca tcagttagca atgcagactg ggtcatcaag 3780 ctccttgtaa ctcaattata tgaccctgat gtctccgtct gccaagtagc agtgaagatt 3840 ctggaggagg catgcaatca gcgcgattac cttgagtttg tggtcaaatg tcggccgtct 3900 ctggaccatc taggtgaaat tggtgcgcct ctgctgttac gcttcttgtc cacttcagtc 3960 ggctaccatt atcttgatgg actcgactat atcacgcagg aaatggatga ttggttccta 4020 ggacggaacg atgcatacgt ggtacctgaa gatgccgtt tgtctcgagc ctatgtggac 4080 catccccgta gaaacagctt ggtacctgaa gatctcgttg atcaccagga tattggtctt 4140 gtgcctccac acttcta

<210> 2973 <211> 1559 <212> DNA

<213> Aspergillus nidulans

<400> 2973

aaataaaaca taatagagag atgaatgcta gattgcttat agataataga aatcataaaq 60 taggaaagat aacagaagga tggagagaag agaggacgcc atgagaggaa agaaaaaaat 120 gtgataagat agaagaaaat tagttaagat gtgtaggaag caaacgtatt cggttcaaat 180 atagagggga gtcaaccata agacggcccg tcgggtatcg aataaqcatt aqcagtttaa 240 gagctagaac aaggggcaga tgccccccgc aaaaaacact taggatccgg tgacaaaggt 300 agagccccaa aatcacggta acgggccact caagccaggg gtcaatcggc ccggacgggg 360 gtgtgcagta agcatgggcg tcccaaggcc aagcctggca aaaaacaagt aggcctcggg 420 aaccgggcct taacttgggg caaaatatcc gcattgataa ggaggcagtg cttaaaaaaat 480 cgacccaatt gagccgcgtt tctggatctg cggaaacgtc agtttcggaa caatgatctg 540

caqtqtqacc gagaatggtt ccatctggac tgcgttggtc tctccgaggt acccagccgt 660 acaqcqaaat qqtactqtcc tqactqccqt gtcaaattta acaaaggtgc ccacggaatc 720 780 cattgatacg aggctacgat cgcgtttttt cctattgctc ctgtgcaagt tgttttgttc 840 gagtgcacgg caaaggaagg gagatggcgc tgggagttga cttgtttaca atctacctca 960 tataacttga gtgtttgctt gtctagaatc cagaggtgct gcttagaaca ccgtaagcgg 1020 acgctgggga tcgttctacg ccaacactat ttacagctag ctagctaggt acttcgtttc 1080 cccaacactt teettgtaca gtagatteag aactacteaa ggcattacet atteetttea 1140 tgcctctatc taagctccca cttcccgtcc ttttcgaaaa tctcaacagc cctcttctcg 1200 tccaaactca cccttcctgc atgcaaaatc gcagtcgtag caatcgtgtt cttcagcgtg 1260 qqcaqtqqtc qattatccag ctccttcaag gtgactcttc cttcattaag cgctgtgatg 1320 qcqtcaatqa atttctcqaa actgatataa ccatagcctg tctgcccgcc gaagttgccc 1380 tettegtegg gggegtaacg catgtagaac etateataag attgttagag gtatttatta 1440gggcaaggtg gacaaagacg cacggattta tccaggcgag gccggagtcg tcgcctgtta 1500 cgtcgtagcc gcgctttgct tggttgacgc ggatctcgcc tgtagcaccc atgtctatc 1559

<210> 2974 <211> 1074 <212> DNA

<213> Aspergillus nidulans

<400> 2974

ggagtgggg gaaaagatag ttggggggg ggttgtgagg aagaagagtg gggaataaga 60
agggatggtg ggggtcaagg aagaggttgg ggagagaagg gtgagaggga aatgggggat 120
gtgaggtggg aggggaagag ggaaaggatg agggggggag gtgcatgtgt ggaggggagt 180
tgaggttaag aagagcgaag tggaggggtg ggtgggaggg agttgtggtg aatagaatgt 240
gacagtgaga ggagagaaga agagaaagta gtagtagctg aaaaggggtc gggcgctatc 300
gaagtggtcg gtatgccgca gggtagagag gcgcaacatg gttgaacagg cccccgggcg 360
cagtataacc gcgtcgagca atccagcaaa atgccctctg aaacggacat gccgagatct 420

tctcagaaaa gcttgtgaaa gggatgcagc tgcgataagc atgttcacta agccccaccg 480 tecagaceet gegatactet teetteaaae teaaegaeee ttteeateea tteegtgeet 540 ctctactgaa ggtgctggaa ccaacgatgg cgggacctct ctcgtgtgag gctcaaagtt 600 660 taggettgte tgetgtttgt teggtgaaag tteetgtagg tttgacaete atgggtaaae 720 tgatcgggtt ttgtgtctct ggagaaagaa tcggagtgtg ttctgctggt gtgggctggt gaatgggccg tttcccttcg ggggacggtc ccccctttt tttatacgtc tccccctctt 780 840 gttcagtggc tctgagtgtt aagtggctaa ctgcattgca gggttgatga tttattgggt tgattaccct ggttttaata ttctcgagcc ttgactcttg cagcaacacc tagcctcata 900 acataaacaa cttgatagga agcggacttg ccattgggcc aaagggtacg aagcgtactg 960 gtatcatgtg ttcggagctg gtgaagatta tggatgaggt ataaaaaaaa gtcgtacttt 1020 gcattccagt tggaaactag caagttaagt tagggccgga ctcttaacta tggg 1074

<210> 2975 <211> 2012 <212> DNA

<213> Aspergillus nidulans

<400> 2975

cgcgtaggga tatcaaagtg ctgtcgacca ataatagtac ctcgtgcgca aaggcgcccc 60 cctgtgatgc tgtgccaaat atcacgaagc cccgggttct ggtttagcat ctttgctgga 120 gttgtctagt cctgtcaggt attgtttgac taatgaaggg gtatgacata cctttgaata 180 gtcattgcat ttgaaaagat gtgtcgttcg aacaaggcca atattatagt cccacattac 240 tgtccactgt ttttcttctc ccggaagctg gaacgtgtac tgaaagactg aggaaggtta 300 gctattattt caagaacttt ccagaatctt gctcgcaggc ttaccctcaa agctttctcg 360 ccctgtcctt tcctgaaatg atttcttgtc gctgttatat ggaatatgtc ttggatagtc 420 ggcaatattt ccaagaggat ggatacggaa gtcctgatgt tgacaagaaa acttgccgtc 480 teggtetteg taaggaggat agegeacete geetetgggt ttteegeget ggaagategg 540 ggcatctttg gccatcttct gcttcttctg acgaggagaa cgtagcatgg cagtgcttga 600 ggagattgtc ggcgaaggag tgggaagagg acagcgatcc gagctaggaa ggctgggaag 660 aggattgagg agaaactgta tagaagccat tttatacgcg agaacttctc caccgtcaca 720

gataaaagcg tottgctgct atgtcggtga ggttgcccgt ctgcgaataa tagagcgcca gagaaggccg caatgctcgg aaggcaagac agaggcctga tttatctgcc ttgcggattc 900 agaaactctg atcggtttga ccgcccttgt ctgatttaag acacagggac caaaggattc tagaaggtct ggtgaggtct caagaggggg tgagttacaa tgaatgagga tgacaaaaaa 960 agggctatgg aggattggca gcgatgcacg agcgtgtttg aagccgacag atagctaggc 1020 gaccatggaa ctggcatgag aggaagaaag agtgaaagta gagaaggaag ggaggggca 1080 tcaatgatga gaggtgatct cccttttgtt gataggtttg ttgagtgaaa ggctttccac 1140 gagtggatag gtgacggcat ctggtcaaaa gctgtccaga tggcttcccc tcctctgt 1200 ttgaccgatt gggatatgga aatgcagggc gtgaagtcct ccgtctcttc gaggagcagc 1260 ggtgaaccta ggtcgtgagt caaataccaa ttctagacac ccagagttga cagatgtctt 1320 ggatggggaa agcgtccggc atgaaataac ctctaccggt tcttaatccc aggaaggcat 1380 cacgaggcac acattaagaa cgggtcaaag gttgctggac gatctgccat acttaaaccc 1440 cagtttgagt atagtaggta ctcccatggg cgtacctggg taccctgttt tgcaacgttc 1500 tccatttagc gctcattcaa cggcagtgcc agacgaacct atcctcaagg gtacgtctgt 1560 tttgtcacta gcttgagaac cagaaaagcc gctcatggca tgcaacttgt cgaggcttca 1620 gctgtttcac tcgttgtctg cagctaccca agactaggct gacgcaggcc cagcgagaga 1680 agacatggta gatcacgttt cagggactcc tgcaaccatg tggaggtcct gcagacccga 1740 ccgtaaattg aaaccaggct tacggccttc tgaaccagat actcactccc tcgcaaacag 1800 agagaagaca geggtetgge atgegtggte tgtaegtgag aatattaggt getgteettt 1860 gagagctaat aataggacca gaggcatgta ttgcagcgca tcactcgcct tcagacatag 1920 acatgcatgg tetetegtet etecegttee egagteatga aatacagaga tattgeetga 1980 2012 agatggggtc aacattgaaa gtcttgtgct gt

<210>	2976
<211>	1169
<212>	DNA

<213> Aspergillus nidulans

<400> 2976

cagaatattg atggctttcg cagaaatatt ccaccagaca agatcatcat ccagaagacc

60

teggtateta eccaeteaag egteeaatge atetgaeagg ettgataggt tgetaggtte tagcgaacga gaaggtagcg gttcgcgatc tggaaatgtc ctacgtgtac ctctacctag ggatcagact tcattgtctt ttggccgtga cttcgactcc ggctgcaata gaattaaatt 240 ctcttcaact tctcgaagta gaataaaaga tttgtccagc atatctggga aaagaggacg 300 ccaattttgt gaacgtagaa ggtcaggacc gtcttgcatt tctggtacct tgcctttata 360 aaggtcagtt atcgcatcga tattttattt gaagtatcac ttgggctaaa tgatttagac 420 ttgtagtgaa tataaccgcg aagtagatta gaggagaggc cgtctattgc tttcttgtat 480 gcggctatac cattgtttgc ggcgtgatga agctggacta ggggctagat ttgtgctcct 540 gctagaggac ggctttgaga gattccttga actttcatcg atttgaataa acatcggttg tggattggaa ggaaagagtg agagcagcta tttcttgcct ttcgtgactt gttacaatat 660 720 taagtagtgt attcctgagg cagggtggca atcaagtgag taaatcgaat gatcaaagta ccctctgtgc ttacagaagg ttcgaaatag atttctatcg ttcttcaact gactgtgtag 780 acggcgactt attgtagaag cagaagatat agaagagaga gattgcgcag agcgagctaa 840 900 ttcagaaata ttatggactg ttgaatgttc aagaagatgt gatggatgtc gctcttgcca tagcctgctt ttggcaggag aagcagccta cagcccgctg ctatagccgc acgtgtcacg 960 gccctgcgcg ccatgatatt aaatcctgcc atctcaactc aaaatgcctg ctgtttcaaa 1020 gtagccctta ccttgtggga ggtttcacag ccctgcgcgc cgtgatcatg agccagcatg 1080 aatgacagag ctcatcctgg cacggtgctc aaggtgagtg tcgagtggct atccagttca 1140 1169 tcatgtacac tgatatagag aagcatgtg

- <210> 2977
- <211> 1171
- <212> DNA
- <213> Aspergillus nidulans
- <223> unsure at all n locations
- <400> 2977

ggcatattac tgccatttac ctgtgattct tgtaccagcg actccgagaa gctaactttc 60
ttagagagaa ctgcactgtt agcaaacagg agttcattgt ataggatgca ctattttcaa 120
ggatcactgg tcgcagaagg acaattggaa gacgtgctga tcgatgacgg tgcgctcata 180
ggacgtgttg cagagcctag ctctaacgat acttggatga ggaattaaca ggccacatgc 240

gtactaattt gcgactggta aagcaagcta gaagtcccag ggatagagct cgcgttatta 360 gaaacgcacc gtattattga agtcatcgct aaatcaggtt aactgctagc cagcaagcag caccatgtta aaagagatag aagagcacat actctatcat gtgggaagcg acccacagtt 420 agatgtactg aaagtatece ggageeceag aggegaggtg caggategga eetgegeetg 480 gaacgaggta ggtaagctac attggacggg gtagggcgac ttggacgatg ccaactgagt cccagaggtg cttacgaagg cagcatagac atcgatcgca tgcaagactg aatgttcgcg 600 aagaagacac taatgtgact aatgagaact accccggctg ggtcatctct tagttatcaa 660 tggctggtcc tgcatgttgg gtgtttgaaa actccctgct cgcctgtaag gctgcttgcg 720 gcgtgctgcg agtgtattat cttagagcca atctacggtc ggaaggccat cctagctggg 780 agaaagcatt cccactggca ctttcccgcg gtgggttgag gtggaanttt aaatttgagg 840 900 ggtgggaccc ccccccccc ccgaagcttt agtttgcaaa atcattttt tgtggtggtg aggtttgaat ttttctcgac gggtggggcc tctggcctat tagttggaga gcagtccgag tccaaatagt tattccctat ttctttaaat cttttggtag tggttcttgt tctgtagtac 1020 tcatttaatt gttgctccct cctcatacct atttctcatt tttagtatca tcctctcttc 1080 catcetteae tttettetet caacattact tgtttegett gttegateea eccetgette 1140 1171 taatccctct tttctaatat tattctatct t

<210> 2978

<211> 1244 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2978

atgtgaataa ggtacgtttg gcaccctacc taattctcgc ctctttatgt tctgcaatca 60 gtggctaata ttgttgcgtg tgcgtatagc tctctgccaa acttgccgag ctcgcggact 120 ccccgaccac aatcacactc gacggactga gacaattaga gcgaaagacg gcgactgtat 180 atacgctgct taaggcgagt gtatacagta tcctgttgca ggagcagatt gtcaacgaag 240 gggagtggca gcagcaacaa cagcagcagg atgaggggaa ggagtatgct acggggacta 300 tgaatgcgg agaggaggg atctatatgg gggagggga catgagctat cagcagtact 360

aaccaacgca aacggttgag ctgggggttg ggcgtttctt ggaatggttc tacatagata 420 480 ttgatcaggt tgttctgggt ctgttttttc agtctagctt tggttatacc ccttcggcgg 540 tgtttatgaa atgcttcaaa ttcgacacaa aatggatggg acttaattta tcgattccta 600 gtacagatac attggtaaat tgttgaaaat caggtattat atacatcgtc aggacgtaac 660 cagaaacctc gaactggaaa ccagacaatg cgcccgcagc ataatcgtac aataatagca 720 qtaatctaqt actggagttg acgtggccgg tcttctcttc ccgagtagta gaccttgcgc acatcaacca gcttcttgcc tcgggcacgg gcaatctcct ccgggtcgcg ctggctcatc 780 840 aaggettegt atgeggettt caeegtgtte ategggttte tggetegete gacaegagee 900 gcaatgtcgc tgataccggc tgctcggcac atctcgtaaa tcaagctctg gcagcggagt 960 ccqaaaccta qattgqcctt gttagcttcg ctgagcggaa atgtagtatt gaaaaaatta ccgggaggac gggtcatcag tttcagctca acggcgccca ctttgccctt cacatcgcca 1020 aagatcgtgc ggttctcgta ccgggggaca ggtttcatgt ttctaatagc acggtatagc 1080 gattggactc tcgcatccgt ggcttcctgt gactttcctt cgccaatacc aaggagaccg 1140 tttccattac cggcgacagt taggatatat gtaaaatcac tttaccgaaa cgagtctggt 1200 1244 ttgtgacgtg tttcacgaca agagccttcg tcctaaganc gaga <210> 2979 <211> 1788 <212> DNA <213> Aspergillus nidulans <400> 2979 actacgggcc gtgagtgttt tggaagcttt cttgaaattt cttagccatt gttgggaaag 60 120 atacatagaa gagtaaagag acgtacctga gccatcgcgg atctattggg aggaatgtag gcgtaatcag gatgatgcgg gctgtcgctc ctgcagataa ctgtgccgta tgcgaaatat 180

actacgggcc gtgagtgttt tggaagcttt cttgaaattt cttagccatt gttgggaaag 60
atacatagaa gagtaaagag acgtacctga gccatcgcgg atctattggg aggaatgtag 120
gcgtaatcag gatgatgcgg gctgtcgctc ctgcagataa ctgtgccgta tgcgaaatat 180
tgagtaatag atgaaacaat taaatggtaa actgcataat tcttcgtgtc caaatcctcc 240
tttaactgat catctcattg tcaatacgtt gaggttgtta agttgggaag ccgtcaagtg 300
ccaacagtaa gtagtgcgac agaccagttc cagtgcaggt gccagcggtt gccctccaca 360
accggccaag cgccgcgcc gccagcaagt ccgcctccac cagccacgag ccaaatcgcc 420
aaatgcagga cgaagacgaa cccggtcccg aaagataaaa cgcaaaaaca ccatcgagtt 480

ccagcttcaa gttgagcgaa agcgagctag agcgctacgt tcactagttc ttagtcgacc cctcttctct agcacttccc aaacctgacg acatgcaatt tgggcttgcc gaagactttg 660 tttagcctgc gcggcgtcac gagtcgtctc attcaccact cgccctctct acgtgctcca gattttgtga ggaggaaggc gagggttccg acaaagacta tagggtccct tgctatattt 720 gttgtttttc tctttaacta tactccgtgc ttcttcccct tctttgagat cttgcggtac 780 agatacactt ttttcggcca tttgggactg aaagaaacga cgacagttgt ttcctttacc 840 tttgtcacca tttctaactt cgtacgagga agaggtagct taggtttatc ctgcctgatg 900 960 ctccctctcq actgacgatt atttccttac ccttcgatat ccgatcaata ctttaatttt cgtcggcatc caataccctg cattggcctc gattccctcg actaatatga ctccgtccac 1020 atcacatatt tcgagccaac taaggcagct gatatattac caatctgaca acaaccttgc 1080 teggaacgeg etgtteettg eeggtegttt acacgeetae gaacetegga egtetgaage 1140 ttcgtaccta ttagctctgg gttacctaca aaatggtcag gtgaaagcag catgggaaac 1200 tagcaagcat tttgggtcga ggggtgcgca tcttggatgt tcttacgtct actcgcaggc 1260 ttgtcttgac cttgggaaat atactgacgg tattaacgcg ctagagcgaa ataagggaca 1320 atggactttg cgaaaccact ggaggaagca aatcaattat ttatacctgg ttggaccttg 1380 gctactgtaa tggcaagcca aactgatact tatgggctct taaccggttt gataaacaca 1440 gggagaagcg acaacacaat atgcccgatg ctggtgcagt ttttttttgc aaggaaatta 1500 tggcaggcca catggaacac aacatggctg tggattggta cactgcagct ttaaagctta 1560 atccctttat gtaggaagca ttcttgtatc tgtccaaaac ggtaagctct attgccctaa 1620 tggaaatttt tttttaacaa aattgccaag gggggattcg cggtttaaac tatataaatt 1680 actccaattt ccaaaaggat tccttttgcc ctaagtgtaa tccatttacc ccgcggctcc 1740 1788 tctacaattt ccatatcact tgaccccccg gtctattgaa aaaactta

```
<210> 2980
<211> 577
<212> DNA
```

<400> 2980

<213> Aspergillus nidulans

tctattaaaa tctttgcatc cttcaggcca atattataga taaaggttta agagctaatt atttttattt tttgcaaaat ctttatctat tagtttttca aaatctatga ataatattgg gactacacgt atagattata tctaaattta ataaaagtat aatatttta agttattaat 240 ctagttgtaa ttaataagat tattcttaac tttatgtata tctattttct tagaaattat 300 ctttcctgga aatgtgttta aaaataataa tttataataa gttactaggc tatatattaa 360 atatatagct ttttaattag agcaggtatt ttagagaaga tattattaat aatctagaag 420 gtcttttagt gtttggttaa aggtttacta ctctaacttt ctgtataccg caataaggta 480 tatactgaaa tataaatctc ttctaataga aatttttatt caactactat attgaatcaa 540 577 tattattaac cagataagct taaatattta ttttagt <210> 2981 <211> 944 <212> DNA Aspergillus nidulans <213> <400> 2981 ggtattcatg tggaggtaat tccgaagcta tgatccggga tcggagttcc cctgggcaaa 60 atcttcttct tccatctctc gcaggttcgg ctggaaaccg gaaacttctg cgagtcgctt 120 ttttaggttg acgcagcttt gatagatacc ctcattgccg cggcggttga tgatgttgtc 180 ctcggcgacg gggccgccgg ggttaaggcc agcggtgtcg gccattgcga cgtccaccga 240 ctgggccctt taggaagagg gggcggaggg ggaggagagg cggctgatcg actagcgata 300 gggtatggga ggttcaaatc tgcgcagcag tcgaagaaag gacagaaaag gatggagtag 360 tagcggccag cggaggttgt acgacagttg tcgtcaagtc aagcatggat tactgaagaa 420 cgccgccgcg ttgagccagt ggaccgatgc gggacggatg gcgcaagcga gcagctaagg 480 aagggagtgg agatagcggt gctcactggc gatggtggtg gacactggca atgagcaaca 540 aaaggtgatt tagtttcaat ggtccacaga aaagtaggtt gccagaagac tatagttcgc 600 tcggagacaa tatatgcgaa tataactctg gtccaatcct tgttcacctc ttcctggtca 660

gtttaaggcc ggaagagaat tatcgaaagc gatccctaag atataagggg acagtgtggg

cgtttggcat tgcagtgatc ctgcaaccat cagggggtag ctaattcaga gcacaagctc

cgtctgctat tgaacaaagg ggtataagaa tgtaggttgg acagtaaaga cgcacagtac

720

780

attagctcct	gatagccagg	gctatgcggt	tgaggataaa	acacaagaag	gcgctcggtc	900
gaggagtcgc	agtgatttga	cagcgaggga	gcacagatcg	taaa		944
<210> <211> <212> <213>	2982 2154 DNA Aspergillus	s nidulans				
<400>	2982					
cctgaatgac	atcgtgttcc	acgaaagatg	ttcacacagt	atgaaagtgt	tgccctttcg	60
ttccgttcct	gaaagtaccg	aacaatctta	attgctgctg	aggcgtgctc	tgaaaaatcc	120
tgtacctcaa	aggtgtcccc	tgatttgcag	ttgtcgcaag	aagcattgca	gtcctggcgc	180
ttaaatgatt	cgctaaaata	tgcaagtatc	tgaactctcc	tgcaatcatt	tgcattctca	240
cagtatttca	ccacgtcatt	cagcattctg	gtctgtcgac	ctttttgtac	gtcgtcagaa	300
tcctcgttct	tttcgatcat	gctctgcatt	gtactgacat	cccggtgaga	gaaataaagg	360
tagcagccag	agcgtctgcc	atcacgccca	gcgcgtccgg	tttcctggta	gtatccttcc	420
aggctcttgg	gaatgctgtg	atgtattaca	aatcgcacat	ctggcttatc	gatacccata	480
ccgaaagcaa	tcgtagcaac	tataacatgt	acatctccag	cttgccatcg	ttgttgagtc	540
cgtgcgcgcg	tttccgcatc	caagcctgca	tggtaatgct	cggctttgat	gctatagttt	600
gttcgaaggg	cttcagctac	cttttcgcag	gtgtttcgtg	agaggcaata	aacgatgcca	660
catttgtttc	gatacgttga	cttgattgtg	tccgctatgc	tgtcaagaag	ttcggcatgc	720
tttcccttgc	gacgaacctc	atatgtaagg	ttcggcctgt	tgaagctttg	ggtgaatact	780
tcgcaacctg	cattctaagg	ttgtgtacac	atcgacctta	acattttccg	ttgccgtcgc	840
cgtcagcgcc	atcaggggaa	caccaggtat	ccgtgctcga	aatgcgccga	tctgtttgta	900
gtccggacgg	aaatcgtggc	cccattgact	aacgcagtgg	gcctcatcaa	tgacaacccg	960
cgcgagcttc	tggatgctac	agagcttttc	aatgcggtca	gtaagagcgt	ggcttttgct	1020
aatcatttcc	ggtgtgatgt	agaggagctc	gatgtgcgtt	tcaggattat	gactagacag	1080
ggtgctcatg	atccattgac	gttcttcaga	tggcgtatca	ccattgatca	aatatgcttt	1140
gatcttattt	tgtcgcaagt	gggagacctg	gtcctgcatc	agactcagaa	gtggcgaaat	1200
cacaagggta	acgcccctgg	ttgagccgct	ggagataaca	gacggcagct	ggtagcaaag	1260

agactteect ecteeegttg geattageae aaacgtatet titeeactea aggtegagte 1320 aattgcttca agttgattag gtcgaaatcc cctaaggtga aatctctctt tcagggcaat 1380 cttcacatcc ttcgtccacg gatgctgacc ccaaagtgta ccatgagttt gagatttctg 1440 cgtggcgggc agcctgcgga catttcctga ggtctcagca aatactggac gactgcatgg 1500 ttcatgtcta tctttggtga acggttgctc ttcctgacaa ttgtctgcgg cttccagaat 1560 atcctcatcc aagacatcca tatcgaagtc gtccgaatct tccaccggcg gcagagtaga 1620 acceatettt eeggtaaagg tegteteatt gteactegtt actteatggt tittiggtaeg 1680 attagcctcc ggaatcccga gactaccagt aaaagagctt gttcgatgat ttgaagtaac 1740 caggcgagtt tcccttgcgt cgtaatctgg tctaaaggca ctattgttag cgacaggact 1800 gttgcgataa cttttgttct cagcgccgcc aagaatgcta ggcgctgtag ttgcaggtaa 1860 agaatgtaat cgctccagtt cgatttctct ggtttccaga gagaactctt tcatgaccga 1920 gaacaagtee geetetegta acaggagaea eatgttagee teeatatett teaattgega 1980 cgtaagttcc ttctgctgtt caattttcgg caacacatcc gatgtacctt ggttcagggc 2040 atgcataatg acatctttca gagcttttga ttctgcttcg cgcgacaagt aggcagactt 2100 ctgtgcagtt aaggccttaa ctgctcggat ttgagctgtg agtgtgccgt tctt 2154

<210> 2983 <211> 227 <212> DNA

<213> Aspergillus nidulans

<400> 2983

acctctaggg atcaagagat ccttccacct cagcctcttg agtagctggg accacaaatg 60
tgcaccacca tgtccagcta atttttaaaa ttttttgtag aaaggaggtg tcactatgtt 120
acccaggctg gcctcaagct cttaggctca agcaatcttc ccatctcagc ctcccaaagt 180
attgggatta caagtgtgag ccattgcacc cagtctaact ttttttt 227

<210> 2984 <211> 1477 <212> DNA

<213> Aspergillus nidulans

<400> 2984

cacgcctgcc gttttcacgc attgagtcaa ttgattcatt gtcataggtt gctggagaat 60 ctgggctagg aaagaccacg ttcatcaaca ctctgttttc caccaccatc aaaaactatg 120 ccgaccacaa acgacgacac cagaagcagg tcgatcgtac tgtcgagatc gaaatcacta 180 aggcagaatt ggaggagaag ttcttcaaag gttatattga acggccctgg tccaactagg 240 ccactgctaa caagaattgc gctgtatagt tcgcttgact gttattgata cccctggatt 300 tggtgactat gtcaacaacc gcgattcctg gcaaccgatc atcgagtttc tcgacgacca 360 gcacgagtcg tacatgttgc aggagcagca gcctcggcgt acagacaaga tcgatatgcg 420 tgtacacgcc tgcttgtatt tcatccgccc aaccggacac accctgaagc cgctggatat 480 tgaggttatg aagcgcctga gctctcgtgt caacctcatt cccgtcattg ccaaggccga tactcttagc cccgctgatc tctctcgttt taagcaaagg gtacgccgtc ttgcgccgta 660 ttaacaaatc cgaaggtgta aagctaatcg catatcatgg ttaacagatt caagcggtta ttgaagccca gggcatcaaa atttacacac ctcccattga agaggacgac gagactgccg 720 ccgctcacgc tcgcagcctg atggcggcca tgccgtttgc cgtgatcggt tccgagaaag 780 atgtgaagac gaacgatggc cgcgtagtca agggtcgcca atatgcttgg ggtgttgccg 840 aagtcgagga tgaggagcac tgcgacttca agaagttgcg ctcaattctg atccgtactc 900 acatgctcga ccttatccac acaaccgagg agcagcacta cgaagcatac cgtgcccaac aaatggagac ccggaaattc ggcgaggctt cggcccagga aactcgacaa ccccaagttc 1020 aaggaagagg aagagaacct gcgcaagcgc ttcaccgatc aagtcaagct ggaggagtca 1080 cggttccgac agtgggagca gaagcttatt tgcggagcga gatcgcctca caaggatctg 1140 gaggctaccc atgctgcgta tgtcccttga ttttctgtat atgctcgtcc aggatcgttg 1200 ggctacttgg atcagcatca aagtttcgaa gcgagaccaa agccgcaagc tattgctcgt 1260 agcacggcgc gcttacattt catacactga agcggggagt gccgttacgc cgggaaagcg 1320 agggcataac tecaatetta etegeceece tgegtttttt tteataggea aattgaeegg 1380 attgcgaggt tctagtacca agggtacgcc acatgccgtt atgtgctccc gagtgtttta 1440 1477 aaccctttcc ctaaacaaaa attatttgtg tgggggt

<210> 2985 <211> 1589

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 2985

tcacttgagt gaaactaccc ccgagtataa taaaaatagc cagctgcccc tagaagaatc 60 tattgtttcc ctaaaccacc caagtattta ttaaagtcag aggccctggc cgtttagtcc 120 ctcaaagcta tgccatacca attatggagg catctattaa ccgttggtcc tgaccaaatt 180 gcccctctgt cagtttctcc aaaacctact agtacggctt tcggcttctt taatgtccgg 240 ccggtggtat tagccagtat atatcaagct tcagtcatgt cgaaatcatc gttccataaa 300 gaattcatgc cttcatgaca agaaagtaca gcctagcccg gtaaacaagg aacggtcaca 360 acatcctcat gacgaggcgt ccaagggaag tgcgaccgag acctaattgt acccaaaggg 480 aaggetettg atccatecat caggeacaga eggeecatge ecagaceete eeteettgga gagccaacac gatcatgtct agactcagta aacagaatag aaactcctaa gagcgcgata 540 cgagcatatg tggtgtaatt ggacttgagt ccttctcttt aggcatattc tttcaatgtt 600 agatgcgtac tacgtagtaa gtagttagga gctcttatga tgttgcttct cggtgttcaa 660 caaaacactg gatgcgggtc tctggcagat ttagaaaata agataaatat attcaaagtc 720 ggtggtcctg taggagtatt ttaaggctca ttggtaaaga acgcagtggt ttgattctaa 780 taatagctga gagatggctg gagacgcacg cgtcaggcaa cttcattgca acctaaatac 840 caggaccaag cgatattcaa agaacctaga tgggaaaggg tatgcgtacg gagatggtag 900 ccatgtctac gcgggatgtt gttacatatg gtgggtagaa cctcagaaga gttgcgagcc 960 agcgaaataa gcagaaggca ccagagtagg tattgaacaa gcataggcca ctaagacgct 1020 cacqaatcat atacaccaga accagaaccg gagtcagaac cagacccaaa ataaaaggaa 1080 cgcaaaattg tataatcaac cacatgttgg tggcaataag agagttttgt tgcgaagatc 1140 aggaattggt attcataggt gagnaaaagg gagtatacat agcgtgtcag gggtgggtag 1200 aaagaggata gccaggggag aaactggttc ctgcaggccc tctttatgtg gccgcgttgc 1260 tagccgctgc tgccttcgcg agccgttctt cgacacgttc tttgtgttgt cgatttcgaa 1320 gatgaacctc aaaattatcc accgtcgtag cagggccagg tgtatacagt ttcccgggac 1380 aatcgtggca cctgatgcgt ggaagataga ggaatttcaa cttctggttg gcttgagcct 1440 gcgagtgggt gacgggttgc atggtttccg tatctacagc cgtgtaccgc atcactgctt 1500

cgaaaaagtc a	accccggccc	gcctggttga	gtcgattgag	tcctgaaacg	aaccaactcg	1560
gaggggggg (ctagaataaa	agcatcagt				1589
<211> 4 <212> I	2986 4699 DNA Aspergillus	s nidulans				
<400>	2986					
atcctgcatt	cctcttctct	cctcatgtat	cctttgtatc	gcctccacag	ccatcaatct	60
cctttttaat	acctaactgt	ttgggataac	ggtgtcagcc	cgtccttggt	tgtctttctg	120
ctctcgcctt	tcaggaaggc	tccgcgtcgc	aaaccatcat	gggcctctcg	aaaaccaaca	180
ggattatgat	cctgttggtc	attgatacgg	cgttcttttt	gctggaattg	attgctggtt	240
tggcacccta	ggttttggca	teegeeegte	tacttatacc	ctctaccagg	ttactccgtc	300
cactcgcttg	ccctcgtcgc	ggattcgttt	catatggtac	gactcatcga	acctactctc	360
tacatatcct	gacacgctct	agctgaatga	tgtgatctcg	ttgctcgtcg	gattgtgggc	420
tgtcaaagtg	gccaaccgcg	aaacgtcatc	caagatgtac	acctacggag	tgagtgtcgt	480
cccttcctac	cccgccctgt	tggaatccgg	cctgactgtt	ggatacagtg	gcaacgggcc	540
gaaaccctgg	gtgcgctagt	caatggtgta	tttctcgttg	ctttgtcttt	atctattttc	600
ctcgaagcga	tacaaagatt	ggttgagcca	caggaggtca	ggaaccccaa	gcttgtctgc	660
ggagtgggat	gcgccggatt	gctgtcgaac	atcctgggac	tggttctgtt	tcacgatcat	720
tcgcacggcc	acggccacgg	acatggacac	tctcatgagg	atgcggaggg	cgttgatgcc	780
gcggagcaag	gccaggtcca	cgatcacggc	cactcgcatg	cggggcgcga	tgtagcggta	840
aggctacctt	tcggcacatt	tctatgcaag	caatgcgctc	agtctgactc	gttcataggg	900
cgcaataact	gaacccaccg	ccgcttattc	ccggcgacgg	acaattgaca	gccagcaccg	960
cagctctcgc	cgaggatttg	aagagtattg	geggeeacee	ggctagcatg	aggcaggaca	1020
taattttcgc	ggctaaccga	aacaaatttc	ccgatgagga	cgacagctat	gagtcaaatg	1080
aacgcgcgga	ggacggagcg	ggagataatg	gegggeetae	tgaacggtcg	acgctgatag	1140
gccacacgga	ccgagcagcc	cattttacag	acgagcacgc	ttcttgtagg	gaccaaacga	1200
aaaagaccct	cacgagacto	acaaccacgo	tcagcctaag	cccaaggaca	aaaagcacgg	1260

ccatgatctc aacatgcgag gagtctttct ccacgtcatg ggggacgccc taggcaacat 1320 tggcgtcatc ctgtctgctc ttgttatctg gctgaccgat tattcttgga gattttatgt 1380 ggaccetggt atategeteg ttateaeggt gattattetg gegteageaa tteetetetg 1440 caaagctgcc tctcgcatcc tgttgcaggc cgtgccacat ggattaagca ttgaccacat 1500 caaggaagat attgagagcc ttcctggtgt caaagggtct caccatctcc atgtatggca 1560 gctcagtgac actaagactg tcgcttcgat ccatatccaa gtggacaccg agatcaaagg 1620 cgagggttct gagcgttaca tgcaccttgc caagcaagta agacaatgct tacacgccta 1680 tggcatccag tcatcaacca tccagccaga gtttcctcgc gacagtgata cagaagacaa 1740 ccaggtgggc tcagctcacc tgccatcggg cagtcccagc cgcaccccaa gtattcgaga 1800 cggcgatcct caggcctgcc tgttagaatg cggcgatgag tgcgccggcg gtcactgctg 1860 tcccacaaag cccacctaga gtcctctaca tccgttatct tttggcctat ttatactctt 1920 gtcttattac tagctgtttc caaaagagcc tgccccgacc ttgcattgtt tataccccat 1980 tcctcaactg tgtcaaatta ctcctgttgc gtcatatgac tacttataga tagcctaatg 2040 ctacgcatga tacctactct gagatattct gcaccgtcac cattgctttt aggccgtcga 2100 ggatagttga cttgcgcttg gattgggacc gtgatcagtt ttgaccgcac catggaatag 2160 tgagcaaacc gtatggaaat tttggatatg tctgataatc taaagtcagt tcacaaattc 2220 agaaccggtc ttccctaaca gagtacaagt gttggttaac caagcgtaga taaatagtct 2280 cacgtgacta ggccctgtcg atcgttgagg ctccctccct gaatcccagc tatttcgggg 2340 tcgagacctg gaggcttccc cgtgccacga ctcatctttt atggctccgt cctcagccat 2400 ttcaaccatc tactaccctt gaacacgatg tcgtcgctta cccagtaacg tacttgcagt 2460 aatcataaca agctgtcaca acgggctttc gaacgactcc ctttaaccag caaagtggcc 2520 tecegacate egeggageaa tgtgeegace ttgagegeet tteaceacee ggttgagett 2580 cgaccatgag ttattcttac ctacctacga gcacccatgc ttacggtcct gctcgtcgag 2640 agattacctc gtccggtatt ctccaatcca tacatgatgc gctgccgcac tgggtttcgc 2700 aaaggatgtc gtcggtcgtc cacacggcgt cgaatcagtt ggaaaagtac aagagtcgga 2760 ctgagctgaa agcgctcaca ttgagaataa tacgaaccct ctttacggtc acaaatggac 2820 tgatcattat atggatatgg acgctatggt ggggagagcg gaccgtgttc cgcgacagtg 2880 tagatgcgtg cgcttgggac gcttgggaga aatgggtgag cttgtcgcgg gcattattca 2940 ttgaggtaat ggaacaatgc tgatgtttct tatttagccg agcaatgcta gacctcatca 3000 tgtcgccttc attgcagacc cgcagctcgt tgatccgcac acttaccccg accgcccgtg 3060 geetetgtet acceteacea teaaatttae agaceagtae atgegteget etttetegte 3120 aatacaacac acgctggacc cggactcggt gttattccta ggtgacctct ttgatggcgg 3180 aagggaatgg tcgacttccc gcagcagcag cccagaagag cgttggagac aatacaacga 3240 tgatttttgg aagaaggaat tccatcgctt tgttaaaatc ttccttggtc cgtggagtag 3300 ccaggagaca cagtctacga actcgcgagg tcggagattg atcgccagct tgccgggcaa 3360 tcacgaccag ggtttcggct cgggggtcca gctaccagtc cgcgatcgct ttcagaactt 3420 ctttggcaag ggaaatcgag tggacgttat agggaatcat acgttcgtct ctgtagatac 3480 tgtttcgttg agtgcgatgg accaaccaga tccccgtact ggaagtacgg gtggtggaaa 3540 cggagatggc gaccggccaa accaggagat ctggcaagag ccggaagatt ttctgaatgc 3600 catgaaggta caccgcggtc gcgccgaggc ggacgaactg cgtttcatgg gggaaccaag 3660 aaagggtcgg ctgttcaagc atgaagtttc cgaagtctca aagccttcga tataccgaga 3720 agatgaccca gagattatcg gatttccggc tatccttctg tcgcacgtgc cgttgtaccg 3780 caagccagcc acgccttgtg gaccactcag agagcgatat cctccctccg cagatggctt 3840 agaagaggac gagcaaaacg cgcttaagat cagtggcgga tatcagtatc agaatgtctt 3900 gactaagaca atctctaacg acatagtgtc caagattggg cccaacctag tccaggtata 3960 ctctggcgat gaccatgatt actgcgagat ctcccaccgc gagttcagcg gttcgccgaa 4020 agagatcact gttaagagta tatcgtgggc aatgggggtc cggaaaccag gctttgtcct 4080 gacaagtete tggaateeta tegaeeetae caeegggaee teeategagt etteeageee 4140 tggaagcacc atccaaaacc acctctgcct cctccccgac caactttcca tcttcatcta 4200 ctacggcgtc atcctagcat tcacccttac cgttcttctc gtgcgagccg tcatcctcgc 4260 tctccgccgc accgaatcta caaccccgga acctatcctt ccgctcaccg aaaaccccgt 4320 aatccgcacc cgcagccgag ctgtttcgca tacatcctct tcgagcatcc caaacaccgc 4380 cttcatcaaa ccaggcgggc tagctagccg cgcgacgaat aattacaatc cccgctattc 4440 cccgccacac tcgtataatg acccctcggc ctaccccagc tctgactaca ttggggaaac 4500 cgatacatcg aaatggaagc cgagccacgc ggatcgcgcg cggcgcggaa gtgagacgct 4560 ttttggacgg gcgtggacag agttcacccg ctcggtcgag aacgttgcta gggttgcgct 4620 ggcgtggtat ttcttttga tttgaatgtg gtgagatttc ttgacaaggc gttatcatcg 4680 tgcatataga ggtcttgtc 4699

<210> 2987 <211> 1349 <212> DNA <213> Aspergillus nidulans

<400> 2987

aagaagcgta gatgaagcag tagcaggagg atcacggatc aagagttctc aactgctggg 60 120 tccagatcgc cccgtggaga agaattaatc tcgatgacct tacgagtcag gacctcacgg ctcccgactg gcgtactctt aaaaggacct gatttctctg attcccgcct cgattacagt attggctcct ttctttgccc gaggtccttt gtaaacagga cacagcactt aactggcact atactccgca ccgagtgacg attattggct tcagcggaca gggccccgta ggctattccg agtcttcttt gccgtttaca gcgtactccg tagggggccg acgacggtgc ttgcttctgc 360 tccaccgagc gatctcttgt ctttgagacc cagtcacggc ccggcatcag cggcagtcat 420 cctacaggaa gaggaagagg aagaggacga agtggaagaa ggagcgtttc ccagatacac 480 attcagatac acattcgaca tctcatacgc aggaacgaat tctgcatcta agaccaaatc 540 ccggatttcg tgctggcgcc tcactaggag cggcaagcaa tatttcgatc ggtcatccag 600 atcctggctt gtcgatggcc tttgcagatc tttcgactcc tctagcctcg actctagcct 660 cttgggagaa gaggtgtcca caaggccgcc accatcgttc cctttcccac cggttgaccg 720 780 aggaccagaa aaccccgtaa tacccaagcc ttggagcgga agctagccat cagtaataat 840 tataattatc ctactaataa ttataatgct gattattttt atctttattt ttattttat 900 tttttttttgt ttggtttcat ttgatttaat ttattttatc ttattttat tatactatat tattttatta ttattatttt ctacggctgc ttagtatgat atcatgcatc cgtagtggcc ttcctattgt ggttccaatc gccgaggtcc agcagaattg tccttattcc cagttcacta 1020 aagaatggca tagatcggaa agccgcagct gaggggggaa gggttcggca cctgccaggg 1080 agtctagaga cgctcgagag ccgtcttttc aggagaccgc gagcaagacg ccactggagt 1140 ccagcaaaga atagcaccgg ttcccattaa ctcaggtagg gaaatgccag ttgactcgcg 1200 gaccaggtag agttcgacag cagacatagt gtctatgcct atatgttgct aatatccgta 1260 gttcttggtg ttgcaacagt cggtaccgca ccggaatgtc atgactcgcg atgtaaactt 1320 tgaggtcttg gtcgatctga ccattgatg 1349

<210> 2988 <211> 1281

<212> DNA

<213> Aspergillus nidulans

<400> 2988

60 ccatagctcg tatcgtccgg cacagactta ctcaatatag ctcgatggta ccgtcgagtc 120 gcagtgcgat ctgacgatct ctgcatcgac aagtgccgcc agtcgcagtc gagtatgata cgacatacgg tatctgagcg taagttggtg aatgggcagc cagtggagag tcagccaaag 180 gcatgaaatg accccgagga ggccgatcag tcgggggaaa acgcgacggc gctgacgggt 240 gctcggaacg gtagagagag ggaagtggtc tctgcgatct agatcccctg cctgcttctc 300 catcataagt gaagggcaag cgttcgttcg atgtggtgga caatcaaggg gagagatgcg 360 atgatgggtc gatgtcgatg atctaccgcg aggtctggag tctggagtcg agtttggtct 420 480 cgtgtggggg atgaccgcac acgccgagac ccactgcacc ggaatttggc gcccaaacac 540 gaaaccgcac tttgggtcta catcagctgt atagaagtgg ccgagaacgg ttccaacagt ggcgcttggt catcctgatg attttccacc aacaagagct tgatttgtgc gagctcgccg 600 660 caggaacact ttttcgctgg cctctacggc gcttattgcc aggttcgcct atcgaatcct gcattgtcgg cgccgattaa cagccaagaa gaacggggtt tggctcaaag taaaaggaac 720 ggcagaaagc aatacaagtt acgtctgata gtccattctc ggtcacagcg caggtacggc 780 840 tgctaagggc tctcaaaaat tggcaatgca cagacgaaac atcacggaat caaaaacacc tgccctgaaa ggataaaaat gtcgcatact gctaccttac aaggtgcctt attgaaccgt 900 taaattaaat tgctactgct tacaagcgct tacggtactc atttgtccac ccactttctc gaagctaagc ctgcctcaac cgccaacttc atctcttggc tacctatctt ggccacacac 1020 tctgcggcgc tcccccaaga cccctcact gtgggatctg ctccattttc gaggagccac 1080 ctaactcgct ctactgcacc cgccatgaca gcctcaacaa tggcataatt ggacacttgg 1140 tttccctctg gggcccttga taatgactga catgcggtcc gcgttctaca agtaacgcca 1200 tgaccggaat cctacttctg tcgaagtcct tgctaagggt ttgatagcca ttacgtggat 1260 tccaatcggg aggacggct c 1281

<210> 2989 <211> 4755 <212> DNA <213> Aspergillus nidulans

<400> 2989

gggaccatta cgcaatgttt ggtcttggag tttggacccc tcctctcggg acccaaatgg 60 ggcagcctaa aggtgggttc gcttgtagga attccataac gccttctcta gctttgtgca 120 ctagcgggga atctgttttg acattcatac cgggctgaac cggccaggca catgatgcca 180 caggtttggg agccctttcg acttcgacga gacacatgcg acctaacacg agccaaaatc 240 agtacagctg cccgaatcaa tttacagtgt tcgaggctta cagtttcccg cgatcattag 300 cttcctataa agtgcgttag tagccgacaa cggaagaggg tgagggggat aagaggaggg 360 gctggcgtac tcatggtaac agtatctatc atagatcgtt agcatcgatc aggtatgaaa 420 gcacaaggtc catatcaaac tatacctagg aattgtcgct ccggctttct cgcatgcttg 480 aatgagagcc gagccagctg cgttgcaggt gagtaccgtc cttcgtaaac atttcagcaa gatagatagt taccttctac cgaaaccttt ttgccatcta atgcccggaa gtagtcagca 600 actgatccgt actattaggg atggtgtcga ggcataccaa ttgtaagctc cacctcagca 660 gagcgaggaa ctgtcgtcac gaaggtcctg gcagtgttga cctttggaac ccggacagac 720 cgggcggccg cgcgaaacag ctgcggccgc atgctgtaaa gaaagaaaca aaaagaaaaa 780 840 agaaaatggt taactagagg gtgacaatgg aatgaagtgg ccgatgtgca gcttgagttg 900 aagctgatag gtatcgtttg gttaaagcac ttttggcgta aggttggatt ctcaagcccg gcccgggcgt tcactcgcaa attgccgcct tgagattggc tcggcagtac ggggaaactc agagtccgaa ccgtaccctt tttcttgctt tctcagcaat cccggttcgg tttttctttc 1020 tttcctttcc atctcatttc acgggcatgt ttattgtagg aggtagggcg tcgccgtctc 1080 tccctcctct gcatcatgat ccaagagcaa gatgcactga gctggagcac ctgaaggcca 1140 tcgtttccaa ttactggcga agatgcctac tgaggggtat agttccttac cgacagcggc 1200 aacatttcca tttaagagcc agccaatgta acttaagttc gctttcttcc tagatcacac 1260 acacttccat tgtttacgcc tttcgcttga tcatctggaa ggtgcgatga ataaagaagt 1320 aatgatagga tetegtaaat tigittiggea atattggace teeegtaggi acagaegeaa 1380 tttcagggct tcatgcattt atgtgttgga aaagcttgca aagtacctgc aattagcaaa 1440 gctacaccca aaaatcgcgt gtttctattt gtgctccgaa tttcaatacg cgcatttgaa 1500 tctctatatc tataaagtca gaactccatc gatggtacac aatagaagca agttagcttc 1560 aacccaggac accaaataca aagcaataga tttattgagc taggaatagc cgcttaagag 1620 tegettgact gecaggtegt etectgettt gtaccaggtg geagecaage tttegtgttg 1680 ctactcgctc ttgggcgtgc atgaccgacg ccgtcgtcct tttttgagtt actggagatg 1740 ggaaatgaac ggtccaagac gtgctggtca acaggcctcc cttgtgggat cgcatagcca 1800 ttggatcccc tgagtttgct cgctccgcgg gtgttcagag ggagaatggg atttttgaag 1860 tgaaagtggt ccgcattggc tttctggtct gcgacgtcat catggctatt gcggtcgtat 1920 aggtatagcc caaggaaggg tgagggcaat tccaaagccc tgacgggcgt agtagaatta 1980 ccaaaccaaa caatcgcgac aacgatcacg aaaacccttt tgataagtga cgcgacggaa 2040 tatgagacag gcgaaaccat agaaaggagg acgaacgcca agatattctg agcaaagtga 2100 gacaccccgt tgaacacgaa ttcgaggaaa agggcgccat gatccaacga tccagctttg 2160 ttcgtaagag agatggcgcc atcttgcatc agatcagaga ataaggggta gccctcggtg 2220 accaaccaaa tgggtaatgt caggataaaa gctaacccag agcaatagta gagtaggttc 2280 aacttgtcca gtttgcggcg accagcagac tgtatatctg actccgcacg ctcggcttcg 2340 ttgaagagtt ttttagagaa tatattctgt gatacgaaaa caagggctgc aaccagcgca 2400 cataggatgc cgaaaaaatt cgtggagaag cctgtggaac aagcaagcat tacacccaag 2460 gtcagtggca cgagagataa ataggtcgcc ttagcatagc gaatgcggaa aaggaagcgg 2520 tatgccagca cggtgaataa tggcgaaagt cctttgatag tgtgcacaag cgaaactggg 2580 atttgcgaag tggccattga actcaagata tgacctgcta gttggaatat ggcgagaggt 2640 agegeegtea ttateacate gegtgaegge gggegtatgt tgttettgag ageeggtatg 2700 ctggttttaa gccatggtaa cttggtggac aggtacgaaa gtagcaggca ccacaaggac 2760 acgaaggcga actggaccat tgtgagagta atgggcctcg gaagcgcgtt caaaatggat 2820 tttgaggacg tattcgttaa tgctgaagta gtataccaga aaaggcagag catctgcgga 2880 cgagtaagcg actgcaatag gcgacggggt tggaaagccg tactatgagc ctgtacgaca 2940 caggtgctct aagcgcttga gccagatctt gcgcatttgc actaacacta ccattgcgag 3000 tcctgatggc acttatggtt tcgctgatgc tctttctcgg ccttcgtttg gaatcccgga 3060 ctggtttata gtcccagcga tcactgggcg catatctgac tgttgtgttt gggtaaagtg 3120 ttgtcggctc cgcggtgcca aattgctcgt cctggaacgc tggaaactta tctattggac 3180 tggccatggg ctcagggcta gatactctga ctgatgtttg caggtcggtt tgtcgtatcg 3240 aagagcgccg cccagtccca gtcactatag tcgtggtcat ttccttcccc tttccgggca 3300 cccctatgcg acggacttca aattggtagc agaatgagaa aagcggtcaa agccaggata 3360 atcgaaccat gtacgttgct caaaatcggg cgctgaggcg ggatacggcg aggttgccgc 3420 tccggtagca cttcgaattc cggaggtatt cgaaggctag attatgcagc tatcaatgaa 3480 gctaacactg gtcgagtaag ctgtggagga tgttataaca tgagtgagct ctaagcagat 3540 gttcaggtac tatccattct tgtcaccagc gttatcgaaa cgcgaactca tcacggtgtt 3600 ggcggagttc ttaatgtctg acgggacgag caacccacta gcgtaatttg gttttagcgc 3660 ggtctgagat gacgaatcac cgaatcacta ttgaccagta ggatttgaga aatggacaac 3720 gctgcgagac cccaggctct gggtctccca ggtcccgtga gtcccgttaa agtcagtcaa 3780 atgctcgcca tgtgcctagt aaacactgga aaagctataa tagagttatg agattcattt 3840 ccccacacaa ctacttgcga acatattaac tataaattga gagagaataa gcagcagaac 3900 ggactatttc tagtatctgc ctaccttgac aaatagacta aagcagattg cgaggagttt 3960 ctgacccagg gtccggagtc ctcagggtac attacccccc gcctcattga gatagggtca 4020 tecececagg gaggatatta cagecaegeg ceateagttt ttagteteet tgacattgag 4080 aatgatgttc tgcctaggac acccacctgt tctcctggca agaatgctta tccttatagc 4140 attgtgcaac agtgcattgt gtggcaggac tectagecaa caggactaca egtcacetee 4200 ccaatattct ctgaacaagg acttctcaga tgttcagtta tccgaaaagt ggcaggtcct 4260 cggccccttc caatatggga caagaggttc gtcttcatac gattaaatct actaaacgaa 4320 gtaatatgcc aacgctatct ttaaaccgac ctagaagcca tttggggggc agatccccta 4380 gagtaccggg gcggatttcg aaacgtatcc tttgatgaag aagttgaata tagcagtcct 4440 ctttccacag acggattcgt gaaatggact catgttaggg ccaacatcac gaataccaat 4500 gctgaacaga gcagagcaga gcttgctgtg gccttccctc aagtagattg gggattactt 4560 caggctgtct acgggtggtc tgcggtgcaa tatcaggcct ggacgcggg gtatatgtac 4620 ttgaatgggt caaatcatca agcagtcgca attttcacgg aaggtatttt ggagctatca 4680 attgacggtc aacggcactt cggtggtgat tctacagtta tcgcagagca ccttgatatt 4740 gactattgcc ccggg

<210> 2990 <211> 1547 <212> DNA <213> Aspergillus nidulans

<400> 2990

agcgccccta gcataggtga tttactcttc tttactaaat cgagtaatgg tgatctagca 60 atgtatctca tctgctttaa tcggggtaat gtgaatcgtt tgcagcatcc agcagccatc ttactggttg caatctgcat ggctggcttc gtatagccat gtattgatgg ggagaatata 180 240 accaccgcaa acgtactcaa tctgctgtag ggaagccgat tgcgtacagt agtttcttct 300 gactgaccgt aggagttaga tttatatcat tgtaagagca gcatcctgtc tccaccgtcc gcaaaatcat agggcattcc gagcatgttc tgtgagcccg gatgcgagct ctcctcaaag 360 taaagcaccg cctccatagt ctcgcaaacg gcggcttctg gtggctgttt tcgccagcct 420 gtctatctta gttgctctcc agcgtatata taaagtggta aaagaagcgt ttcagcttcg 480 aattgtgcca ttatccaaac cagcatcgtt gttatttcaa gatttaccaa gtccttgagc tcaaaatgaa atcctccacc attgcgctgc ttagtatgct tagccatgga atggccttgc ccacacccca ggcaaccgag ggtgagaatg agcagaacaa ccaattactt accgctaagc 660 taaccatatg actgaagacc aagcgcctaa tttagatgcg cccactacat gttccagcaa 720 cccaggcact gcagtcttcc caagcatggc cggctatcca ggcttcatgg gtggctggcc 780 cggtgttctg ggcactgcac cctcctctgg cacatacggc aattctggtt tctatggatt 900 cccgggcttc ggtggcttcg acgggtctca cagcatgcct ggaggtggtg gcggagcacc aacgggatca atcacggcag gacctgctgc agccagttcc cctggcttcg gtggtttccc tggctttggt ggtttccctg gtttcggtgg ctcctctggc ttcagtggat tcccaggctt 1020 tagtggattc ctaggttctg gtggattccc caacttcttt ggtagtagct tgaacccaag 1080 cactactacc caaggaggca tttcgcacaa tgcctgcact cctgtgccac accccttac 1140 taaaggcgaa gatttggaag acgggccaga aaatgcaaaa gcggatgctc ctcagtcaac 1200 acccaaagac gaccgccgg ccgataatcc tgacaaggcc gagatgattg acgccacgat 1260 agaacacatt gatgcacctc aggcggctac agcagccgct gtaccttctc ccacggcagc 1320 gccctagatt gagtgatggt gcaccgggca tggggaaatc tcgagcctca actcctacag 1380 ggaatacgga agtattact gagtgacttt cgatcgtgg ttttgaaatg tgagggagtg 1440 atgtgccta actttgcttg tagtgctgtt atcggatagt catttat cattgggaat taatgggaat 1500 gttatttggg ccaacattac ggattcactt gcggcgaatt catttat 1547

<210> 2991 <211> 2530

<212> DNA

<213> Aspergillus nidulans

<400> 2991

attttctcgc gcagctccgg ctcgaaaacc tggtgatgct gcgacagcat atcgatgagc 60 tgctggccaa aatccttcgt tatgtcggga tagcagtctg caacatgggc aatgaagtcg 120 ataagttcac gcagcgagat cagacctgtg tctgtggcgg acgagggcgc tgccatgaaa 180 atttcccggt gactttcata ttgatagtgc tgggcgcgga aatcttcgat ataggacctg 240 aggagaaaga atggtcagga tacgttcaag tttagtcttg ctgcttttca tgcgacaact 300 cacttcggat ctctgcggat tttatgttgt aaattgggcc tgtaacggag gagatatatt 360 cattagcgac agatgaaatt tctgggggac aggcggccgt gataaacgta aagaggagta atacatacaa atcagcctcg accttttcca gggcccccag cttcctcttg accattttt 480 cgtgaagaaa agaatcccaa ggtattgtcc ttgatgaatt agagggagtg gccgaaaaaa 540 gagatgttga gagatcgagg ttgtcgcgcc aagaagcaac tttttttcag actgggaccg 600 tatcgataac gttgtcggag ggtctgcgcc ctcgacattt aaccattgtt cataatttaa 660 720 ggacttcatt acagcaatct gactctttag gtggagttga acagaagact tcttgagttt attattctac tgtatcattt tcattgggat ttcagaaatg ataacttggt tagacagaaa 780 agggaataaa ttttcgttta atagggatgt tcgtggtcgc atccaaacta ctggaggaaa 840 gccgtccgat tctctcatat tttttggatc tcactccctt tcgtgactgt gcaggtatat acagccgtgc agacgtttgc aaaacgactg aatcccagaa actccccgtc cactccagta 960 agcatgaaat aggaccataa acggagaata cacccaacaa aaccgtttta ccggttgctc 1020 ttagccacac gctcaagctc gtccttcttc ttgatagcgt aggagttgga gctgcccttg 1080 gcggcgttga taagctcctc agcaaggcac tcagcgatgc tcttgatgtt gcggaaagag 1140 acatcgacgg cctggcgacg gacggtacca gcggaaccga tacgagtgct gtcttcacgg 1260 ggaccgcagt tgacaatagc atcgacggcg acctggaggg ggttctggtc ggtcatgatg 1320 tggatctgat atcaagtcag ttttctgatc cattattcaa atactcaacc agtttgccgt 1380 atgtgggtac acatacgatc tcgaaagcgt gggcaacaat gcgaacagcc atgagcttct 1440 ttccgttgtt gcggccgttc atcatgatag agttggtgag gcgctcgatg atggggcact 1500 gagccttgcg gaagcgcttg gcggcgtagc ggccagcggt gtgaggcagg tagacgggag 1560 agcggatctg gatgtagtcg ctgtaggcaa ttgcaggtca gcgcgcgttt accctcgatg 1620 gtactgtgta atcctctatc ccatgctatt cccttgcgat tcagttgccc gtctgcatcc 1680 cttcaatttc tctcccaact gaacgcaata agaccggtat tttgccttaa aaaaaccctc 1740 catcgcagta aacgcaaggg gacaccaaaa aaaggagatg tccctgatct caacatacct 1800 cggtagcacc acttgttaaa aagcttaacg gttcccatct ccgcgagagc atccttgggc 1860 agggagtcgt aaaccccggc ggggatatcg acctcgactt caccgtgttc agacattttg 1920 gctccgtatg cacctgttgt cgagggacgg attcgtgagg tgtgtcggac ggtttcgttg 1980 gttggcgatc ggtcggctga aatgtttctt cgacaaggga aaatggaggt gcgcttcgct 2040 tagcactgtg ggtgggttag ggcaggccgt gtagcgaatc aaacgccgtc tgtcatgtga 2100 gcatcttgcc aatagtctgg gcggtgatag tcctaatatg gttagactca tcttccaagt 2160 tecageette atacetaett etetataeat aaceataate ceatatteet geeetaeteg 2220 gtggtatttc agttttctgg ctctgtcccc taggatgaga cgaggcacat ccggtatacc 2280 attgatacgg cggaaggaat tcaacagcgg ctatatactc gtctgaattt gcgtcgatct 2340 caccetgtag teaactaget gettgttgtt acttageatg eteetetget ettttgagtg 2400 aattggcttt ggcactatat tgatcctggg atatttcagt gactactccg tattcgaagt 2460 tatatggtag ccgcttacgg aatatgggtg gggcgcatta accatttagg agacttatat 2520 2530 atatactcga 2992 <210'> <211> 1172 DNA <212> Aspergillus nidulans <213> <400> 2992 ggacacggcc cgaaacatca gtgcactctt atcgataggc acagccgaat atcacagccg 60 geggtaatee ceaetteece tetttgtggg ggegetgeat tteaaageag ceaaageace 120 ccatatttca tcatcctggc cagcttttac acaacaagaa gattagaaat ccaccgcgat 180 aaagtgcgct atataacccc gctctccctc tctcctcttc ccttcccgca ttgcactctg 240 aaagatcacg cccgtctatc agcacaacat ggccgccccc aagatcatcc tctacacaaa 300 ccacctctgc ccctgggctc accgcgctca tatcgccctc aaggagcttg gtctcgagta tgaggaggtg attattgacc tcgacacccc gcgcgagccc tggtacctcg aggtcaaccc ggtacgcacc ccttctgagt gacatttgct taattctcta ctaaccataa cgtacagcgc 480 ggccttgttc ctaccatctc ctacaacggc accgctattc ccgaatccgc catcgttgcg cagetecteg eegacgeeca eeceageeae etectteeeg egtetaaeae eecegaaggg 600 gccatccagc gtgcccacgt ctcctttttc gtcgacacct tcatcggcaa ggtctggtcg 660 caggcattcg cggcccagaa ggctgcgagt gaggaagagc gcgccgccgc aactgagagc 720 attgtcgcgg ctattgagaa gaacaatgtc gagggtttgc tgtacccgga ggggactggg 780 tcaggaccct ttttccgcgg tgcggagaag ttgacgcagg tcgaggttct gacgggaagc 840 900 ttcctgctgc gattgctctc gttgcacaag tatggtctgc tttccccaga gctgccgagc cagttggaga agcgggtacc gaagttctat aaatgggcgc aggaggtcgt caagcaggag 960 agtgtcaatt atatctggga tgaggagaag gttggcactc ggacagcgaa gaagttcggc 1020 gctgcaaaaa aatgaattgt agggagatac tctataataa gccctaatgt ggcaggtgct 1080 gatgctctaa tgattcaatg tgagaaacac ctccttcagc gcttggccat gctaaccgcc 1140 1172 tggcacctat acgtgcaacg ctgctcttgt cg

<210> 2993 <211> 1444 <212> DNA <213> Aspergillus nidulans <223> unsure at all n locations <400> 2993

agttgatggt atagttgcct gccatatett ccacatggca gttgctatac acgtgccacg 60 aatggccgga aggatctcag gtgtatggac tatttattct gtgcggacgg cgccagccgc 120 180 agtcccagag tgcctagtct tgattcggga acccattaaa ctcaacgtcg tttatgttct agcgactgga aatttgacga ctgtagcatt tttttcacgc cttccgtggc tggacatgtg 240 tacttgaaag ccgtttagct attactctct agagagccaa tcttcggtgt ggcttggccg 300 atttctctcc aagtagccag aaatatgtct aatcgtatag aggaccgact cggcttctgc cgttctttct gtctcagact tggactatgg gcagaaccac cttgtgcatt ccacaatcca 420 tttcaggcta aggcctgaat gacgccttgc tgcatctgag caaccctcag aatccaaatt 480 ctggctcctc tagaagctcg tcgaaccaaa catcaaaccg cggctcattc atctccttag 540 600 gttctacaaa tgacccgtta tcatagatct cgattccctt ttggatcatc aatgctgcag atccgaaaag agccagggtg tctgtttaat tgtacgtatg gcccatgtca gccagcattc 660 atgtatcttg agggtcatct agggcacctg ggaaggaatg accatgtttg aggctccata 720 cctgcatttt tctccggacc caatgtttct gggtcagtgc tgaggtctgt taccatcttc gcgattctct ttgcgttttt ccagcctatt aaagagttag tagaagtata taggcaactt 840 900 cacagoggag ttocogotgg agtocoagaa cocaacacot accatatoca totogacoac ctacatctac aggtatgaac ttatctggtc ctgctgcgcc gcgtgtatgc atcaactgat tggttcgagg agcaatatta gtaatggcag atacaatctg ccggcacacc gacacgtttt 1020 cccggggaaa agaaggttat cgacaattta ctcacctcat gaagaattac tttgtcaaac 1080 aaagaaacaa gatcaatggg cgtataatag cgatttgtaa tccatttatc gagtaaggta 1140 gcaagcttgg cccaagttac agcggatttg tctttccacc acgagctgaa cgtcttgtat 1200 tttctcttca tgccgtactc gaggaaccac gggcagaaag tgatttcgca gttttcagtc 1260 tcgtcatagg gacacatagt ccacgcaaga tttgttaagc attcgagcaa ttcggaaatg 1320 taattttcgg cgagaagttc tttggtatgc gtgttgaata acctgatgcc ttttgtcctg 1380

ctaagttgtt	tctttatgcg	tcgcgagtcg	cagtaaaacc	tctggcatng	caatgaagtc	1440
aggt						1444
<210> <211> <212> <213>	2994 940 DNA Aspergillus	nidulans				
<400>	2994					
ccgtcgacgt	agacagcttt	tgggtgcatt	caagctcttt	tctattcaac	ctaaaccatt	60
tcgagttctg	atggcaacgt	gcttgggctg	gtttttcttg	gatcttcctc	tctacgggcc	120
cgggctgata	agccgcatgt	tatcagcacc	atctggcctg	gcagagataa	ccctgatctc	180
gacatatgac	ttcctccttc	aaaactccta	ccagagcatg	gtcgtcgtgt	cctctggcgc	240
ggtggtggga	aacctcatag	ctatcttcac	catcgaccgg	ctcggacggc	gcaacatcca	300
gctcaacggg	ttcttctggc	tttatatctt	aaatatcgtt	gttggaactt	ccttctgtca	360
ccctgaacag	aggacagatt	cttcggccct	tgtagtatat	atatccctgt	gtcagatctt	420
caactttggt	gcgttcttct	cctcctactt	gaggcttgac	taataggacc	tattgacagg	480
accaaacacc	acgacttaca	ttgtaagtat	acctagatgt	gtctgactga	gaacgttgct	540
gacatcgtat	tatagctccc	tgcagaactc	tttgcaacgc	gccttcgctg	cacatgccac	600
ggtctagctg	cggccgcggg	aaaacttggt	tcagtaatcg	cccatatatt	tatatccttc	: 660
gtcgactacg	gatcggctca	taccataaag	atgattctag	gaacttgctg	gggttttctc	: 720
ttctttggta	agtttgccga	tgtgtgatcg	tttctacaaa	. gccctgtcaa	tacgaatago	: 780
ctatcggcct	tcatgttgtt	cggcctcgtc	gccacctatt	tcttcgtcct	gatgttcggg	840
actctgatgg	aaaaattaag	tcgcttgaga	. agttggctga	tgaaaaaaag	acggactcag	900
gacctttgca	tgagactcgt	ggggcagggg	gtggttgttc	:		940
<210> <211> <212> <213>	2995 546 DNA Aspergillu	s nidulans				
<400>	2995					- 60
acatccatto	c cacgtgaaag	attccgtctg	g cagcctcttt	gacageetea	attcgtgcat	- 60

gctgcagtcc aacctcacgg aatttggctt tccaatcctc gaattcctcc tttagagagt gataatcctc ccaatctttg tacgtgacgc catccatcag ggcccacctc atgccaattt cttgtagtcc gagatcccgg acgtcatcga gaacagcaag cgtagagttg actgcgactg 240 aaacctttcg aataagctct tcctcaaatg agacgtgcca ctccctaagg gtgtgagctc 300 360 ggtctctgat gataacggca gagtttcgaa cgccctttag tagttcctcg accgcggttt cttcttccgc cggagcgtca gtagatggca gagactcagt cagcgcattg atacggctct 420 tgatggcggc tgtctgctct tccacgacgg tttccaatgc cattacaagc ttctcaccct 480 cggattgtgc tccgtccgct aagtaggtat cgacaatttc aaccacacga ctctcgagat 540 546 tctcga <210> 2996 2248 <211> <212> Aspergillus nidulans <213>

2996 <400>

atgaggcagc aaactgtctc ttgagaactg gcacactgtt gcattgtttc tggcctgtcc 60 tctgaaaaca tgagtttttc tcgtgctttt cgggtctttg caagatgctt cggatgaggg 120 tttttctgaa gcgcaaattg ctgactcgaa tgactgtctg gtaggcccct tactcgaaga 180 ccgtcaagtc cagcgcgtac tacaggtaag atcgcaaatt ctcgatgcgc aaactgcctg 240 300 ctaataaaat ccacagtcgc taccagacca agtaccgccg tcgcagagag ggaaagaccg 360 actactatgc tcgtaagcgc ctgatcaccc aggccaagaa caagtacaac gctcccaagt accgcctggt cgttcgcttc accaaccgcg acatcgtcac ccagatcgtc tactctgaaa 420 tcaccggtga caaggttttc gccagcgcct actcccacga gctcaagcgc tatggcatca 480 540 ccaacggtct gaccaactgg gctgccggct acgctaccgg tctccgcctt gggcgccgca 600 ctctcaagaa gctcggcctt gacgaggatt tcaccggtgt tgaggagccc gatggagagt tctccctcac tgaggctgcc gagaccgagg agggtactcg ccgccccttc aaggccttcc 660 tcgacgttgg tcttgcccgt acctccactg gtgcccgtgt cttcggtgcc atgaagggtg 720 780 cctctgacgg tggtatcttc attcctcact ccgagagccg tttccccggt tacgacatcg aggctgagga gctcgacgcc gagactctcc gcagctacat cttcggtggt cacgttgccg 840 agtacatgga gggcctcgct gatgacgatg aggagcgttt ccgcggccag ttccacaagt 900 acaccgagaa cgagattgac gccggtgaca ttgaggagct ctacgccgaa gcccacaagg ccatccgtgc cgaccccttc aagaaggacg agtccgaggg ccccaagaag actaaggagg 1020 agtggaaggc tgagagcaag aagtaccgca agaccaagct ctcccatgag gagaagaagg 1080 ctcgtgttga ggctaagatc cgtgagcttg ctgcttaaat gttttttcct tgaccggaag 1140 gcggattgat cgtacttgat gcctagctga gtgcgatagt caaagcagaa aagtttactt 1200 ttgtccacaa tatagggctt gccagtcgtc gattcttcag atatcctgct tgtagcttga 1260 tgactttatg acgatgtttg ttttttgtct agggcttatt tccggagtat tattgggcgc 1320 gggcaatcga atgggtttat tttctcttaa agctcaagtc tccaatatat tggccggcat 1380 gtccaatagt aggctcgacc tgtatactat aatggttaac ccaagccggt tcacctacca 1440 cagetettaa eegaaettet tgeeaggtat ategggeatt ttgtaaetge ggatggatge 1500 aaaaaatgct ctatcctctg tgaagacatc tacggcacct acggcatgtt tgatgccgcg 1560 agagecgaeg gaatatgatt eccaataggg taacetetet tgtgateege etteeacaaa 1620 ggagggtctg tcagacgtac ggaggatcta tattaatcag agaacacccg cgagtccaac 1680 taatggatac tcactgcaca aattgcgtgc acgcgtagtc ttgaatagcc tatccaagac 1740 tetggteet gaetgggtea gtaataataa tggaaaataa tggaaaaate ceacatgaca 1800 cgatattcag gcgggaattt tacggcactg aaaaatcgaa aagaactatt caggcaaacc 1860 actaagctgg ccttaaagga gtcgaacagc gatcagcagg ttgaatcgcc tgtcgtttgc 1920 tactccacta gcagccacag ccatcgatca cctgacctca acatggtaat gcttttacta 1980 gtgcgttcta taaaatacaa gacgagtgga aatcaactgc cagttactcg acggagcggg 2040 cgggcaaaaa gaactggatc aagcgtgcag taatcgccct cgcatgcgtc ttgccaacca 2100 ctgattgcaa cagttgtctg cagcaaaggt attctgtgta acgccgagga agatcagaca 2160 gtcatgggct tttgaggcaa attctaacgt cctgcgtttt tgcttgcatg gcctgccttg 2220 2248 cagcttgcga catcttctgg accgtgga

<210> 2997 <211> 2750 <212> DNA

<213> Aspergillus nidulans

cccaggatga aaagagcgat ccagcgcttg cgattcacca agcgaaagga gaattggcgt 60 tgaggcaagg cagcgctggt ccagctgcgt ttctctttat caccagcctc tccggaagat 120 gggcatgtct cccaaagacc ttggattagg tcggcctcag ccataagcat accgcccagg 180 aaaagaacga catcccagcg gccatagcgc atacagaacc ataccaacat gctaaccaag 240 300 gatatacgaa cggctgtctt cacgcgcgct gtagcgagaa ttgtaaggaa gagaacgata gagctgcgga actcaacggg aatcgtccac aggtgaggat tatagttatt ataatacaag 360 gcccagtcga acgggtccat aaggcgcgta agcgtataat accagtccca caactgtttg 420 gtcagagatc tgaccatgat cggtggatgt tgttcgttgg tacccctgat cgtgtggcct 480 540 aagatgccaa cgaacgaggg gatgtataag cgaaggcctc gtcgtaatgt cgaagaagcc 600 agggtaacat atgtctcatc gtaagcccga ctgcggacca atttgagcgg cttataggaa 660 aggacatagc ccgatattac gaagaatatg gcgaccatga tgtgacccga gaccaggacg 720 tggatgatag gcagctgata cagatgccag ttctcattgt tgaatcccca cccaaccgcg 780 accttccaag tataggtgaa gagaaagtga aagttgaaca ccaataaaca ggcccatcct 840 cgcaaaccat ccagcgcacg aactcgcatg cagctttgtc tgcggcgggg gctggccgcc 900 gaccaagtgc tgtaaatagc tgggggtgat gacgatgccc agtttagtga accagtcttc tagatattcc tgccagtggt cggcaaagtg ttcgaggagc ggacgcagct ttgctggatc 1020 ataaagaacc tctgaagcag agaagcctcg aaagctgggc catgcgagag ttcgacttcg 1080 ggatgcgcga ccaaagccag attcgacgtc atttaggggg acattgtgga tggcgggggga 1140 cgactgcctc tcgttctcga cgttcattat tccgggagcg ctgcgagtct gggagcttga 1200 ggcaaatgca gagcctcgat ccagggcaac tgatgaggtt cggtctaggg gtgcgcggtc 1260 ttatatgcaa ttgttgcgat agtggagtct gggttctttg cagcaggtgc tgatacttat 1320 gggtccggga ttcgtcatcg gcgattgtgt ctgacagcgg tagaacggag catgctctgg 1380 agccctctat gatggaataa tgctcgcggg gtctgaactt ggtacacaaa ttgaagtgag 1440 cgagagaaag cgaaataaaa gtccaccttt gggggcggag gagagttaag gccaaatggc 1500 gagtgtcgat ccggatgatt tcaggacggc gacgtttcac cattattagg gtggcatcag 1560

ggacggaata cgaattggct aagaatcttt tacagatcta ttcgccctct caatgagagt 1620 ttctggttat attagatcat ttatttaacc gtttacttct gatttgatca caacttgagt 1680 gcaattggcg tttgactgga gtacatccta aatacaggca ccttgccctt tatagcatat 1740 acagaccgca atatagttac acgtgatctg tcttgcaccg ccgggcagaa aacgtccgag 1860 tecgaaageg gaaacteeca aaacteaaca geeaegeage ageatggteg aatetttgtt 1920 atatagctag tagatggctt tctgtttaga attaagacta tacaagctgc gctgcagtaa 1980 gatctgtatt agtagactcg taagaacgac ggatctgaca aggagaccct gcaagacatc 2040 ctttatgagc tggcgaatat ttggtcttgt gcagcgaaag ctgaatacaa caccatcttc 2100 ctctatcgtc accatccatt ctatcaataa ccttcacgac ctagagcaat gtctagctgc 2160 taagtcgctg gctttgcttc tttgaacgct ctgatctgca tcgtcggtcg tcctttcttt 2220 ttccaccctg ccttaaactt cgtctcatcc tgcagccccc tttcatcccc tgtatgtctt 2280 gttcctcatt gtcattctcc tccgtcgcct ctctccgtca ttaattctag actggtaccc 2340 cgttattagc accgggccgt tgtggagagg gggcttgctg ttgttttcgc cgtttcttgt 2400 ctgctccatc aattctgctc gctatcggtc cgagttttct taacagaact cgcaatcgct 2460 atggatttgc gcacgatcat gaacagcgaa gccgcgggca cctcccaacg gcctccatcc 2520 cccacgttgc atcgatcacc gccgcaactc acccgcaaac catctgagcc aacctatccg 2580 gcacacgage agtttccgtc gtcatcatcc tcgtcttcct acccatccgg gtatcccaac 2640 gggccagcgc agcaacccgc gccgctccag cgtcccaaac ctcgccagac cgagctccat 2700 2750 cctacggctc actgcaatcg ccctaccagt ataactctac gggcgcgcag

<210> 2998 <211> 1339

<212> DNA

<213> Aspergillus nidulans

<400> 2998

gttgaaacag cttaatcaaa aatccagaac gcattctgaa tactcctcat ttggtcaatg 60
aatatagaag ctagaggaag tttattttcg tttcctcaag cctgttccgt gaagcgttag 120
gtctgtcaac gtggatagaa aagcaacagc aacagccatc ttattacgaa ttaggctaaa 180

ctgcaggggc aggctgtgac agtaccttgc aagatacaca ttctcaatca ttcatggtag 240 tgcaattaga caatgccggg tcgccggaag taaggattgg ggaatcacag aattttgcat 300 agatctgtga tcagcttttc cgggtaattg cgcagtgtgc agaatctgac taccacacat 360 ctgggccatt gttcctttga ggctgtattc tctcgtcctt ccccatacgt atctgggttg 420 attagcagtt caccaatttt agccagataa ttgcaatgaa ccgacttaat gaccttcggc 480 acageetteg etaaaggtat gatatettag ggttetgatg geggeteeta ggeegtgtea 540 ggcaacggag atggcccata ttctcttata aaatatctat tcctggctag tcagccactg 600 gaagaactgg ttttcagaac tttctaagca caatgagaaa cctgaactta attttcacaa 660 agttttattc accaaataac cacagcggaa cgaagtagaa gcggagcttc aagacgcatt 720 gcaagcacaa aaaagagact acccatttat atgataaaga aagacgacga cgtgaaccgg 780 840 ccaaccagga acctcccagt tggacacaag atgaaaagga tacgggagtt gatgaagata cggaggccga gggatttaat ttgaaagatt ggttagggtt ggaatgatat tccgacatta ttcagcaaaa gtgtacaacc atgaaagaag tcttctgaaa aacttcaaaa atgatacaag 1020 tacactttct cctgattcga aacagtatga tctcagtttt ctcttggggg aatatgttga 1080 ttacaaaaac ggattgatac accgttgttg agtgattaaa ctaacctttt aaggtgaatc 1140 ctgcaattta ccagatattc cacatttggg atgtttatag ttactttctg cagatggaaa 1200 agageetetg taegtgtttg acaaggtaag teactegett geaaatttgg aataetteet 1260 tttccctacc gagccagtga ggagtgcttg aacaggcttc attataatgc cacacaatat 1320 1339 aggttcgtcc aaagcaaca

<210> 2999

<211> 901

<212> DNA

<213> Aspergillus nidulans

<400> 2999

ttttttttt ctgacccgc gttcttgggg ctttgggtgc tcgcgactc atggttggtt 60
tgccctcaat cgttatgagc cgcgggctta ctttacgcag ctccatcagc gtattggtcg 120
ttatgtgact tcgtctctta gtattagttg ctttgttcgt ctcccaagcc gccgtcatcg 180

actcgacgat gctatccgtc attgggacaa cgttggactg agacttttcc tgctcaatgc tacccaacaa aatcgattca tccacacctg tgagtatcgt gcgataccaa cccagttgca actcggtgag tggcaccgaa aacacagtct ctttcttcgg tggtaaatcc agcccgatct 360 gagaatcaca tttggttcgg cgtagcatta caacttttag gaagcgggta atgtggctga 420 gaaatatgct gtcaaacttt ccgtctgtca aggaaaacgc gttttcgaaa agcttggccg 480 tggctggcac gaaaacatcc gggtacagcc aatgtaaaat agaccacagt tcagttagat 540 cgttttgaat aggtgtgctg gaaggaggaa tgtcagttca tgtaatggcg gtgtgcttga 600 660 ctagtgccta ccctgtaagc acaatcctat tctctgaacg aagtctgtaa actccctgcg ttcgcttaga cctgctgttc tttatgcggt ggccctcgtc gaggaccaca tgtgcccaaa 720 780 gtgtcttctg aaagaaccag agatcactgc aaagtgtctc ataggtcgtt acaacaatat tccaaggctc ggcccctgt tgtctgaagc atgtgcgcag gttttctctt tcttcactgc 840 ctccatggta tgccattggc ctgagcccag tcgtccacct agagatctcg gacatccaag 900 901 t

<210> 3000 <211> 3063 <212> DNA

<213> Aspergillus nidulans

<400> 3000

aaaatgattg caaagagcgg aagagaagat gaagagtatt cttgaagaag ttggataaga 60 gtgaatatgg acgcgaatga ataggagaca aagtgaaaaa agtacagttg tgaaagaaca 120 180 aagggccatt aaaaatagga gtgaccctgt gttccaacac ggagggagaa agggcggtcc ttacatacct agccttaagc cactagtcgg aacaagggta atggccaact gctgcactcc 240 300 ttaagggatg gtgaactcta cactcaaacg gcatgcgggc agaccacagg gtcccatcaa ccggcaacca agatgcaagc aaacaaaaac acaatgtccg aagaatcagt cgctgtcaga 360 tgagtaacta tgagccatcc ccgcgtttat ccgctgaaat ggccaggtgg gacccgattt 420 gaattcaccc acggcttccc ctgcccttca aacgcaaaac gtgccggaat tccccaagca 480 ataatcgagg cagccattgc tcgaggccag ggactgagca ttaccgaaga agcgctggag 540 600 ccagtaacaa ttgaagcaat cctaccacat tctgttgccg acgtaatcga atgcctaact

gagagcaagg ctcggctatt gcaggatgta cggcatgcta ttaaaaaagc tggcggcacc gcgaccccga ctgcatacct ctttgagaag aaagggcgga tagtgtttga gaaaaaagac ggtgtcagcg cggacgactg cttggagcag gccatagaag cgggaccacg gatatatcct 780 cagatgaaga agggcgtatt attgttttca ctgaaccaac ggcgactaag aatgttggtg 840 900 aaacactttc caagctagct ggtctaactg ttgaagagct tgaaattatt tgggccccga accaggatac gctggtagaa ttgaaggacg aacaggtaca ggagattgag gagatattag 960 cttttctcag ggacgaagcc ggtgtccgtg acatatatct gaatacgact caagctttat 1020 gactgtagca ttaggcttgg tatgccgtct gtacaacata gtcacccatt agatttagat 1080 accttaatag actaaggaga tttatttagc gagccatgac ttgatgtcat agtccactgt 1140 ttacgcagaa tttagttatc gttagctctg tctgtcatag agagagttcc tgtctaccgg 1200 aaagctactc ttttcgaaga gctttcatcg tcgtgcgcat caaattcgca attcccacgc 1260 ttcccgcagc atccatccag tcgagcatcc gcactctata atcttgccag gtcatctgaa 1320 teceteette ettetetage geacteagag etetetgegt caeaggette egtageetgg 1380 gttgagtctc gccaacatca ttctccttct cgatatcaga aaagcagcag gcagacatat 1440 tgcacagcgc ggcatgatgg ctcagagagt ataacgaccc aactgtataa gagaatgcgg 1500 attcgcggct cttttttcgg gctttgtcat tgacttcccg gagatactgt gttagtgcag 1560 ctattgttgc tggcggtatc aaacagccca gcgcgtttgg atcctctgag ttaagagctc 1620 gattccgcca tacaagattg caaacatcca taatatatcc gttgaactgg ggaacgagct 1680 tctgtgtcca aagcggatct ttggactgga gcgtctcgga attcattgat aactcaaagg 1740 atgacttgta gctgcacagt atagagttca tgctcgagat aacaaagctc acggggctga 1800 aaatgagggt gtagacagac ggcgcaagag ggacagtgag tttaatgttc ccgttagtat 1860 gtgcgtgaga gaacagatct gccagtgtga agtaaaatcc gagaacagac agcgtactgg 1920 atctatagtc tccgcttgtg tctgaaggct gttgtactgg actttccaga acggaagagg 1980 ccaacaattc agcgtgcaag ataagagcgc tcaaacgttg cgactgctca atgtcgaatg 2040 actccgttct caacttgatc ccccactgac ggataaagtcc ggagtaaaag tctaacaagc 2100 tcgccttgga agacgctgta tcttccagca aagcagtctc tagaggagct aagatctcgc 2160 tccgtaaaga gtcatggtct ctgataggaa ggtactcgag caattccagt attaactggc 2220 ggttttcgaa gccattccag attggtaaat atgatctcaa aaacgttagg aaggcttccg 2280 ggatattcta ttacatgtta gcaggctgcc gaagtagttt gggtgagaat cgataccttt 2340 gtgtactgtg cgtaaccaac aactagattt agcacgtagc ctagcgtctc aacaccgtca 2400 tcaaagtctc gcgcagactc taaatgctcg ctcaagaagg cttgcaacca atcattgagc 2460 cgccggtctg caatttccgg ttgaaccaac aagacgcatt tttgggcaaa atcatgcgta 2520 aatgtggaga ttatctggtt aggtagctcg attttgtcaa gccgttcgac aaaatgagta 2580 acactgcgca ctcctccagc gaagttcggt tctggttgac tcgagaggtt tgtacttcag 2640 ggacaaccgt ctgcacttta ctcctcttcg ccaggcctcg atgtactacc tggaaactgt 2700 tggacccatt tccctgagtt cgctccaagt tcgtttcctg gatttgtcgt gcatgagtcg 2760 tccattcagg atcagggtgc ttaaagaaca ggcctttcat gccagtattc cccacaataa 2820 catctggatg atagttcttg aaaaccctta gcagtgatat gagttcccta tcatcgccac 2880 ctgacgtgcc aatcagttcc attagagctt gtattctgaa aggcttgaca tgctttcgcc 2940 tggtaatgta ggaaagaata tggcacaggg gcttgcgcag gctgatcatg tcaagatggt 3000 taaagagcac agcgtagagc ttagacaagt gagaccgatc atcaatgaat tcataaacga 3060 3063 gaa

<210> 3001 <211> 777 <212> DNA

<213> Aspergillus nidulans

<400> 3001

aaaagcccgt cgccgataat cctggcttgg ttagtaaatc ttccagcgga gggtatcagc 60 ctccttgaga ccgctggtaa gatgagaatg gcattatcat ttatgcagta gacactcagc 120 ttctcaggtg atggaacgta ctccatatgt ttagctggag cagtggcgac agagtgagat 180 caggcgagga agctgagaca atgtgggcga tgtcatgtcc agttcaaggg tgctggagaa 240 cattcaaatc gctgcctcag gccaacaaat tcatatatat tgaagattcg agatatgaga 300 ttcggggatc gatttccgac agcacaactt gacatttcga aaacgtggga ggagagacaa 360 gttatggccg agaaagtcag gcagccttgt ttttgcgcaa acaaattcgc atcagcgtct 420 tgatatgtca gcaccccctc tcttctttgc tctcatgtca agcctccaaa ttcaacactt 480 ctaaacgtcc gtcagttcca aaggccacca aaggtccgtt ttcagacgca atggcgctcg 540 600 tttctaccct gcatcacgag cttgcattac cggtgccaaa gctggagcca gctacaacaa gcccactctt tgtctcgaat gaaaccagcc tacgccaatc tgcagataac actgcagaag 660 720 ataccgttac aaacaatcat caggatgcac ccgtttctcc tgtacaagca gagccgggac agacacgaca ggttttcgag cgagcccatt gcctgaaagc agtcgatacc gccagtt 777 3002 <210> 2855 <211> <212> DNA <213> Aspergillus nidulans 3002 <400> ggattgtcgg taagtcggac aaacgtaaaa aaccgtttaa gaagggcgac cgcatcgccg 60 gattcattca tggctccaac caagtgcagc ccgaagatgg cgcgttcgca gagtacgtcg 120 ttgccaaggg ggacattcag atgcatatcc ccgacaagat gaggtttgaa gaagccgcaa 180 cgctcggtgt cggcatcatg actgtcggcc aggcactgta tcagagttta aagcttgccc 240

tgccgactga acccaccaag acgcccgagc cgatcctcat ctacggcggc tcaaccgcaa 300 ctggagcgct cgcgatccag ttcgctaagc tgtccggcta cacggtgctc acaacttgca 360 gtccgcacaa ttttgatctc gtgaagagtc tcggcgcgga cgcagttttt gactacaagg 420 atgccaatgc ccccgccaag atccgcgagt acacgaacga caagctccgt cttgtgcttg 480 acacaatctc gctcgagccc agcgccaaat tctgcgacgg cgccctctcc accagcggtg 540 600 gcgagtacag cgcgcttctg cccgtcagcg tcgaccgcgc caatgtcaat tcaagagcca ctcttgccta cacggctatt ggcgaggagt tccagtttgg cgacaagacg acccctgcga 660 agccagaaga taaagagttc gcggcgcgct ttgccactat tacagagtcg ttgctgcagg 720 atgggaagat caaggtgcat cggcataagg ttggcaagaa cggacttcag ggggtgcttg 780 aagggttgga actgtgaagg agaataaggt cagtgggtaa aagttggttt acagggtgaa 840 900 ggatacgccg taaatgtaat ttatgtctta aacatctata tctgacaggt ctggctcgta tcgtgtaaat agatagaatt gagaccagca gaaaaggaat aactccgctt cagaaatgcc tcctaacgtc caaggcttgg ccctgagagt gcctaagaat ttgacttgtt tattttcttc 1020 tgccaaccca gtttatttct cgtgggaacg tactattcaa taggcttaac tgttccaatc 1080 ttattacatg aaccagtcag ttagggtatg gggcgccacc ggccccagtt aggtctagac 1140 gccgcaacca aaaaccccag tctcgaggta agtgcttgaa atgtctcaaa ctttgggttt 1200 ttgggattgc tagtcataca cgctcacgac cgacgaggcg ggacacattc ccgaagattc 1260 tgcattgtta aaccetteaa atattaaaga tetgeagata tgaaaggeag gaatgegete 1320 tctatctatc cacattgctc ttctccaatt ctgtgtacta acttcgtatc atcatgggcc 1380 ttcaagaaag teeteattgt eggegetaee tetggaattg geegggetat tgcaaccaga 1440 tttgttcgcc aacatggcag cgacaaggtc aaaagcaagg tctttgatgt gacaaaattg 1560 gacaaagtaa ggagaagcat gcaatgtaca aggacaagct aacagctcaa gattcccgtt 1620 ttcgcctctg aagtcctcat cgagaacccc gacattgaat gcgacttcgt caattcgggc 1680 gtccagcgcc cctttgactt ctccaagccc gacactgtcg acctcccgat gttcgaccag 1740 gagetggtea caaactaege ateegeegta taceteagea aageetteat eeceeactta 1800 caggcccgga aaatcagacg tcactcattt atacaacctc acagatggcc cttgttccaa 1860 tgatgeggtg cccgaactac ggggcttcca aagctgegct gcaccacttt attctcgctc 1920 teegeaegea getgegagat ggtetggtgg tagagateta eeegeeteet gtgeagaeag 1980 agctgcatga cacgaagcat cagcgatctc aagaacggac atctaattgg gatgccgctg 2040 gatgatttta ctgacgaggt gtgggcaagg ctacagaacc gcgaggagca gattgctgtc 2100 gggtcagcgc aggaaatett tgacgcgttt gagattaagc ggcaggggct gtataaggag 2160 atgacgaaga tgttggctgg gttatttaag cagtttctga ggtagatagt agttgcgtgc 2220 ttgagaagaa tgcgaagaat ttgttgtttt ctcttctcct ttccttcttc ttccccctcc 2280 tattcctttt ctttttacc ttgtcccttt cacggtggtg ggcttgagac gatttgctag 2340 ctgtctactc gccatatact ctgtacattc agtcaggctc ggactattaa ttcttgctac 2400 tataaaacac tagatatcac tgttcccctg cctcatacta caagagtacg ctccagattg 2460 atccgatgct caatgtcacg agttacagtc gttgatgcta acaggtagta ttagactaga 2520 agaattaget agagaattaa aacacagtga cegttgaget teetagtgta aeggacegae 2580 gttggtgcca accttgattc gtcattccgg aagtcagcaa caatcatacg agaactggcc 2640 tgtacatggc ttateccgga ccagagattc aattggcagt tggttcctag tggactggct 2700

cgtcttaatt cgggcaatgc tcgaatcaag acttcgggcg tagctcgtca cactcaacat 2760
aatttcccgc actttctgag tttttctaaa aaaaaataca cgagttaaaa atttattttg 2820
caacttcatc cacgcgtcta ccaccttgtt gctgc 2855

<210> 3003 <211> 1696 <212> DNA <213> Aspergillus nidulans

<400> 3003

agagaagata tgaaaaatag gagtaagatg aaggagatat tagaagaata ggttaggagg 60 120 tgagtaataa ttgaagagag gaaagtaaaa aggtaaagag aaagaggtgt ataaaaaatat tcccagagga aggggaatta tgaagagctt tgtggccaaa aataagtgaa aggttgccgg 180 qaacaacqtc ctttaatatq qcgactagtt tqaaqcaqat aattqtgtaa aaagccattc 240 eqtectqtqq tteqattqca qatqtaqaqa aatqqcattt gqtgcagtat gtecetggca 300 360 caaggtactt ttgggacatt tcaagattaa tttaaaaagtg ttgaagcgtt accaatttat 420 aaaattcaat gttctcatct cgcttggtaa ttaaaaaaact tttcgcatta gctgcatgta gcttttgggc acgatataac agcgactaac tatgcttcat cctttgggtc gctctgctca 480 540 ttaaacacca cttgttctgt ctcgcctgtt ttcccttcgg ttcctgcatt ctgctgcgca 600 gtgcctgtgc tgctggtttt tgcqccgctg tctccacctc taccctcagc acgtctcgac ttagcgcctt ccttgagttt ttcccatcgg tccctatacc gaccaagcac gttgtggagc 660 ttctcattct cccgtcctac tttctccagt tccttttcgt ggtggcggag tgcttcctcg 720 780 agtteettta tgegetttte ttgttetgte ggegeggegg ttgeegtaga gggaeetgte gaaggtgagg acactgcaga cacagattgg ggtccatgct ccggggatgg gatattctgg 840 tgatgcattg ccttcaaaga ttgttgcaaa gccagggacg atgactgtgc gttgacctcc 900 cacatgtgta accgttttga taaggtgtca gagaggtgac gtagtgcttg attttccatt 960 tgcagctctt ccaaggtctt aggcgactgg aggctcgtta gtttgtcgtt cccccggcct 1020 gatttgeett tgeetttgge tttgettgee tgaageattt ceggagagga gggtgtetet 1080 cgagcatcaa caaagtcatc ctccgcatca tcgacactgt tccgacgagc ttccttttcg 1140 gcaegggtta agateceege gtaagacaca gtaecaeegg ttgtgggeae eaegtagaae 1200 <210> 3004 <211> 1443 <212> DNA

<213> Aspergillus nidulans

<400> 3004

aatttcttct tcaatctact tcaaatccat agatgttggc gaatacaaac tctcgatccg 60 aatcagcttt tcttgcttgc cagggcccca ttgtgctgca tactttggca aagtgtcgtg actagataca gctatccttg aatctagaat tgtcatgatg atttaaggat caggcctata taaagctcca ttcccaagca cagaccatca acgatactcg acgacttcac aatcccagat 240 ctgtcccctt gaccacaagc gtcatcatta cttctaacta tgcacaatga tatagtaatt 300 gcttatacat aactcatcat ctccccttcc ccttcagccc ctactgacgg ttcatccagc 360 qtgagaqcca tcatacaaag gccgacagtg gtaatatcac aattcaagct cgtccgtagc 420 480 ggttactcac tectegteaa etececeaeg gtetetgaet tgggcaecaa atteaeegge cgcgctggct cctccccact ccccaatcca atctgtgcat cagatgatgg agaagctgat 540 agaatcacgc ttcgaccaat ttggaaggcc accggctggg gcgtgtgttt tcgactcatc 600 gaggtaggaa gggaggtgtc atgtctcctc gcgcggcggc tagtggcctc aacattatcg 660 tgcgtcgccg tgctgtgcgt gtgcgagttc ctagctaacg gaattggttc gttgtcgccg 720 780 gtgctagtgc taatcacttg cgagatagtc cgcgggagat gatagccagc tttggcgaag 840 ggaatagaga gaccatgaac gactatgctg cagatgacga gaaaccagac caccacttcg

atggtatcag agacctgctg cgcatcggcg cgaatttcgc cattcacggt gatcctattc aaatattccc tgctcactga aagatagaag actgcaccga cgccgatggg gccaaagaag ccgacaaatg tagtctggaa cagactttcg atctgttcga tatacttgtg catggcgaaa 1020 atgataggca tgcgacggac aagtaggatt aggattccca ggggaataga cggtatatcg 1080 qqatqacttt tttttctagg agagatgcct gggcagacgg taccaaccca atgaagactg 1140 gtaggtgagg agcattccat ggttggttga agagagtcgt cctggtttct aggggacccg 1200 getetgtggt eagettgeet teceattete aaggggaegt titttgtttg aacattittg 1260 acqatacacc cacaqqtcca tqtcattatt ttactactct atatagaata aggtttcttt 1320 ctggggtttg cgttctcttt tcatgtatgt taaaagtatt ttttgtcatg atttctttct 1380 cqtqatttct taatctacat tttcttttct ttatatttta tatttttat actattttgt 1440 1443 tct

<210> 3005 <211> 597 <212> DNA <213>

Aspergillus nidulans

<400> 3005

tgactaatac atggtttgca ggctctgcag catccgtatt tctctagctc gaaaaaatct 60 acaacggctg tctaatttag gcttctgccg acacatacac ttcgcttatt agaccccgtc aaggttataa tcaggcatat ggaaggttac atacggcctg tcgtagcccc cttgagatat 180 qtcqaqctat attqqtatat caatqtqqct catatcacaa acqcccatat gcttgtcagc 240 cacggaaata ccgaaatttt caagttagac aggctagcct tctattttgc taatcaaatt aacaaaacag atgcgattct cttcaaggca gtggtttcgg ctttcattct atatgaacgg 360 cattcaaaat cgcctgaagg ttggtcaaag cagggcagta gtcgagttgg gctcattatg 420 agatgatgga gacattccag atacggaaac aattgtgatt gcgaattcgc gcagggtatg 480 gaaggatacg aaaagatgaa atattgtata tcaatctggt cctcctattg agcactcctt 540 597 ctccgcaagt tcaccgtcgt ctgatttgag acgcggactc gaggcaaata tggcgtc

<210> 3006 <211> 1433 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 3006

tacgccggga taagtccaaa aagtccgtag cgccttcgct ggaaaacagg aaaacaggaa 60 aagtgatgtg agctgaaata gagtaaggaa atcgtgtcgc atgatgtgtc taaacctgtt 120 180 ccqtqtttqt qqcttqqctc ttqqacacqt ttqttttctc gagggccatt ccatccgcct 240 ggactgcatc tgagctgaaa aagccagagt caagggttcg aggatcaggg tactggaaca tqtctttttq aatqtcqqca tcaqaaaqaa gtqcgttgat gatgtccgca tcatcattgt 300 tctggttcct gtccgatttg gatggggaaa gatcagaagg gagccaatct gcccagttat 360 tattcgacac atttctggaa tcgagtgcga ataatggatc tgtgtgaagc gccgagttgg 420 480 cattgtcgga gaagatatct acaatcatct cgtccatgcc ttgaaatgca gctgtgccga agatatcatc tgacatcggc ggaaggtcag gaataagcga gcgagatcgc ccaggtgtcc 540 ggttctggtg gggaacagac ccaggactgc tctggacgcg ctgcagccga cgtgcaggag 600 ttcgagttgg ggttatatca atagetccgt ctcttcgaga cttgacaggc gagatatagg 660 gaagtgagtg tegettgtee gatgtagtea ggegttgatt tegtegettg ggggtgggae 720 780 tagcacaaag ctcaaattca aaagagggag gctcgtagag ccgctctaag tcattcacag cctggttctc tttctcgccg ggctccttgt tcgcttcttg gacgccgggg acgcgtgagc 840 900 ctcgcttagg actgttcaag accgagtcgc ctaatgctcg caaaggaccc ccctcgttct gcgaattagg aaacaatact ctcctcactg acttgggagg caggtttctc tcacccgggg 960 ctgaagtatt gccacctgca agattcctag cagggctgga ttgaattgcc cgccgaagcg 1020 cttcccttqc atcccctca tqccaqcqqc ttcctqctct gtcaqatgat ttgcqaqgtt 1080 ctgcactgtt tgcgcggcgg cttntagctg gcggttcctg agcatcatcg ttcttttgtc 1140 cttcagtttc gcccgcctta ccagcatcat tatccggacc cggggtagta tcatcatcag 1200 ctgctgggct cgaagcgtct gatacgcctg gtgaggaagc atctggctta gacggctcgc 1260 ttgtgctqcq qccaccqqqq cqcttattag tcgaaaqcqq cccaqcatct ttgcqagtcc 1320 tgcgcggtcg ttttcttttt tcgtagctag ctttgttcca cctattctca gggcgcatgc 1380 ttttgcattt ctgaagccag ataccacaag cttcggagcc attagtacat atg 1433 <210> 3007 <211> 1357 <212> DNA <213> Aspergillus nidulans <400> 3007 aatgtagaac tgggggagca gaaagtgcg

aatgtagaac tgggggagca gaaagtgcgc aaggttgggc ggcctgtgtg cgttgttgtc 60 120 qacqaqqtqq acggatggtc agcggatccg ggggttctgg tgaaggcggc ttcatgaagg 180 ccttgaccga tctcgttctt ctagaccaga gaaactcagc acgcacatcc gagcgagcat 240 ctgacggacg taagagaaag ggtgacaatt ttcggttcct tcgtccgctt attctagtct gcaatgacgt gtaccatgca agtttgcggc cgctcagaca atcttctgtc gcggaaataa 300 tccacgtgcg tcaggcaccg ttagagaacg tcgtctctcg catgaagtct atcttcactc 360 ttgaggggat cccgtcggac agcgacggag tacgacgact ctgtgaagcc tcatggggcc 420 ttgcaaagcg aaagcaacgc ggcgtgagaa gcactggtgc agcagaaggt gacatccgga 480 gcgtcctagt agctgcagaa tgggtagccc acaagcttcg aaatgaaagc tccgctcctt 600 tgaggttgac acgaaactgg cttgaacagc gagttctcgc agacgccgga ggcggctcgt 660 ttttcaaagg catgaaccgc ggtggagtac gcgacattgt ggatcgagtc tttactgaag gggccgggtt cccagacgta ccccttggcg atgaatctct ccaagaccca tacgaccgct 720 780 cagaggcggt ttcagtggat gtcgccaata tcaaaaagcg ccatgcaatc aggaggctgt gcgagatggt cgacgccagc ggcgaccatg accgctgtac ttccgagtgt ttctcctcat 840 900 acccactcca accatatcaa gacgatacgt tcctcaccaa accgaacgcc gcttacgact qqcttcactt ccacqacacc atctcatcaa gaatttactc tgcccacgat tgggagttgg qtqcctacct caqccaggca acatcggcct tccaccttct cttcgcaacc gcgcagggca 1020 aagctcaaca acagtacaga gaaatagacg aagaagagga ggaagcacat cccttctctg 1080 gcccgcgagc agactatgcg gccttcgaag ccacgaagca aaaccaagcc attctattta 1140 cqtttcaqtc attctttct qcqcctattt ttcgactttt tcggttcgtt aataattgag 1200 ccacccaact tatttctaac gttattcgca ttgctcttgc agacaataaa cctgtcttcg 1260 tgcgccgaaa cgagcataat attgttgtct agccttcttt aggagagtga tgccctcttt 1320 1357 tttcattttc ggggtcgtgt tatgactcgt cctaggt

<210> <211> <212> <213>	3008 631 DNA Aspergillus	s nidulans		v		
<400>	3008					
ttgcgcgata	tttcgccgtc	gactccctat	attccgacct	tggtacgggg	aatcagtgca	60
aatacctcta	tcctccgcac	cgtaggacgg	ctgtttcagt	ttacagaaat	tgacctgtcc	120
ggcctggtca	ctggcagcgt	cttaacagat	ctgccgccgt	accagtggca	atacgataga	180
cgcttctggt	ctgaatcacg	agtctcacga	aattggcgat	tccgtcaaca	tcctcatcac	240
gatatacttg	ggtctcagat	tccagacggc	aatgagatgg	agcctctctg	gcggtctcta	300
attcatcttg	acagtgttcc	atggcttcga	gaccatgtca	ttgacgggaa	gacggtcttc	360
ccgaggtcgt	cttatatctc	aatggcaggc	gaagcgattc	gtcagctgac	agggagctcc	420
gatgtttcgc	tacggcgcgt	atcttttctt	gaagacatta	cattcgatgg	aaagcacccc	480
actgaagtct	tgacacagtt	tcgacccata	caaggtaccg	aatggtatga	cttcacactc	540
acgagccagt	ttgaaggcaa	gtggacaaag	ctctgtatgg	gacaagctcg	acgaggctat	600
gatctccctt	ccgatatcaa	acagetgtge	С			631
		3 3 3				001
<210> <211> <212> <213>	3009 1560 DNA Aspergillus					
<211> <212>	3009 1560 DNA					
<211> <212> <213> <400>	3009 1560 DNA Aspergillus	s nidulans		atgttgacta	gtcggggact	60
<211> <212> <213> <400> ctcctgagcg	3009 1560 DNA Aspergillus 3009 tattttcggc	s nidulans ctcttgcggc	aggattatta	atgttgacta tcatgcaaca		
<211> <212> <213> <400> ctcctgagcg	3009 1560 DNA Aspergillus 3009 tattttcggc tctgcggtgg	s nidulans ctettgegge ttteeegegg	aggattatta aattcaaact		acattcatat	60
<211> <212> <213> <400> ctcctgagcg cgtcccgtca ttgcagtata	3009 1560 DNA Aspergillus 3009 tattttcggc tctgcggtgg tcaccatggc	s nidulans ctcttgcggc tttcccgcgg	aggattatta aattcaaact aatcgcttca	tcatgcaaca	acattcatat	60
<211> <212> <213> <400> ctcctgagcg cgtcccgtca ttgcagtata agggtcgcta	3009 1560 DNA Aspergillus 3009 tattttcggc tctgcggtgg tcaccatggc ctcctcaagc	ctcttgcggc tttcccgcgg tgctgcgaca gggcagcgca	aggattatta aattcaaact aatcgcttca tcctatctca	tcatgcaaca gagctctata	acattcatat ctcgtcctca ctatgctact	60 120 180
<211> <212> <213> <400> ctcctgagcg cgtcccgtca ttgcagtata agggtcgcta acggatccct	3009 1560 DNA Aspergillus 3009 tattttcggc tctgcggtgg tcaccatggc ctcctcaagc catccgccac	ctettgegge ttteeegegg tgetgegaea gggeagegea tggeggaget	aggattatta aattcaaact aatcgcttca tcctatctca tcgacagctg	tcatgcaaca gagctctata gttatcgggg	acattcatat ctcgtcctca ctatgctact gacaacattc	60 120 180 240
<211> <212> <213> <400> ctcctgagcg cgtcccgtca ttgcagtata agggtcgcta acggatccct acggacaagc	3009 1560 DNA Aspergillus 3009 tattttcggc tctgcggtgg tcaccatggc ctcctcaagc catccgccac tcaacgcggg	ctcttgcggc tttcccgcgg tgctgcgaca gggcagcgca tggcggagct accttctttt	aggattatta aattcaaact aatcgcttca tcctatctca tcgacagctg ggagactttg	tcatgcaaca gagctctata gttatcgggg gcaagagacg	acattcatat ctcgtcctca ctatgctact gacaacattc aagagacaat	60 120 180 240 300
<211> <212> <213> <400> ctcctgagcg cgtcccgtca ttgcagtata agggtcgcta acggatccct acggacaagc	3009 1560 DNA Aspergillus 3009 tattttcggc tctgcggtgg tcaccatggc ctcctcaagc catccgccac tcaacgcggg atccttccga	ctcttgcggc tttcccgcgg tgctgcgaca gggcagcgca tggcggagct accttctttt agcttatgct	aggattatta aattcaaact aatcgcttca tcctatctca tcgacagctg ggagactttg cttaagaccg	tcatgcaaca gagctctata gttatcgggg gcaagagacg tctctggggg	acattcatat ctcgtcctca ctatgctact gacaacattc aagagacaat gccggctggc	60 120 180 240 300 360

gcccggtgtc ccaatatttc cgactgctgg ggtggtggtg acaaggctgc tgctactgcg acaatcatgc tgatgggtga cacttgcaca cgaggttgtc ggttctgcag cgtgaagact 660 tcacgcgcgc cgccgccgct tgatccgcat gagccggaga ataccgcgga ggctatttcg 720 cqatqqqqac tqqqatatqt tqtqctqacq aqtqtcqacc qcqacqacct aqccqacqqt 780 ggtgctcgcc acttcgcgga gacggtcatc aaaatcaaac agaaggcgcc taatattttg gtggaatgct tgacaggtga ttatgcggga gacttggaaa tggtcggtgt cgtggcccga 900 tcaggtctag atgtctacgc gcataatgtc gagactgttg aggccctaac accacacgtc 960 cgcgaccgtc gagctacctt ccagcagtcc ctccgtgtgc ttgaagctgc aaagaaagcc 1020 aagccatcgc ttatcacaaa gacctctctt atgttgggac ttggggagac cgaagaacag 1080 ctctgggatg cgctccgcca actccgcgct gtcaatgttg atgttgtgac gtttggtcag 1140 tatatgegee caacaaageg teacatggee gtgeacgaat atgttaeeee tgaeegattt 1200 gaactetgge ggeagegtge tettgaeatg ggetteetet aetgtgette eggteegttg 1260 gtcaggagta gttacaaagc aggcgaggcg tttattgaga acgtcctgaa aaaaggaggt 1320 ttgcgccccg tagtaagcat acacggtcca gttgtgagcg gccggaacaa ccttattcat 1380 caatttttat tcacatcttt aagggcaggt tggaaatgtg gtggtttaat gcagagtttt 1440 ttatttgggc tctattgtgg actatgttat gcatcagggc attaacgggg ggtgaatatg 1500 tgcccaattt aatccaattc ccccttttct gaatttttta accccggtgg ttgtagggtg 1560

<210> 3010

<211> 788

<212> DNA

<213> Aspergillus nidulans

<400> 3010

tagctacccc cgcccgcctg ccgacgttgc acacgctcct tcaagatgaa gtcctgacat 60 cgtatattgg ctgggatctg gtgaagatcc tgcttcccat gcttccagag tcgcaagaat 120 gtcttaagga tgtggctcga ctagggaatc ccagagaagc catcttacga gtatccgacg 180 ctcttatgca gctacacccc gcggatgagg acgaggagga atcagaccaa cagctagagc 240 cacaccatgc agacgttgga cagggaagca gcgtgactaa agcacctgca gggaaaactc 300 cacttcatgt ccacaaattc aacactcttg ttgccatgct ctccaccctc cattcccgta 360

tacagacaaa atctcccagt cgattccttg cgacatccct gcaggcagta ctggaagcat 420
acacatcgat gccaacaaac gagactacga tagccctgct cgagtttttc cgagacgttt 480
cccctacgaa aagaccccca ccgccgccca gggctccgag cgattcgaca gtcctccgtg 540
tcgccgaagc gtctgctcca gaccctgaag cggaagtgat gtcgcctagc ccggctggta 600
acgaagagag cgcgctcatc aggaggttct tgcagtttgg tttgattgag cttcttaaat 660
cgtatctttt gagctgttcg ggtccgatgg atcccggaat gtcgtgggct gttcgactac 720
aagagaagtt acatccggaa tcgcgtatgc caggtactgg ctcgcctaca aatgtatacg 780
tggataat 788

<210> 3011 <211> 1318 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 3011

gattggaaat atatttggtg cagactcctt ctcgtatctt cttgatcacg gttcggtact 60 tgacgatggc gattaaaagt tcgaatcttg ccccgcctac tgaagttcgc ttcagttctc cgccactggg atgctgaatt gcctcgctcg gatgattgga aacgtggacg ttgcatgctg ccacgggatc ttgacggtgt cgaactcgtg caggatctca aggatactac gtcttgggcg 240 cgttgtgtag tcccagaact cgtcaagata ctccggattg gtaaattcga gcaatcgctc 300 cttgtgcatc tcatatgtgg tgtagtgtgc gattgctgcg aagaatgacc ggcgggggat 360 tgctctaata tctaagtagt tgataagtag ttcgcgcagg gtcagtcgcg ggtaggaatc 420 caggctgtgg atgggcggac taggcagttc attcgtcgaa cgagtgctat cgcgagggac 480 taaagagacg agetggteeg ettgeteetg ceageceate ateteaatga gaetttggae 540 atcctcagca gtgttcttcg gggttatcgt taatacgtcc cctggagcat atgaaatggg 600 atcggagaca gtcaaaatca gatgacgcac gtcttgccag tgcgtctgcg gggtcacacg 660 tttgttctgg acgagagttg ccgtcaagct atcgtgtagt ggccgatggt cattgtcgag 720 acggtacgag tcaggaaaat cccctgttac tgccgcgccc attgcatcag ggggactgac 780 atcctccgaa gcggcttcct ggtctcgaag tcgtagaacc cattttggcg gtagctggac 840

ategtetggt ateggatect geeceggggg aagaggatae ttgtecagea agtgetteeg 900
aaaccetgee aaccaaggaa taaacgtace etetaagetg egaceatate ageatacagt 960
atttgatage tgggateggg acataceeeg aagaatgttg gtggtetget tetecaceag 1020
ggtatatete ateegegeee agetgtaaca acettttata eagtttgege geaegeeagt 1080
tgaacttggg gtacgageta teeceeagee caaaccaegt gaateteaet eeacteagaa 1140
aagteggegg caettettea aaageagega tetecaaaae gteegageat tggeeggeag 1200
ateteettga eeggttgteg aaacggeaaa gaegacaatg gtatacgaee ttaaegaete 1260
etagegatgg ecageetagt tagtggtgte atateagagt geattanaga eagagaca 1318

<210> 3012 <211> 1396

<212> DNA

<213> Aspergillus nidulans

<400> 3012

qtaqcaaaqa tqagctctgg ctttgctaat cggaggaaac cccgcaagat tggcggggac 60 gacggcaatg atgatgagga gcaaggtaag taaccgcctt catttggtgc ttccaacctc 120 ttattcgcgg agttgttgac taactatagt atctagacac tggcccaatc atcaagaggc 180 cagttagttt qaaaqtqaaq caaaaatcca aaqcqcqcqt ttcqttcqqc cctqqtqaaa cttcaatgac ggaggagac gacggcgaaa gagaagtcat cgttccaaag aaacatggct tgggcagacg agtagttgag aagaacgctt tccagaaatc gacaactccg tccgcactaa 360 gcaatcaact tccacttaga gttgggcccg aacaagaccg accaagttac aacgaggagt 420 acttaaatga acttcgaaac ctgacggctt caacacccaa gcctacggcc gattctgaaa 480 540 accagaatga agtggatgta gcggccaagt tcggtgaagt cacgaaagtc actgctccgt cgctgattcc cacggaggcc gagatcagag aaaagaaagc tcgacgcgcg aggttagcaa 600 aggagcagga cagtcatagt ctaactgaac aggattatat atcgctggag gaaaatgcgg 660 gcgatgactg ggaattggtc gacagagaat atgacaggga taccaggctc gtgcgagacg 720 atgaagactt cgcggaaggg tttgacgaat acgtcgaaga tgggcgcata tctctaggga 780 ggaaagctga acgtgaacag aataggaagc aacgtgaagc aatgcgcgag ctcattgaag 840 atgcggaagc tcttatggac gaggaagact cggatctaga ggagaaggca gcctatgaag 900 cegetcagae aagagetgeg atgggataeg geaatggtee egtagategg eegaaaaege 960
ceectaagat gacatetett eeeegtetet egacatgeet egacagattg eggatgaate 1020
ttgeggtttt ggagaagtet agaacacaaa tgataaaeeg gatggaggaa etgagaaagg 1080
agaaageeaa tatatetgte agagaagteg aaatacagge tttgateaag gaaaetggtg 1140
atcattatga gaaaettaag eaagaageeg gtgteaetee gggtteegag getgagaege 1200
cagggacaae agattttgag agetegeeg gattagagaa tateggaget eeateeaeg 1260
ctgtateeaa gactaaeteg gaaagtgaga ettgaeettt aetggaaega agagtgeeta 1320
ceggetttte geeaaaaaaat eteattaeag aaggtgeeae teaeaeeaag eegtgtegae 1380
eggaeteege acacea 1396

<210> 3013 <211> 3506 <212> DNA

<213> Aspergillus nidulans

<400> 3013

gccccgtct tttcccgcac ttcattaacg tccactccag gcgcaagctc ggtcagggta 60 agctcgccct tttggcggtc gacttggaaa acgcactgtt gtttgttagc aacagggcag 120 caaattttga ttcagccaag tgtcttacca gctccgtgac gatcgtgctg acacagttag 180 cccctgtcag tggaagagag cattctgtga caattttggg taagccatct ttcgctgtgt 240 300 gactggttgc gacgacaatc ttggtttggt cggggtttga gattagatcc atagctccgc 360 ccatcccttt aaaqaccttt ccaggaatca tatagttagc taggtcgccg tttgcgctta cttgaagagc ctgtgttcag atgttagtat gaatttgcac agggaaagta ttggctgacc 420 480 cctaggattg aaacatcaac gtgtccgccc cttatcatcc caaaggactc tgtgctgtcg 540 aaagttgcag cgcctggcag caaggtaacg ggtctcttta cccgcattga taatgtccct gtaaacagtt agaagatggc teegtaaaga tggageteea cataegeate gaetteatea 600 tcagttgggt acggtccctt gacttattta gcttacgttc tattaccgcg ccgctcttgc 660 720 cttaccattc caaqqatgcc attctccgat tgaatccaca ccttgacacc ctcaggcagc atcgacggtg cgagtgtggg aatgcctaag taaaaatagc acagttgaca cgcattttag 780 agaaacgtac cgactcccag gttcacatag tacccctgct tgagttcctt agctgctctt 840

tttgcaattc ggtttctctg aatgatagcc ggcgatacac ctgctgccgt agagccatct tectgegatt gteggagttt cetgateteg atttgettet eagetgtega aggaacaate 960 ctatccacaa agataccagg caggtcaaca tcgttgggat caattgaacc aactggaaca 1020 atgttctcgg cctcgacaat ggtaagggtt gctgctttgg ccataatagg cccgaatgcc 1080 trggtggtgt agctggagag agaccgtcag gtgcccgttt gatatataaa tggtgaaatt 1140 acctaccgga aaacgcagtt tccagcttcg tctaccttcc acgcgcggag aatggcgacg 1200 tegeeggtaa gegeagtete cateaagtat gtettgttgt tgaaaaecet tgteteeege 1260 ggtttgccat gttccaacac attgccagat gcatcgacac gcacaggaat tctgccatcc 1320 tgaagaaagg tatctatgca cacatattta gccgagcccc aatccacgta gagacggact 1380 cacgagecce tgtageagtg tagaaageag gaatteeage acceeegea eggaggeget 1440 ccqccaaqqt tccttqaggq cacaqctcaa tagcgatgtt ccctgtaagg tatttcttct 1500 ctagcgcttt attatttcca aggtacgata tgataagtcg gtcaacctgc ccggactgtg 1560 tcaaqqtaqa qaqqccacct ttgcctqqcq cqccqgcatt gttcgagact gcagtgagtg 1620 agtggatatt ttcggcccct cgtcgagcaa ttgcggttat cagagtatct gccattgtca 1680 tcacacacat ccaagcccat catagtaggt tttaatcacc tgccactcca caaaggccga 1740 agccggaact aaggattgtt gagccgctct caatatcagc cactgcgtca tccgcacttc 1800 tgaacagttt cgaggctgct cgatcgattt ttggagcgcg agttgttttc tcaattgtgg 1860 ttgatgcagt agaatatcca acgcgagtta ttggagaagg agttagtcgc ccgcatgttc 1920 tttggtatac gcggaaacaa agttgcgccc gcgcaacgct cgtcgctttt cgagacagag 1980 tcagtgctgg gattcgaagg gttgccatct cacttagtag tagtcaaaca aatagttgta 2040 gagaaaatca acgaccgcat gtaaacagat accgatgacg ttcgtttata agatccgact 2100 ctcggggcta cttctggagg ccgagatgtg gggtcacgat tcggccctca agaatatctt 2160 ctcataccaa ccattcctag accgtcacaa attgaactcc gggttggcta tatcgagcca 2220 gttccaactc atcagatcgt caagtggaac atctggaaca ctcgcgccaa aagcagtgcc 2280 ggctcgattg acagcatcaa tgatctggtc gtcagacata gccgagaact gcatgggctc 2340 ggaccagaac atagaaggcg caaagctttg ttggaccggt gaagaaatag cgctaaacgc 2400 atccaaagtt gttgatggga gtgcttctgt gtgtgaaatg cgaggatcac tctgaggttg 2460 cgagtccaaa gcggccggtg tacgtcgaac aagctcacgc aagaacctcc cgtagagcac 2520 agatgcccca ttcctatgac tgggtgtgct tccgatcctt tcaaggactc cagcagtttc 2580 ctcaattagg ttccggacac ttggggctaa gctagaattg ctatcggttg gcattgaact 2640 gagactcagc gcagagcacg cagcaaagga aatcatgatg acggtattgt ttggcattga 2700 ctttaacctc ccttcgcctt gaattgcggc tcgcataacg ttcaaagctg aagaaaggcc 2760 agctgcacgg aagaatcgtt tgacttcaat aggtgctgta gggtgattta ttacgccgcc 2820 gtaagtcgaa agctgtgtgt gcgtcaccag gatttctacg tatgggggaa gggcgcgtgc 2880 ttgaggaatt agcaccgact tgaaggttag atgactggga tgaccaaact gacattgacc 2940 ctctccgatt tctggcgccc aagettcgta ccattcggta tagaagcatt ctatcattgt 3000 cttgattcta ccgtcggatt agcatatgat ccagggtagg atgtgggtta catgcgattg 3060 tgccgcccca gaaccagtgc tgcttgcttg gttattatca caaatggact tgacccttct 3120 gaacaacccg tcctagtgcg ctgccggtca gacattatat cggatagggt gaagatgggt 3180 cgaatgttta ccaagtttct tcggagtatg gccattgaat tcatggcgcc gtcgcgaaaa 3240 tctgcaaggt ctgagacatg ccatcgatcg caattctcag tcagggccgt cgacggcact 3300 gtatagetee teeceeggge caggeagaca etgeaggatg ttagatattt atttaaacta 3360 gcatggetee tgacactaga etcageeteg gtetaggaeg aatagtgeta tgeaageeet 3420 ttctcgcctt cgtaacagtc ttcgtgccca aattcgaggc tggggtcaac ctcttcgaat 3480 3506 ccatctattt gcaggagcct tcttgc

<210> 3014 <211> 2390 <212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 3014

gcgtttgtcc cgtctgaaac gcgttatcat gtgagatgcc tcas aga agcc,ccatt 60 gtgtctgtct gcgtacggcg agttcttgat ggttcttcac cagagttgga ggagagatct 120 tgcgactttt cgaagggccg gagattgaag cctaggcacc tgacctgtcc ggaaatggaa 180 ggcaggtctc cagctgggat tagtcagcta tgacaatcgt cagaccagga ctctcacctg 240 gacggatttg ttcatagtca gcaacaccat tgagataagc caaatagtga aatctgttcc 300

catcgaccgt caatcagatc catggcgcag gcgtgcgaga aatgtcggat cctcaaagtt 420 agatgcgtcc gaattgaacc gggaaagcca tgtaccaagt aagtctgtac gggatatgta 480 ggcaccaact ctgatcctct tgccaaacag atgtattaaa gcaaagacac aatgcatagt 540 cccaqaqccg aaacaacgag ttcagcaaag acaaaggagg ccgtaggtgc tcattggttt gggagaaagc tactgactgc gaagtagacg tctcgctgat ctggagacaa aaataacgga 600 660 cctactcggt cttctgtccc aaaattccgc ggcgcccact gtcaacaatg gatctgttga 720 gagtcctgag cgcaccgtaa gtactgtttg caccgctagt caagctcaag attatacggg 780 aggatggcta gaccaggggg teettgagga getgaatatg gaetttgtee agaegttaga cccaaataca gcttcttctt cttcttcaga aatgatattt gaaacgcctg caagtgccga 840 900 gagcagttgg attacggacc taggactcag cctggctgtc ctcgagcatc ttcttgatgg ctttcgctcc ctcgcgcgct atttcccctt tgtcatcatt ccggctgatt ggaccgtcac gtacagggcc gaagacgggc ctttcctctg ctctcagcgg tggatgtgtc gctcgagatt 1020 cagtatetee ageaageest getgagggaa ttgaaagtaa eestaageea tegtgtegte 1080 atagctgggg agaaaggctt ggacctactg caaggattac ttgttcacct ggcctggttt 1140 gttttgtgct cccgttccat tcagctgcag aactgactga ttcaggtttc atttctacct 1200 ggacccgcga agccggcaga cctaccaata tctgcagcta gcgatcagta tggtcgttga 1260 gcttgatcat agagcagaaa attgctgacc tgatcgaggg ctcaactgca ccaggcgacc 1320 tetgeagteg tgaageatgt egtgeetace ttggetgtta ttatetetee ageetgtagg 1380 aattcaacgt tatctgcgaa gttgggcttt tagctgacaa ttttcaatag tatagcaaca 1440 gccacatcaa agccagataa ctttcactac tcagagctct tactgcgttg cacaaggatg 1500 ctgcaacacg agcaggagtc cccgaccgat gaactcatat acccgttgat caaactgcaa 1560 cagttggcac gggaggtttg cgacacatat cagtcaggaa tatctcagat caatgcgtcc 1620 catcctgagc ggttcaatgc tcggttggaa gagtggtgga cttccctccc cgcagacttt 1680 cgatgcgcag gcaagacccc ggtgtccgtt gaagtctata tttcactaac tgaaagtact 1740 agccatgcta acgagcggat accacgctgt gaagatcaga atctttgata tggggctggt 1800 ttacaaatac ggacagagaa agcgaccccc taaaagcctt tcaggcgact cgatgacatc 1860 ggcaagtttc aaagtggttc tcaacctaac caaatgtctt attggtgcca aagaactctt 1920 cgacgtgttt atggtaattc ccgaaggaga gcacgataaa ttgcctcttt caatatggta 1980 ccagctcata ttggccataa tggtgctgta cagactgtcc gttggactgc cggagacttc 2040 cgactgggac agagaaattg cacatgatgc tgtgaatttg cccgagtctc tcgataagct 2100 gatcgatcgt ctacggtccg ctgagtctaa acgacgagct gagagccagc cctcaaacga 2160 caagtgtctt ttcacgattt ttcctgacat ggttgagagc gtgaaggaat ccctcatctc 2220 ggctagcaag tatcccactc agaataatgc ttgcgaagtc tctgcacata caagcttcgt 2280 cagcagcaat tgcgcgcnct ctactcaaag acatagatgt cctgcaatgc gcaatctacg 2340 gaggcaggcc gcttgaagta caatggatga tgccagactg cagcgctgta 2390

<210> 3015 <211> 2547

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 3015

agcgccatga gcactgtaac aaccctaatc gaaatcattt tttattcatt ttcccagatc 60 taatgcccac cgtaccataa tgtccgcttg gcagcagtat caaccgcctg gaaggttgga tggtccggaa ttactgtggg gataggagcc accgaggtgg tcgtagtcca tgatgaggtc gggtcgtgcg aaggaacggc cttggtgacg gtctcggtca gagtctgcgt gactgtgaca 240 gtctttttca gcgcgtcttc gatcatattt gctataccga tctgtttcga ggtgggcgat 300 aatgatggtt cctccactaa gccgtgcgta gccgatgcta ctggacccgg ggctggacgc 360 atttataggc tctcagcagc cagcgacgat gatggtgaca tccatggtct cgacctgagt 480 ggaccaaaga ctgctgggtc gattcagagt gagggacgtc attcgccaac tgcgcgcatc 540 cggggtggca tggcagcggt ggtcttacat ttcaatcgtc atactgacac cagaacgtcg tcatcgggca gagagctgcc ggagctctct ggaacatgaa ggaaacatcg atggacattg 600 gtcgaatcgt gagctcgatt cggtcgctgc aagcagagta aaagcaagtc agctgagcat 660 720 tgcagtagct gtcaagggcg agtcttccag tcatcgtctc atcgacgcgg gaaggactgg 780 gtcttggcgg agccggcgca agttccgatc ttgccactga cgacaagcag catcctgaaa 840 gttggactgg cattattatt gggacgtatt actccgagca agtgccaaag agtggtccat

ttctaattct atttataata tacacgactc aatattagaa tcaagaagac acaccgcacg caacaggggt gaccccgctg ttttattgta cgtgtctaca gggtagtaga gagatcgaaa atgcgcatga aaccgatccg gtcaagcaga tccatttagt ccctggacga cttcttcaca 1020 gngattgcac gccttgtccg cggcggcctc tgcttgcggg atgacgtacc gccagcatcg 1080 agggcacttg gatgcctgcg ggctgtaaac atacactctt cctttcccac cgatcggaag 1140 ttcaaactct tcgctatact gccaatcggc gctcgctatc gtgtcgggaa gggcttcttc 1200 gctaccggta agcgtgactg aggagacgac aaagatatca gggagctctt ccagctttcg 1260 ttggagcaca gattgggtag cagtgttcgg gagctggata tgcacgaaag attgcaagga 1320 tgagccggtc tgcttgtttc ctcttgcctt ctccagcata ctcttgatag cggagtggac 1380 cgtgacgatc tcctgatagt ctccactcag ggacgggtcc tgccattgtg ggtcaggttt 1440 cgagacagtg cgtctcagag ggtgctcaaa tgcggccttg agcgcctccg gggtgtgctc 1500 ccaagtttcc tccaccaata acggtgtaat gggacctagg acttcctgta gatgttggta 1560 aatgtgaaac agtgtcgttt gagcagcccg tctgctagga ctgttttcgg cataagtata 1620 caggcggtct ttgatggctt ccatgtaaaa agcagagaac tcgaggttcg cccatcgatt 1680 gacagcactg actgccttgt agaattcaaa cttctcgcag gcagttcgcg ctgcaagcgt 1740 cattlctgag aggtgtagaa gggcgattcg atccaccagc agaagttgat catactgaac 1800 cttattttct gggcggaagt ccgaaagggc accaaggagt agcttaaaag taacgcggta 1860 cttgtgcaaa ctggtatgga ctgtttgtag aacttgcttg cccatgacaa cgtcgcgagt 1920 gtagtcactg cttgcggccc acaatcgaag agcgtccgga cctaaagcgt cgtaaacggg 1980 tttcccatcc cccccttgct tttttccctt tttctgcttc agtggaggta gaagagtgcc 2040 ggccatgatg teetggggtt ceatgacgtt gecaatggat ttgeteatet ttegteete 2100 ctcgtcaagc gtgaagccat gggtaatcag ggtcttgaat ggagcacgag gcgcgtcagt 2160 ctggccggaa gcaagctggt gtgcgacata ggtgagaagt cccgactgga accatccgcg 2220 gtgttgatcg ctacccttga gataaacatc tgcgggacga cccatgttca ccgtaagggg 2280 tttcaacttc tgcccactta gaccgctgtc gaacaaacct ccattgaatc cgcccgggtt 2340 tatagccaga cttgaggttc tttccacccg ggcggatcca aggggaaatg gcatcttggg 2400 ccacatgcct gggtccacct catcaaacac tatatttgga aaccttcctt ggaagtccgc 2460

<210> 3017

ccaaatttca	ccttgccccc	cccggtc				2547
<210> <211> <212> <213>	3016 1155 DNA Aspergillus	s nidulans				
<400>	3016					
gattctcaat	agttgttcct	aagccagcat	gtgggggtcc	ctggcggttc	tagtggagga	60
ggctatgttg	gaggcttgac	tcagtcagag	cgcagatagc	aggacttaaa	ttgccccaaa	120
tatagcaatg	gctttctgta	aaagcggcgg	gtgcaacgtt	cttttagggc	aaagggttgc	180
ccaagacatg	cttcgagaat	taaactatca	tttattttga	gatggttaaa	gctggcagaa	240
aaaggcggag	aaacaggtgc	ttcagatcga	ggccgaggcc	ggagaagtta	gttctcaaga	300
accaatcata	tccgatcggc	atcgcggcct	tttacttccc	gcatttaacc	tccgacccgc	360
gatgaaccat	aatccgagta	aatgctttgt	aatgtttctc	acattcgggg	cgcagattat	420
actgtcatgg	gtagtatctg	cagtgtggag	caacttgatg	acatgaacgg	gtaattggag	480
gtggatatga	ctggccgggg	gataaatcgt	taaaatgagc	tggatcgcag	aaccccacca	540
ttaggcctgt	gtgcccctcc	aatggcatca	tcgcccctcg	ggggtgctgg	atggtcctgc	600
cctgccatgc	tgtccttggg	ttggagatga	tcatgacttt	ctttctttaa	attccaccac	660
cctgccgact	ttattctctc	aattttccct	actctttcat	cctctttgac	ctagcaacct	720
aagcgccatg	tctctcgaac	acacgaagta	agtgattctg	tcctcattgc	acaatttcaa	780
cgtcgactgg	gaatgaatac	tgacacgctt	tcccgtccca	gaaaggttta	cacccttaac	840
accggcgaca	aaattccagc	cattggtctt	ggtacatggc	agtccaagcc	aaacgaggtc	900
agagaagctg	tcaagaacgc	gttgctgaag	ggctaccgtc	acattgatac	gtaagtaact	960
tcatgatact	tcgaagaaca	gcatctgact	gcaatccata	gtgcgcttgc	gtacggcaac	1020
gaagctgagg	tcggacaagg	tatcaaggat	tctgcagttc	cccgcgagga	gatctggatc	1080
aacacaaagc	ttgacaacac	ctggcaccac	cgcgtcaccg	atggcatcaa	cggcgccctc	1140
tagcaataag	gtgtt					1155

cttccccct gtgaaaaagg gggagggcc cccggccgga cgggggcccc ttattgtttc 2520

<211> 3302 <212> DNA

<213> Aspergillus nidulans

<400> 3017

aacgcaacaa atatgaggac attcagtgcg tggagacaca gagggggaaa tggactgcac 60 aagtgccgta ctctgtttga gtgctgaagg ttccaggttc gggcaggcgg ctacagtacg catgatgtca ttgagccggc gccatgaaga tcgtggcagt gacgactgag tggcaccatc tttttgggaa gaattgtcat tcgtctggaa gtatgttgcg gaaaatcgca gtaatcacat 240 tcaggttttg cgatcgcaca gcgcgattca cgacccagag gaaaacgccc attgctagaa 300 360 ttagctttgc aggtcctaca ctgagtctat ctgtaaagcc gaccacagct caaaatctcg 420 taqcaqttaa qcatatcaqa gagtggatta tgccggcacc actcacttgc gacaagctgg 480 tcagccctgc tggaagtggt agcctggggt cccccgggac agtgtcccag cacgcgatac 540 cgcccgtctg cgtccaattt ctccaaccca ttagcgaact cgtcaaatac cgacggtaat gtagactcct cgtcgaacaa agtcttcatc tcatcattga ccgcggtaga atggcggatt 600 660 cgactacctt ggcgcttggc gcggacactc tggcggaata tatgaaccag attccgccct aattgggccc gacttggtat actagcaaaa acactggcaa gtaatagaaa ggtgttgtct 720 agaatgtcaa atttgccttg tcgctccact agcacgaata gggccaggtt gatagcgtac atggtcaaat ggtgagcatg agctgtgccg taattctgtc gctgcatgcg cacaagtgtc 840 gcaattgctc gcgctgcaga ctcaatggtg tcacacttgt tgcgctctag cagtgggctg 900 ggactcgtta ggctttccgg ggttttgaga ccttccatgg ggggacccag gatctcatcc tcggcatgga acagtagaag gatgatgatc agagtgtgat accgcatttt catgacaagt 1020 acgtacggcg gcacctcgtc gtctcgcttg aagtgggcgg gcaatccctc cgtccattcg 1080 cgcagcctcc ggaacaacac ctccttgatc ctgattagtt ccgtagccga tggtactctt 1140 ccgtgactcg caaagagcca ctgggacatg tcccgcgcga tctcgctcag attgcacgat 1200 atgtcgaagt actcattgag gtatgactcc tttggctctc cacttatggg gtatggcaac 1260 caacgagtat tetggteatg tetgttagge egttegaggt tgatettgtt tataagaete 1320 gatcgtagga agccggtgtg tacaatccta cagggttagt tcgggacaca taagagctgg 1380 aggtaagaca cacgtatcaa tctggaataa gccccaggca gtccgcctta gtgacacttc 1440

catatectee gggaactegt tgetegatag ggetggette ettteaceaa taagteeett 1500 ggcctctcca gtccaaatgg ccaaatgcag cattttatac ccgcaatcat tcttaccgca 1560 aagggagtat ctagcggagt cagcatagca cagtctctaa agagcattga ataccaacct 1620 ttcacatagc aggaggattc cttgaatgtg ggtgagtgat agtctgggag gctcgatttc 1680 tottageoge teggeeteag ecaggaagte atteceettg eteatgatat eteeetgtet 1740 ggcgtatgcc tccgaatagt ctgaaaaatg ctaaacgtgt taacacctgt ctgttacata 1800 caaggtgcgg cttacacatg cattcgcgag tagcgcgttc accaagaagg ggctgcaaaa 1860 ctccgagttg atattccccc caatcatgtg cttgagaaac acatcgcggt ccagaaaggt 1920 ggtcgtaacg ttcgtccagg gttgcgcggg gactcgatag ggagcatcaa cacagaggta 2040 gtgtatgtcc atgacttggg gccgccacga ctgcataaaa tcttcgttga tcatacactg 2100 tatatectet aggttgetga etggttette egteteatea eettttetee eagtaaettt 2160 gaggatgete ceaatgegat ggegtaacte ttegttggta gegtetegte ggateatgte 2220 caccagttcg atggcagacg atctgtcctc ttcacgcatt gccctgagaa gatcgttata 2280 caageegegg tagtagteea attetteage tgtgegettg geegeeaege ggeggegetg 2340 gtcaagcgtt tcgtcgaaaa cacaatctct attcaaggtg cggcaggtgt cgcatggctg 2400 cttacccgag cactgggtgt gttaggcggg ttggtctcgc tgggcgggat gcttgccttt 2460 egettegatt tittacaage tatgeatgee attgaageee getgetgett ettgeeggaa 2520 tcaccggagc ctcggcgctc ctccatcgga gagtcatctg gggatatttc gcatcgtggg 2580 qaaqqqcctq qaqcqaqttq tcgatqctqc qttqqqqact cqgtcataat cqttcaaaqq 2640 deddedatet dagteaagtd accattatde caaagagage gaccatttee gteacagate 2700 atcctagece tectectect tataaattag gagettgteg atteaceata tetegtgaeg 2760 tatequegeg ttageatgta tgtgtggate gatateegeg aattgeaaca aegeaactea 2820 gccatcaact tegeceattg geggetetgg cagecatete eeggteaaca teetagaaga 2880 gaccacggat ctgagggcac gaagattgaa ggtggtcaac ttgtccgcct attctgtact 2940 ttcacgtgat agcgatggtg agtggtgcga accatctccg aacggtcgag gccttcttag 3000 tgteggggga teccaacttt cegtgagaeg aggagtagag caceeegete ateageeetg 3060

gaaacatctt gtgatttgt gcaaacggac acctacccca acaaccctaa gtattcttgc 3180
aggctgtcta tcaactttgt ttctcgaata ctttgtcaca atgccgggaa ttagtccctt 3240
agatagagcg cgaccaagct cttgattcgc agatacctgc tgttccatta atgggggtct 3300
aa 3302

<210> 3018 <211> 1053 <212> DNA

<213> Aspergillus nidulans

<400> 3018

aaggcgcaat acgctcaatc ccatccggcc gagtttggtc ggtgcattgg agttccagtc 60 tgttttgtcc tccttaaaac ggtcgaggag ccacaataga agccactcaa tcggtcttga 120 gaggtactca gacaattcgg aaagcgtaca gggcgatcgt tcacagttcg acaatatatc 180 catagcatet catececaaa geageegeae eeagggeaae agttttetgt etetegatea 240 aggaactaat cgaactcgag cggtctcggc aaacgacgct atgggtttga aattagacac 300 caatttette accagtgaca atgeacegea accaaaattg actgtgagea gacetteaat 360 cgaggatgga tctaacacgg agatctcgca tattctcgag tcccagaatg gcacagagtt 420 taccaggtca cccacgtcta gtgcattttc atcgcgcagt ccaagcctgg gcccaagacc 480 agggtccagc gtccataatc ctactctact cgcaccacct gatgtcttcc agtccctcaa 540 ctactccgaa gcggcatcgg attcccgctc cacgcctcaa gtatccccaa agggtactag 600 atatgttacg gatgggcagg acaacaactc atcaggcgca cccagtccct tccccccatt 660 tcaagatgtg cctgggtcac cattatccac ggcgccaagc attcgtctgc ccgcctcatt 720 cagtccagca gagccgttac agtaccagga agatacgttt gacagtggca gtcgacttac 780 atctccggtt aattggtggc ctcgatcgcg ctctttactg cggctggttg tgtctacact 840 cttcccaacc ctggatgggt ggaaagccaa gacaatttgg gagaaaattc taggcattgt 900 egeegeteet agegtgttee tittgacaat caeceteece gtggtegace cagtatetee cgaagttacg tctgctactg tgcctgtcat tgtgacttct gcagaagatg atccgagcgc 1020 agcaacgcct attgtgcgcc taccagagga tag 1053

<210> <211> <212> <213>	3019 1677 DNA Aspergillu	s nidulans				
<400>	3019					
gctagacagg	caacggttgg	cgctggtccg	attgagctcc	gagcttacta	caagccattc	60
gtatataaag	ccctttatga	cggccgaaag	atggatatgc	tactatacag	attcagcctt	120
cttgcctttg	ggagagcgtt	tgatactata	cgcaaatcat	gggtctccgt	gtcaaagccc	180
ttgcagtggc	agctctggct	accctcagcc	aggcctcgcc	ggtcctatac	actcgcgagg	240
acactacctc	caacacaacc	tacgccttta	ccaacagcaa	cgggctgaac	ttcacccaga	300
tgaacaccac	acttcctaat	gtaaccatct	tcgcaacagg	tatgaccgtc	ccttcacttt	360
cccatctctt	tccaaccccc	ttcagcaaac	agcaaactaa	acaatagcaa	caacaggcgg	420
cacaatcgcc	ggctcggccg	cctctaacac	tgcaacaaca	ggctaccagg	cgggcgccct	480
cggaatccag	accctcatcg	acgccgtccc	cgaaatgctc	tccgtcgcca	acatcgccgg	540
cgtgcagatc	tccaacgtcg	gtagcccaga	cgtcacctcc	accatcctgc	tagagatggc	600
gcaccgtctc	aacaaagttg	tctgcgagga	cccatccatg	gctggcgcag	tcgtcaccca	660
cggcactgac	acccttgagg	aaacggcctt	cttcctcgac	gcaacagtca	actgcgggaa	720
gcctattgtc	atcgtgggcg	ccatgcggcc	cgcaacattc	atctctgccg	atgggcccta	780
taatctcctg	caggccgtta	ctgtggcgag	cacgaaagag	gcaaggaaca	ggggcgcgat	840
ggtcgtcatg	aacgaccgca	tcgcctccgc	ttactacgtg	tccaagacaa	acgccaatac	900
gatggataca	ttcaaggctg	tggaaatggg	gtacctgggt	gccattatct	cgaacactcc	960
gttcttctat	tacccggccg	tgcagccaag	tgggaagacg	actgtcgatg	tgtccaacgt	1020

cacctccatc ccgcgcgtcg acatcctcta ctccttccag gacatgacaa acgacacgct 1080

ctactcaagc attgagaacg gcgcgaaggg cgttgttatc gcaggatctg gtgctgggag 1140

tgtcgatacc gccttctcga cggctattga tgatattatc agcaaccagg gagttccgat 1200

cgtgcagagt actaggacag gaaacggaga ggtgccgtat tcggctgagg ggggtatttc 1260

gagcgggttc ctgaacccag ctaagtcgag gattttgttg ggattgctgt tggcccaggg 1320

agggaagggc actgaagaaa ttagggcggt gtttgggaag gttgctgttt gattcccgac 1380

tgcccagggc ttatgatgtg atttgatgag atatggtata ataatccgta tatatccagt 1440 agatatcatg gaagatgatg aatagctgcc gatatgtttg tgtatctact cagtatagtc 1500 tctggcacta cggtgtatat gagacgacat cgcagacacc gcatatgcca gagatcgaat 1560 attctatagc gagtatactg tggtatgcga gtcaccttga ttgacaccag cgacctggct 1620 aacgacaccg ctgcataaat gaggtgacgc cgtagtacga catggccgac ctcatat 1677

<210> 3020 <211> 1349

<212> DNA

<213> Aspergillus nidulans

<400> 3020

ggtcttcatc atccgaacat tgtccagtat ctgggaacta ccgccgatga tcaatatttg 60 aacattttct tggagtacgt tcctgggggc tctattgcta caatgctcaa gcaatacaac accttccagg agccattgat aaagaatttc gtacggcaaa tccttgcggg tctgtcctac 180 ctccacagca aggatattat acaccgtgat attaaggggg cgaatgttct cgttgacaac 240 aaaggtggca taaaaatctc ggattttggt atctccaaac gagttgaagc atctactgtt 300 cttggatccc gagcaagcaa tggtgggggc catattcacc ggccttcgct gcagggtagc gtttactgga tggcgcccga agtcgttcgt cagacggcgc atacaaagaa gqctqacatt 420 tggagtctgg gatgtctcgt cattgagatg ttcatcgggt ctcacccttt cccagactgt 480 agccagcttc aagccatatt tgcgattggt agcaacaagg ctcggcctcc agccccagaa 540 catgctagta agcatgccgt tgctttcttg gatatgacat tccagctcga ccatgagaag 600 cgacctgacg cagacgagtt gctcaagtcg cccttccttg ctacaacact gtacctgaaa 660 tcctttacga tgtcggatag acaatgggcg ttttttagca ttgagcttgg agatttggag 720 ttcgaattat gtatcagggc aataatactt ttggtctttt gcgtattctt tccccttcga 780 tatgataccg tccctcttga ttttaatgct ggcgttgatt aaggtagatt tgggaaatat 840 atatatcccc caagatattg cgggtcatca aaacccaatc gaaaggttcg tggcgtcagc 900 aggggctggt tgcggtttta tgaccttttt cacccgggtc cactgatttt catttataaa 960 aatatagcgt ttacctttta cctgttgtaa tctgaagctt ctcgttgtag gtctcattga 1020 ccttatttga ttccttgctc gaagttaagc atttctggtt tataactcac tcacgcgaca 1080

<210> 3021 <211> 1279 <212> DNA

<213> Aspergillus nidulans

<400> 3021

ttcttgcatt cacttatagg ctccgaacga gactcttctg cggaccatca ctgaacggtg 60 cgacggagta ttcgttacgc ttgagcaggc agtagaggaa acagaaatcc cccgcgtcaa 120 gcctgtccgg ccagttgcat cattcaaagg tttcttacaa ttaggtaacc ctgaagaata 180 cgacactgcg gtccgcattc ctgttgagcg gtacccacga acaatggtag ctaaaccccc 240 aacggccagc cagttcgtcc tgcgatcaga tttagccgct ggacaagaag gcccagtgtc 300 atctactgcc gttcctgaaa cccagcctga agatggtagt aatctcacca atgtgaggaa 360 cttgagaact taccaggtca gcgacgagag tgcccctggt ggtaagatcg atgttgaacg 420 ggacgacttg gccaagggat atgagtatgg acgtactgct gttcatatca gcgagaccga 480 tgagaacatc acaaggctgg aaaccactgc ggctatggag ctagtcggtt ttattcagag 540 cgaacgggta cgtactgctc gaacctacga ctcgccttcc gcgactgaca ttcccagtat 600 gaccgataca tgcatttgtc caatagtcac atcatcatcg ccaaccgtgc taatgacaaa 660 gcctcacttg cactatcctc cttcatccat gccctgtttg aacttgagag ttatgccgtt 720 gctcgtctgg tcaccaaaga gaacaaacct cctaccctag ttctgctcgc accttccatc 780 gaaccagact acgagtgcct cctcgaagtg caactaccat tcgccgagga cgtccgaaca taccgcttcc cacctcttga ccatgtagtt accgtgtctg ggaaggtggt aacgcagcat 900 cgaaaccttc caaatgacga ccttcttgat gccatggaca aatacgtaga tagcatggag ctgaagggca cagacgagga tgggtaaact acccaacatg cctcgatatg tacacatcgc 1020 taacgaatac agagacctgg tcaatacgcc cttcccaatt gatgactcct tctcgccagt 1080

tetacacege gtgaacgege tgattegete tegagetata cacecaaacg accecatece 1140 gecaceagea aggateetea etcaattete geaaceacea gageacetee teaaaaacge 1200 agaggeeate teaagagget tattgaggta getgacgtea agaagggtae taageaattt 1260 teeceattee acaaagagt

<210> 3022 <211> 1961 <212> DNA

<213> Aspergillus nidulans

<400> 3022

ttatgatcgg agagattgat acgctagctg atcgagtggg agggaagtta cagaatggaa 60 ttgtcgaggt tgaagcatat aatcaggaag aatgaaggtg ggtattatca ttgcattatc cagtctgctt tgagggtttc atgatcttcc agtctgctaa ctagggatta gatacgatgt cgtcgttctg catcgctgtc ctcattttcg tcctcgttct gttattaata ctagtcatcg 240 ccctatagtt tgggggctgt gaattgctcg aaattctctt ttggacgttt agaccttggc 300 cttcttgcgt gggcgggagt cttcctcttc ttcgtcctcg tcatcttcat cctcatcctc 360 gtcgtcgtcc atatcgaaat cgtcgggatg ctcttcaaag gattgggctt aaaaacaaat 420 tagctgggat cgtctcgggg agaagagaaa gttataccat agtacttcag cgcattgggc 480 cagaggtett cagcaaggge aacggccaat tegetteegg cagggaagge ttegatetet 540 tegaagtegt egteaaegte etegtetteg teggeetegt eateetegae aettteteet 600 ttgagaaget teteaaattt eteetgttee teettggteg eegeegeaga ttgtteggea 660 gtcacgtcac ttccgcgata accgaagaag ttgaagaagc tttcgccgga aggatgtcct 720 agagggteet categtegtt eteateatee teatecetet caagggeete caecteagea 780 agcttctctt ggagcttctt gaactctggc aactccctac gagaaccacc cttcttctcc 840 gcctcaaaca gatcgcaggt ggcatctagc agacccttgg tgacatccat atccttcttc 900 cagttgatgc ggacaggctc ggaaacaagt ccatcccagg tcctcttctt accactggca 960 gtggtgaaaa cctgctttcg ccagtatagc tccttgacca gcttctcatt ctcaaaqacq 1020 gggttcgcat ccccggtgtg cgactataga gtagcacgca tgttgccggt ctagcccaga 1080 tctttcgcgt gactagtagt cgctctacgg tcaagttatc tagggcatag tcaaggatcg 1140 tegeategge gtgagtaatg taatggtega egteteegga egeattggte teeaeggegaa 1200
accagaaggt getgtgeace teagggtgeg egacgateat ggegegetaa teatacaggg 1260
gaagaagtta aacgatggag egacgeactg taatttggtt eatgttagea tgeacactgt 1320
atataacatt gattaacgta taataacate geeggegett tgeaaaceat gegatgeget 1380
ggacaacgag eetatettgt atcaagttae ttaeteeget eaaecetetge gegaacaaac 1440
tgetgeteea aaaggecaat eteeetegea acetetgggg gaacaacaagg eteggagatg 1500
egeteegeaa gateettetg etggtegtte gacatgttga tgtacagaet aggtttggte 1560
tggegtaaat gtgagaatta teaattggte gagtaaaaag aatgaagaag aagageagga 1620
aateeeegte aaaettaggt eaateaggta aacactaate aggggeeggg gaggagacag 1680
aaaaaatetga getetgaaaa attgtttaa ttgegetgeg eggetaegae etgagaact 1740
aacteegaeg gagttggegt atttegteae tetttgeeet tteegggeeg egacgegaeg 1800
aacagggege tgetttaage eataagetta aageggegtg egttatetga aecactgeat 1860
agagcaetee gtacaatgat etgtgtggat atgetgeteg eaaaetagtg aegagagata 1920
eggtaagegee etaaatagtt aegatgaeae egaettettg g

<210> 3023 <211> 3292 <212> DNA

<213> Aspergillus nidulans

<400> 3023

gaagccttca taagcgtcac agcaagcctc cagacatcga gataaggctg acgtctccat 60 caggcgctac gtaacctaaa ccatagccta tttctgatgc tcaacaagct cagggagcca 120 accgtaagcc tctggtgtcg gtggagtgct ggacgaggaa ggtttttgat aagcctgctc 180 tggggtcgtt agtggtgggc ctttggtagt cttagtttcc ttattttgaa tataaagctt 240 tcttgtctac taagcttctt ggagggcgtt acgtatacgt aaagcctcgc caccgttgga 300 aaggtcaaga cgttcccatc aatactccac ccgcgctagg agaagaaagg ggtttacgcc 360 tttggcaggc cgccggtcat ataaaaaccc catggagtaa agatcatgat gctttggcgc 420 ggtcggagct tctctgcttg gattacattt atagcgttag ttggcatata ttactggcct 480 caacatttta ggtattctg agttcttgtg cccgttccac agcctttcag gtaatagaac 540

caaagctgcc tgctattatg aagacagaac agtacgatca aggaaaggtt cagagatggc aaagagcaat gctgttgtct ggcctacgtg cattccagtt tccgttaact ccgccgtaag tccatccgcc cctcgtgacg aaaaccctaa gtccattagc tccagcgaat ataactgcaa 720 ctcctcgtca tacaatttcc gatatactta gcaagcaaat tataaggggt atctttgaat 780 taatttacga aattcattat gaagattatc cttacaggca cgaccggctt cgtcggaacc 840 gaagteetee accaagetet ceageateee tecateaeat egategtegt tetateeege 900 aaacaacttc ctgactccgt tactacggac ccgaaaatca ctgtcaagat tatcgatgac 960 tttctttcat atccagactc gcttctccat gacctcatag gtgccgaagc ctgtatctgg 1020 taggeeteca cegtttaeee tetetgeate teaetggata eetatetaae gtatgtatge 1080 aatataggac ccttggactt ccctaccact ccgatatagc cttttatcgc agagttaatg 1140 tagaatatac getegetgee gtaagagegt teactgagte teteaegeeg agettagaga 1200 aaccactgag gttcatctac tgcagcggtg cagcggccgt tcgagaccaa gaaaagccct 1260 tgtggctgat gccacagaca cgcaagatca gggtgggtct ctgctctact tcatcctttg 1320 cagtgttgtt ctacttttcc ttttctcacc tggatagctt gcttgatgaa caatctgacg 1380 tggtgatagg gccaagttga gaatgagctc cttgaacacg ccgaaaagaa tgctggcaag 1440 gttgaggttt atgttctccg tccggcgatg attttctcaa cgggctggtc gttgggctgg 1500 cttctctctg gtatgacgcc gtcgattgcg gtggatactc tgagtagggt catgttggac 1560 cttgccgtta acgggggaag ggtggggagg gtagtggaaa acaaggaaat gaatgcatgg 1620 gacaagacgt agaagtatga ttgatgtctg ggatggtctc attctcgttt cgagatcgag 1680 ttccgtacta ttcggcattt ctctggcagt ttacccagtc tgatttcgct gagggagcta 1740 gcaccctcac atgtcattag agcctggcag cggttttctg gcatcaggac gaataaacag 1800 aggccctgcc tgtggcccaa cgccccttca ccaccatgga taatggaggc tcagttcgag 1860 cgagtctgta tgtgaggtgt ggatgccagt attggcgcag aactacttta ctaggtctgt 1920 gccgtttcat gagggccgac gctgcaatga gcaaggtttg agttgtatga ggtatggttg 1980 attgttgtta tctgaagtgt taacctgaaa atatgactgt ctaagactaa tctgatagtc 2040 atgacgeett tttagettag tgatatattt teeeetteet teeeeagtag taggaaaggg 2100 teacaaceca gteectaata cetgaagece ttaattettg tecaateegt atgetgttag 2160

gaatttaatg aaatacttat agtgctggct tacgtgactc tgcccactta actcaagatc 2220 caccqtqcqt tqaatqaaaa qcaqtcaqtc aqccatcatc caccacaaaq tactacctca 2280 attecteaca ttggageget aggtetetea tecagecagg taataceege eecagetgee 2340 gctcgagtat ttcctccttc agtttttagc cagaaaataa gagccagcca cgccgtattg 2400 acggggcagt ctcgggttat aaggggaaaa gagaatagtc atacattcaa aggggccagt 2460 ctaccgagct ggtggtcggg cagtaagaaa acaaacatga ataaataagt aaaatatata 2520 aataagaagt tactgtatac tggctgagac ttctcaaatg tggatagaac aatcttagaa 2580 caaaagagga agcgcttagg atgattgaac tactgatgtc ctcaggctgc tgtgacagta 2640 acgatacctc atatattacc agttactgct gggcgagtgt tggcttacat atgagttgga 2700 ageggggetg ttetgtateg taaaceagtg acttteactg gatgetgget etagetettt 2760 ctgttaatca cccactcacc agatatacaa aaatgagcgt ttgtatctgc cttgaatagc 2820 catcacgata aatatgaagc agcgttctaa acatatccca tcaactggct aactcccctc 2880 tegecaaete agageagetg tetgetgetg categgeage teatatteta ggeetetgat 2940 ctcagctgcg caaaatcgct tcgaagagag cttcaacgcc ctgttgaggc gacaccttgg 3000 actttgcacc tctcgctgat tgtggtttat taccctatta acgaggttcg accgtcgagc 3060 caccgtcgtg ccaccatcgg gccacccggt ggaatgggaa caggaaccac agcacccagc 3120 tggacggaat cttcgcgcca ccaggccata gaggatacag gagcgcgata tatagggaat 3180 atacgcatat atgcgtgtgt gtgattgggc taaatgaaga gagaaatggc cctcgaaagc 3240 catactatct acctacactg ccagcataga tggacaacct gaagagggca tc 3292

<210> 3024 <211> 600

<212> DNA

<213> Aspergillus nidulans

<400> 3024

tgctgcgatc tgcaagaaga ccttgaattg cagtgtcaac cccctgtaga tcttagattt 60 ggggggagagc cactctgaga aaccctccag tgggcggtag aacagcctcg accgaatgta 120 atccttggaa aagggtgatg ggcctggcgg cgctggccgt gttcctgcat atgctgcgga 180 gggcctgatg tgttgggcga gaatttgaaa ggatgaggga gaatcatgat catatgtgcg 240

agaatagaaa	ccgaaccgaa	ctagacttgg	ccgtcagtac	gactcgtccc	tcgaacatct	300
agataaaagc	aaagggcaag	gctgcgtgag	gttatcgaaa	aaaattccct	ggaggcatac	360
ccgaaaagca	cccgctaaga	acccacgaac	ggcctcagac	gtgatctctt	ctggcggctc	420
aacatccgct	ctttgcgagg	aagggggagg	cattgtgata	gcctaagatc	acgaagtccc	480
aagctatcat	tcttttccct	aaagattgcg	gcgtatgaat	tggacgccgc	tccaaatccc	540
gagcaatcgc	gatgacgcag	ccgggatcaa	cattgctcca	aattccggta	ataccaatac	600
<210> <211> <212> <213>	3025 102 DNA Aspergillus	s nidulans				
<400>	3025					
ccgccatcgg	agaaaaccat	agcagtcaac	tacccgccct	tgacgcatct	agagaccatt	60
cctttagtgt	attccttaaa	agacaagctt	gacatggaat	ca		102
<210> <211> <212> <213> <400>	3026 1550 DNA Aspergillus	s nidulans				
gcgctgactg	tgggtattgt	gccctggact	cttttgccaa	tgacgaagac	aaatgatgcg	60
ctgcatgaga	gggcaaagaa	ggtctttgtc	gtcacggaaa	agacggccga	tgaagtgaag	120
gagttgttgg	ccaaatggaa	ggtgcttaat	gcaatccgcg	ggttgttacc	gctggttggc	180
gggttggttg	ggtttttggc	tttttgaatg	atgcatcagt	atagtaatga	atgcaatgtt	240
gtgcagtggg	ttagagtggg	agggtataac	gcgatcatta	tgaatattaa	acgtaagtat	300
gtacatatat	ggtattattc	acctcaatgg	acctccagcc	gaccttttgt	tactcgatac	360
cctggcgtac	acgatagcca	tcagcctaga	cctcgaactt	ctcgcgccag	catccctctg	420
agatetteeg	cgtctcttat	tgcagctccg	ccggtggcgg	ccttgaggcc	ggcagttctt	480
gcatcggcgc	ctgcatggaa	tgcttgttcc	cattcgcgta	cacatccgcg	acccgcttat	540
cctgctgcgt	cggcgcaaac	gcctccatcg	agttcggcat	ctcgcccggg	gctacagcac	600
cggaagaacc	agaccgctgc	gatcgcaccg	agaaccagtg	gtatgccgac	gcctaacccg	660

acteegagae egacaeegag gttgetgtet gagetgttgt egetgeeget geegeeeqtt ggtgttgtgg tcggtgttga ggtcgtcgta actgtacttg tagtcgtcac tgaggtcgaa gtcgatgage tactcgtget ctctggcgag agactgctga ctacaaactc gacggccgga 840 atcgagaatg tctgggttga gttattgcag tcacatcctc cgtacgcggt gcagcagaac 900 gtctcggtgc cgcaggctgt gacgcgtttc cggaatctga aaccatccac atcgcccgg 960 ttaagtggga ttcacttgag atgagcagtt gagcgtaggc aagacatact ccggacgttt 1020 cgcactgtgt cgcgcatgtc tcgacgtctc cgttaattca gtcctgtatg ctgcatgtgt 1080 tttgccataa tgtcattccg tcgtcgtcaa gccgcccgca gaggccgttc gttgcqcaqt 1140 actetecete geegeageat tgegetgggt tgeegeecta agageaagta atgegegtta 1200 catectegtt geegtegegg tegtageact tggetaceat tttggegeeg ategggegag 1260 gtcggcgggt aatgggacgg tgtactgtgc tagagctata gctagggctg gtgctgatgc 1320 tgccagatct tctcccggga tgaatgcgag gatggaaaaa gtgtggatcg cgagacgctg 1380 tggtccacgg gcgattgcct caagaacgaa attaagaatc caaagaagag ccgatccgag 1440 gcgaaaggga ggctgagcgt gggatcgcta gacgaagacc taaggccaaa agatgccagg 1500 aaattgaagt tttggcaaga tgcggtaagg aaccaaagcc ctggtaatcg 1550 <210> 3027 <211> 2834 <212> DNA <213> Aspergillus nidulans <400> 3027 tettgeatet cacacetgtg tegteteeat ttettettea tttettgttt gaettteett 60 tgatattgcc atattettac aaccacetea egegagtate teattteett eegatteget 120 180

tettgeatet cacacetgtg tegtetecat ttettettea tttettgttt gaettteett 60
tgatattgee atattettae aaceacetea egegagtate teattteett eegatteget 120
ttaageeaat eagteacece tettgeeege teaagegaae aaacggaeea teetegeteg 180
aceagetega tateeaacet gaataacgga tggegggttt gatgggeget gattgaegag 240
egageeette tgeeetgete eeegtageaa ttaacatatg geeagaeaaa ggeeeaacat 300
teaeegeeag gaeeetettg aggaeteteg egeaetgeee tegtetgetg gtgeeteege 360
tactgeegee aggtaeatae eagateettt eteatteeta eeeegegttg geeteette 420
ttegaegeae tgtgtteegt teatteeett eeeeateeeg gtateeeage tteggtatee 480

cgccgacgga gtttcggcaa acaagtattg aagaccggct cctttggacc tctggagcac ggagetettg gagettacat gteeteatga agategeeat caattgttte taacateate 600 atcaccccgc gatcacactt ttttccctgt cctctctgaa cccttcgtct agtatcgtgc 660 ttcgtgagtg accagtttct catgtcctcc agaatcactc gctcggccgc gagacaagct 720 780 gcagattctc ccccgcccgc cggttccggt ccctcttcta catcccccgc cgctggttcg gccccatctc gaaagcgaaa ggctcccgca cgccgcggtc agtcaccgga ctcctcggag 840 900 cggccaaata gtcatcaatc tccccatcga aagaccaagc gacaacggcg tgcaccttcg ccacgagegg caaacgeete tgetgeaget tetegtegtg gtaccegaaa cegeecaaet atgtcacacc ctgggtaggc tggatctctc tggcgcggaa gatatacgtt tactgattgg 1020 tttctgttcg cagtccatcg tcacacccgg cggaggaatc ttcgaagaag ccggcctcgc 1080 ccccgcaaca aagaaggaaa tctagtcgac atgggaaatc ggctcaaggt aagatttaca 1140 tgagcaggaa cttttcacct teegettget gttgttagga tgegtetatt tactgaaatt 1200 ctatgcgaaa gaccgatctt tagctactca gtcacctccc ccgaaccggc aaaagaagcg 1260 ctccagaact cgtccagatg tcgttatgaa agaggcagat gacgaattag aggaacggga 1320 gaaaagcgag gaacatgagg cttccccacc aagtgacagc aatgatggca cgaacccttc 1380 aggtetegae gatgaggaeg aagaggaaga tgatggagat ettttteata acagtetgtt 1440 cggagcgcga ggctcccttg gactccagag tactcttcgt gcccttagcg gtatgatgtc 1500 gggcatgtca tecegeetae gggatateet ecaaaatttg agaatgaagg atgaceegte 1560 agttcaactt atcgcccttc aggagctttc agatctgtta cttgtatcga acgaagacaa 1620 cctatctggc cagttttctc ctgatcctta cgtgaaggag ctggtatctc tcatgcaacc 1680 aaatgatttt ggggaagaga atccggaaat aatgcttctt gcgtgccgtt gtttggctaa 1740 cctcatggag gccttacgcg gctctgtggc caatgtcgtt tatggcggcg ctgtaccgat 1800 cctgtgccag aagctactgg acattcagtt cattgacttg gctgagcagg ctctcagtgt 1860 atgtcccttg catttttctt cttttactct tgtgcttcgt gccgtcttcc gttggttttt 1920 gacagtacat cgctgacctt acgacagaca ttagcaaaga ttttcggtgg acttcccggc 1980 gtccattgta cgagaaggag gcttaacaga atgcttaaca taccttgact ttttccctac 2040 gagtacccaa cgatccgcag taacaacggg cgccaatttg ttgccggaat ttggcgtacg 2100 <210> 3028 <211> 3795 <212> DNA

<213> Aspergillus nidulans

<400> 3028

eggggetgea ttagaageet ttegttteea gaatggeete etetegteae eatttgtete 60 cccagggtgg gggctaggag acctcccagg ccgtccacgg gacggtccag gaggtcatgt atttggggte ggtgteettg getagaegge ggaeageate eegtgateee gagaetegge ctaccagttc agegaccege geceattege geteetegge eteatttgte acatggeget 240 gaggggggaa ttgaagtgcc gtgcttgggt gcagatgtct cggggaatga ccctcatcgc 300 cggcgccctt ggaggatgag gccttctcca agacgcgctt ccaggacgta aattcggact 360 cattgcgagc gcgtagatgc catacttcag ttccggagtc gatggagatc tcgcgagaag 420 tctcattgca ggccacagcg gctagactca acggaattga gccacgcaga gtagcagagt 480 tggcgtcgtg gaaataggac agcgtagacg tcgaaaagtc gagggagaag aaccgccgcg 540 cccatccctg atggcgctta cggcgacgct tgagcagaag cccggtgtgt attgttgtcc 600

catctccctc ctggacctgg atttgcggcg gcattttggc cattatgcta ttgccccgcc ggcgcgacga tgaggactcg gtatcaccac ctggttggct ggccgcatgt gtagtaggaa 720 ccgattgtgg aggtagagca gttgggtaag taagaagaac gagggtcacg gttttggata 780 tttgcttcga aaatgtgttg tcaaagacaa gtgcgtaatt tccgccctcg ttagggggca catcatatgt cccctggaca atcttatccg cctcacatct gccaacccat cgaatctgct 900 tcagacccat ggccgtcaat ttgtcgctaa gcgaacgcga ggcactctgc ctcgagctgg 960 caccgccatt tgcgaggttc tcactcgaat cgttgctcgg ggtatcagct gaggtcagac 1020 taggggtact gagaatgccg gactggccgg gatgctcata catgccgaag ttcagcgact 1080 tcttgtgcgg ttgaatgctc caagagatgg tatgcgcgga tttgacgggg acccagcgga 1140 cgaagtaaga ctgtcgggta gatcagtcgt cggtcagctg cggaaaccat aactcttgcg 1200 cgttcttggg gtcgtacctt gctatggact tcaagctctt ccatggctgc catgactgca 1260 cgagcgaaca gtaggaggtc actgaccgtc aggaggaagc gttgacggca aggagccgca 1320 attaaaggcg cgatggaggg aacgggggtg taagatgggt gggtagggga ttatatcggt 1380 gcctgaggac gttggagagg ggtggagcgg gttcacgaga ccattgacaa tgacggcatg 1440 ggacaacgag ataatcatgc aaagaagcag gtgataacaa ggacaaaaga gatcggagaa 1500 tatagtagga aatgagaaag gggaatgaga atcagccgaa tqqqqcgaaa qcqqcaqact 1560 tgtcatcttc cgcatgtcat tctttcataa ataatgcgga gatcttaagg ctgtgggacg 1620 gagcetecta taaacaceca ggaaceteag ggeategtea catgggetgt tgetgecatt 1680 caggaaccgg gcattccgac cattataaat ctattcaaaa tcaattcttc agtggagcac 1740 ctactccata attacttgga gtaaagtgga tgatccaatt caacggccaa gtctagcttt 1800 cgtccttgaa gtagtagtat agtgacctta tccccgcaaa atcatagaaa atattaccca 1860 atatagaaga aagatatget aaataagaat atgeaaaeae ttaaaeeett gateeeteag 1920 cgtcgtttcc cgctttgcat gttagtgaac aacagettga atccattgca caatgcccgc 1980 atgtctggat aaggattgcg ctgcagctcg tacccttggg gaatcacctt gaccggccag 2040 ctatgcacct gcgcgtgctc tccggccttg aagcaaagga agaagtaccc ggcatgcttg 2100 gggtctatgc agaaggcgta cgccgaccgg cgcgggttag ccttagtata ggtctccagc 2160 cactggtctg aactgccgtt agtactcaat tgaatgtaga atgtaggaaa gtgacgtaca 2220

ggtcgaatct ttgctgccct cctggtattt ctcatgcagc atcatctcat ccaccttctt 2280 ggccatagct ttgacgtggt tgaagatcag atcatccaga tcactgtacg taaatcgacc 2340 cccaaccttg agtgtacgcc cgacggagaa ctcattctcc ttgtccagct ctagcacatc 2400 aatatgctgg aagatgccgt ctgccacctt ccaggtgacg gccaagtggt cgggtccctt 2460 tgaagacggt cggataacca cgtcgccgcg actctgagac ccgaggaact ccactgcctg 2520 cgtggagttg aacggacgga ataatggatg tttgatgaca cgcatcgtac gcccgccgtc 2580 ctgtgtcttg gcctctaacg cctctcgatc ctgttcttcc tgacggtaat cccattctcc 2640 cgcgtgtgct cggtcagcgg cgggcctgga cggccggctg acttgttctt cccgcagcga 2700 cacgttacac gtaaaggtct tgcggttcag gaacatcacc ttggccggta ctgtttggtg 2760 tagggagtaa attgctctta cggggatgtc gtaacgatca gtcatctccg attctccaac 2820 aagtgcgtcg acaccgcagt ccagcttgcc ttcaatgtgg tcgtccctga tgctcttgat 2880 agagateggt accaecatge ceteegeeaa tgtetgtget gteteaeegg tgageatggt 2940 gaagatgtcg tctgtgctaa ggaagacaaa gtgttttcgt agctcttcgt aaggctgctg 3000 gagttccgcg cggatggttt cgagcgtggc ccgctttcgc tggttgaggt tcttctccaa 3060 ctgttccgcg tattcttcaa ggatcagatc atttacacga tcctgagcat cttcccggaa 3120 gagettgegg acaattgeac egggeeegtt etegtetgtt tetgeettta tateetette 3180 gtccaactcc aacgegtceg ctgccatctt gcgagcgata tcgtagtctt ccggatgcac 3240 tegagtgttg tegaggggat eegagtetge gteegegett tegtagtega tatacagaaa 3300 actogoagag ttgttccata cttttactcc catggcaggg tactgtaccc caactccaag 3360 cagagaaaac cggctgttaa ccacacctcc agtcatgttc actatcttta agaggtgtgc 3420 tgctttgcgt gggcccaggc cgcatacgta tgggagaagg ttggcagtag ccgggtctga 3480 cacagetteg ttgatatega etecaaceag gttgaceatg tegaceageg eggttteaag 3540 ctgcttcagc agtagetect gegecaceag ctgctgecea ggettgaact gaatggacac 3600 aatgtetega eecagegaag catacteett tagagggete tgeagataet tggcaagtee 3660 tacacaataa tgagtgaggg gagcgaagct ggggtggtct ttcttagccc gatcactgtt 3720 ttaatagagt cgcgccactt catcgttaac gatcactact tccagccggt cactgacctc 3780 3795 cacatcacgg tcgta

<210> 3029 <211> 1559 <212> DNA <213> Aspergillus nidulans <223> unsure at all n locations <400> 3029

atagtggatt gcttggcttg gatggctcag aaagggcggg aggagatagt gagggttgtc 60 120 gactagcgtt atcacatggc tcctctagag agggcgtaaa cggcgacgga cgggtttcat 180 gagggtctgg actggaaggc agtcgagtcg acacggtgag agtctccagg gtgaggttga 240 300 aggagcaaaa ggcaaagggg aggggatgaa ctgagaagat gagcagaggc ggaagggaca ataataagaa gtgagaaaga caaatggcag tcagaggagg ctaaagcagg gcgggctctt 360 attggcagtg tatatacaag ctgcactctc tatctgacca agcagatggg gtaaactccg 420 accgagtgca ggacagcgcg acaagtggcg agttgctacc gagcgggag ctgagcggat 480 gacatgcaga actgggttcc ttaaaagaga agaaagagag cgagagcgga aaagctggag 540 actgcgagtg cgagtgcact tcatatgggg atgccagcaa atctgagggg agcatgagct 600 ggcaggcggt cactggaatc gtccaaatgc ctcatattat gcttgctata ccttcctggg 660 tcatatacag aacgaqatgc gaaatgacaa ctcgagcaca gtaaataccg cccagtggag 720 780 caaatccagc gtatttacag ggtcttcttc aaaaacaaac cctcctatca ataataacag gctgacaact gacgagtgac aatgattctc atcgattctc tggactcaaa cagctgaatt gaccctccac tgtgctacat gaagaacaag ttgatgcgtt ggcagcgcat gcatgaaggc cttccgctct cctgattcgt cgcccgccc cctctgcgcg tcttgctgtc caccaagacc atccatccaa aattcgaatg caattcaaac catggcctct cattcttgcg ttgaaacaag 1020 atcgtcccgg acgaaacaaa gtcgtagctg tcccggctac cgttgaaagt caaattacct 1080 ctaccaaaaa gtattacgag ggactcagct tcgatctagt tctccacggt ttcgaatctt 1140 tcctgtgaag cggaatcaat cagatgtatt aatggcaaca gcatgtgccc tcttaaatca 1200 actocatoto tggotocttt atgtatataa taagggtaaa tatgttogot cotgtoacog 1260 ccaaatteet ettatteteg eateggteea tegtageegg eggggtaeae tteaegteet 1320 gcgctgtgtg cccctcttaa aagcgtcagg taccacttcc tcgctggact tctgtgcggt 1380

ctagtcaagc ggtggaggtc tgtaaccgaa aagaagcagt catgattta tacaaccatc 1440 cgctctttga cggggttgca gtcacccaag acacagcagt agaccgtagt cgcagtattg 1500 tacctagttt tatcgcttag aagctaataa tagnggcgtt atcattttca tcatatctc 1559

<210> 3030 <211> 2396 <212> DNA <213> Aspergillus nidulans

<223> unsure at all n locations

<400> 3030

60 gattatggtg acactataga atactaggat cttaaacgtg ctcctatggc tttctgtcat gtacttcacg gatctcggat tgcgagccgg agagccggtt tctggtaatc tgcaaagccg 120 acagctgagc aattgggcag gcagcttaca gcagcgacgc gtgttcatac atagcacgag 180 240 cgctgtgtga atgtttgatg gctaatctag aggacgcaac gcattggtgc ctagggtcgc aacagcgctt agatgctcct gctgaagcat ggggtattgc aaccgtttaa atgctgggat 300 ttccaaagtc tagaatggaa cgctctgttt aacttgtggc gaacggtaca tntttcaatt 360 tgctaaagcc aatttgagat taactaaata tagaactttc caaaatggaa gaagcggcca 420 accaacttga tcaatatcat ctgccccaaa tatttgccca gcctcaccct gtggcctgtg 480 ctctgcagcg actttataat gcgaccaata aacacacagc cctgtccagc attacaaatt 540 600 aaaaaaaacgc catggatqcc aaaaqttaaa caatacatta ttcacqtqqc ttaqcacqct acacctgaac gcctgtccat ggcagctttt aaatgttatc gccctgcagt tgcctcgatt 660 tctcagctca tcaggcggag agtcaatcgc cttttttttt tttttttat cgaaggatat 720 ggctagagta ctatggcttc cagccggcct tgccacagtc catctcaatc ggatactcgg 780 cttcattgag ccccaaggtc cgcctttgca ggcttcctac cgtagacaac agtactatca aggtcagccc agcgcctgaa gatatttttc tctctttctg agggaaaaaag ggcaacagac cattcctgat atgcatggat tcttggagtg cgaaqqccct ttcgcatgcg cgacagatat ageteaaett ettegegtga ceaetggata gettageeae agteetggat aetggaeggg 1020 gagtgtacct tgagaatggt ggttaacagg tacatgctcc atccctcgat cccttcttcc 1080 cacagcagcc ggttatatag tcccagctgc ttaagacggt gatcgctggc ccatccqcca 1140

atggggatet tgtategteg etegaceaeg tecacaaaae cageettgat cateetgtee 1200 ctggactcgt cgacgatcct caaagatttc ccaaacgcct cgccggcttc gagagagacc 1260 cqtccccatt cctcqaaqat cqtccccaca gtagtcccgt cgtccgactt tggtactacc 1320 gattgctcga cttgctcgat ccatccgccg ggcttgactg atcttgttcc ataggtattt 1380 agcacttcag ctcgccagag ggaggctcga cgtaccgtaa tgcctgttta tagaacgcgt 1440 cccagtccgc gacgcagccg tacagtccac ggatgtgtac gaaatcgaac gcgttgtctc 1500 cgtacagcca ttcgtcgcag cagtcgtcga cttcgaactg gacattcggg ggaacccaac 1560 ggggctggat tgggggagag atcggttccg ataaccgctg aggaaggatg aaggtctgcg 1620 aattctctgc gcgagtgagt atttataaac aattctcagg ctgcttggga tagggtcgcg 1680 actatacact gcccagatgc ccgtccctgt cccaacatcg aggactttct gtgcaacgtc 1740 aataccgccc cagcctcagg acgcggtcga tcactcacct gcgcgtcgtc cgggataggc 1800 qctaqataqa qccqtccqcc cagqacqagg ttgtagacat ggtgtcggtt tgttcgtcag 1860 tettgegeag eeggegtgga tgggaattae teaceegaaa teeagatggt eetgegeett 1920 ctcatcatta ggtcccctag tgaatttaat ttagaaggat ctctaatgcg acccggctcc 1980 tgctcaccag tatgatccag cgcggtaagc atggtagcgt cgcccgttct cgtagcggta 2040 atccacaata ctgctccgca gcgaggtcaa ttccctagcg cagcatcagc gaccgcgtcg 2100 atcagggtcg ggtcgtataa gcacagacga gttataatca tcgctataag cggaatccgt 2160 qtcqtcqqqa tqctqacqtq ccgaaaagaa tcagctccgc tccaaatcta aatatatggg 2220 qtqaaqccaa aqtaqcqqqq qaaqctaccc ctggcctaga gaaatactgc taaaaaatga 2280 aaaaacaaaa aaaaataaaa taaaaatttg gaggaaaaag gggtaaggga cggctcgcac 2340 attgatgtcg acctcgagcc tgtattcctc aaccatgctt gatggatcaa atcact 2396

<210> 3031 <211> 3107

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 3031

tacgtgccta catagtagga ttgcataatc cagtgcagga tgccgtggac ccaggtgaag 60 tttccaggcc cgaaaaggta gagggcgctc gggactgacg tagtgaagta gaggataaga 120

tgtgtgagca tgacaacgtc tgtctcgaca cgaactatct gtcgcgcagt cgcaatgtag gcttgtatta gcctttttag tatgctaggc aattttgcga gatctttcat gtcccaggtc 240 300 acgaagacgg tgggctcgaa ctcggccgct tgagtgttgt tcagagcttg gagtctcagt attgtgtctt tatcggaatg tgtctgattt gacgcatttt gggtcgctat ccaccttgtc 360 agtatgagct tactcgggcc ctgagtagag cgtggacata catttccctc tgttccgtgc 420 tcccgcggga tcgtttcctt tttcttcggg ctgaagactg ccactgctgc cgtggatctc 480 ggcatcatgc aaaagagtct ttaaaaccag cagatccggc tcggttagat ttgggtctat aaaattggag gggtccatgt tgggatggcc tccttactca gagtgcggtg ggttgtcaga 600 660 acqtqcaqaa gactgtcaga atgttaaggg gaagctacgg gtatcggccc atccgtcagg 720 ggccagatcc ttagacttgt tgcctaacaa agagcctcac aatggtatct acattgcggg aatcccaaac gttttgacat gtagggagaa gaaacctagg tcagaatatt atatacaaga 780 cctgcagaca gttgcttaac tagaccaatt agaaggtgaa aaagacactg acaggatctt 900 acttttccgt aaatgtgctt agtaagagtt gaagcatgaa acctcgaacg gtaagacgcc actctacaaa catgcttcac gaacaggatc ttcggccttc tcggcgggag caaatcttga gtcagatgcg ccttcccgat agcttgtcgt taccttaggg gctcgagtag cgttggtgga 1020 attgactggc acccatgcca atgccacatg acttgaccaa tcaaattcaa tctacggatc 1080 tacggatcta ccccacgata aaaaaaaat tggcggggtt gatttgaaga gagggaagct 1140 gcattcagag caaaggcaaa cgcagctttc aaactgtgaa aataactgct cttagacgag 1200 ctgtaccttc tatatctagt tcaagtctca gttcggccac tgttactaca atgactcttt 1260 caaagttgca aggggtcaag ctccccgcat cggccgactt ccacggtgcg tatgaaccat 1320 ccactccatc gcactgctat agtcaactga tgagggaaaa tagtccacct ccgcgatggg 1380 gacatgatgg aattggttac ccccaccatc agacaaggtg gtgtcaacac agtcttcgtt 1440 atggtaagga gataacttta ctgggggacg agaagcaaga gatgaaacga tgcgccaact 1500 gcattgattt gataagaacg ccaaataaca tctgatgcta tgatagccaa atctcgtacc 1560 gccagtcacc acagtcgacc gtgcgctcga gtacaaacag cgtctgcaag cgattgagcc 1620 aaacgtaaat ttccttatgt ctctgtacct gcacgagtcc atcacgccgg aaactatcat 1680 cgacgccaag aagcgcggca ttacgggagt caagagttac ccggctggcg tgacaaccaa 1740 ctcctctgcc ggtgttgtcg actacgagca gttctaccct gtattcgccg aaatggagcg 1800 ccaggggatg atcctgaatt tgcacgggga ggttccctct cagggtgatg tgaccgtgct 1860 ctcagccgaa gagcgcttcc tgcctaccct cgtgcagttg catgagaagt tccccaagct 1920 ccgtattatt ctagagcatt gcaccaccgc tgcggcagtg gaagctgtta agaagtgcgg 1980 gccgactgtt gcgggaacaa gtaaaatcgt accttctggg ttccacgtgc aatattgtct 2040 gaccgtgttg tagttaccgc tcaccacctt tcgattatta ttgattcttg ggcaggagac 2100 cctttctgct cttgcgagcc tgtcgccaga acccctgctg atcgagacgc tcttctgcgc 2160 gccgctgcct ccggcaactc taagttcttc tttggctcag atagtgcacc gcaccccgca 2220 gcttccaaga gaggaggaga gaagatcgca gcgggtgtat tcacccagcc gtacacgacn 2280 cagctcgtgg ttgacgcctt cgagcaggcg tgccgaaacg gcgttctgaa ggaagaagat 2340 atcaccccg agatcatcga gggcttcatg agtaagttcg gccgcgcttt ctacggcctc 2400 gaggagcaga aggagttcat tatcctcgaa aagaaaggcg agaaggtgac aaatatactc 2460 aagtcggata aggtggacgt ggtcccattc agaagggatc aggagacatg gagcttggct 2520 tggtccgcat agagcgcttt cagctgaatt ccataggccg caaaagtatc ccttctactc 2580 ctcctttcta tccgcctgtg taagcatact agtcacggcc tcgagtgcct gtgcttcgga 2640 gatgttcact ctgcgtccgc caacagtaat gttcccatca ttaccaggta gctggccaga 2700 ccgctcaaga tgtagtctga ttctgctttc aatgtaatct cgtctctcat ctgacttggg 2760 ttccttgtct ttcgccaggc ccgattccgg taaagcggcc agcttaggcc ggagctcttt 2820 tagcatcgct tgcagagcag gaagttgtga caaaatgaat gtagttttgg tcgtcaacgg 2880 tgtgtgctgc tggttcgatc ctgtggcaac gccaacgcgt gattgctgag cagccggact 2940 cgctgtcaag aacgacaagt ccagatcttt cttcgtaaga gacgtggttc actttctttc 3000 gtgtccgttg cagcatccga ggcttgcgtc gctgacaaga tcgctttaag ctgcgcgatc 3060 3107 attacttcgt tcctcgcgct ctcctgcttc aatgctcggt ttagttt

<210> 3032

<211> 562

<212> DNA

<213> Aspergillus nidulans

<400> 3032

gcatgactga	tatagtggcc	tcttcaccat	tggcttggag	ccgggcttca	tccccggtcc	60
atgagggcga	cagttccaat	ccagcttctg	cgtatagatc	ccagaacaga	cgggaggcgt	120
cgaggtccat	tgatggtctg	gtgaaccccg	accatggcca	tggcatgccg	aggatgacct	180
ggagcagtgg	ggggcgtctc	cgtttgcttc	tttggctagg	ggactaggtg	ggggtcttag	240
tcggggactg	cgtgggaagg	aggataggcg	gaaccaggga	aggcgccggg	gagctcgacg	300
tttgttccga	agaggtcttc	tatgaatcaa	gttcttagct	gagtcgggct	tggttaaatt	360
ggacgctaat	atgaatggct	acgattatac	tatattgtta	tataccctga	tcgtcaatcg	420
attatgtaca	tacattcaac	ccttcaaccc	tctaccctct	actctaaaga	gacagggacc	480
tcgtacgaaa	ccctactgat	ccctttctgc	ctactaatct	tcctaatcac	aatccttccc	540
gttcttttcg	tgctcagcac	at				562
<210> <211> <212> <213>	3033 2093 DNA Aspergillus	s nidulans				
<100>	3033					
<400>	3033	gaaagactta	ctgttgatat	attcatagcc	caaatccttq	60
tggggattat	tggctgtgta			attcatagcc cagttgcgtt		60 120
tggggattat agtcctaact	tggctgtgta tcacgacttg	cgctgcggca	gtcagaatta	cagttgcgtt	gatgtcacac	
tggggattat agtcctaact tcgtgcgcat	tggctgtgta tcacgacttg tccaagagct	cgctgcggca ccaacctaga	gtcagaatta gctgggaggc		gatgtcacac tatcaagtga	120
tggggattat agtcctaact tcgtgcgcat ggtcgggtca	tggctgtgta tcacgacttg tccaagagct gttaagaaag	cgctgcggca ccaacctaga cttgaactgc	gtcagaatta gctgggaggc agcggaatca	cagttgcgtt	gatgtcacac tatcaagtga ggtgagagag	120 180
tggggattat agtcctaact tcgtgcgcat ggtcgggtca gaaggaaaga	tggctgtgta tcacgacttg tccaagagct gttaagaaag caaggatata	cgctgcggca ccaacctaga cttgaactgc ccactccgtc	gtcagaatta gctgggaggc agcggaatca aggcctcatg	cagttgcgtt ggccctatat gggtgagaag	gatgtcacac tatcaagtga ggtgagagag ctcgggaaat	120 180 240
tggggattat agtcctaact tcgtgcgcat ggtcgggtca gaaggaaaga cagggtgatc	tggctgtgta tcacgacttg tccaagagct gttaagaaag caaggatata agtgctagaa	cgctgcggca ccaacctaga cttgaactgc ccactccgtc actcgatcat	gtcagaatta gctgggaggc agcggaatca aggcctcatg ttcgcacgtt	cagttgcgtt ggccctatat gggtgagaag agcgcgttgg	gatgtcacac tatcaagtga ggtgagagag ctcgggaaat gatcgaggta	120 180 240 300
tggggattat agtcctaact tcgtgcgcat ggtcgggtca gaaggaaaga cagggtgatc aaggaaaatt	tggctgtgta tcacgacttg tccaagagct gttaagaaag caaggatata agtgctagaa tgaagaagca	cgctgcggca ccaacctaga cttgaactgc ccactccgtc actcgatcat gcaggaatca	gtcagaatta gctgggaggc agcggaatca aggcctcatg ttcgcacgtt tacggtcttt	cagttgcgtt ggccctatat gggtgagaag agcgcgttgg actcctggct	gatgtcacac tatcaagtga ggtgagagag ctcgggaaat gatcgaggta ttgcccagaa	120 180 240 300 360
tggggattat agtcctaact tcgtgcgcat ggtcgggtca gaaggaaaga cagggtgatc aaggaaaatt ctgcaaggat	tggctgtgta tcacgacttg tccaagagct gttaagaaag caaggatata agtgctagaa tgaagaagca gcaggggtgt	cgctgcggca ccaacctaga cttgaactgc ccactccgtc actcgatcat gcaggaatca ttgtctctct	gtcagaatta gctgggaggc agcggaatca aggcctcatg ttcgcacgtt tacggtcttt gaccaaacag	cagttgcgtt ggccctatat gggtgagaag agcgcgttgg actcctggct atgccaggca	gatgtcacac tatcaagtga ggtgagagag ctcgggaaat gatcgaggta ttgcccagaa ttgggactgg	120 180 240 300 360 420
tggggattat agtcctaact tcgtgcgcat ggtcgggtca gaaggaaaga cagggtgatc aaggaaaatt ctgcaaggat aatctagtct	tggctgtgta tcacgacttg tccaagagct gttaagaaag caaggatata agtgctagaa tgaagaagca gcaggggtgt tcgtgatcaa	cgctgcggca ccaacctaga cttgaactgc ccactccgtc actcgatcat gcaggaatca ttgtctctct gagcttgttt	gtcagaatta gctgggaggc agcggaatca aggcctcatg ttcgcacgtt tacggtcttt gaccaaacag gctgtcacct	cagttgcgtt ggccctatat gggtgagaag agcgcgttgg actcctggct atgccaggca ccatgcctga	gatgtcacac tatcaagtga ggtgagagag ctcgggaaat gatcgaggta ttgcccagaa ttgggactgg gctaatcagg	120 180 240 300 360 420 480
tggggattat agtcctaact tcgtgcgcat ggtcgggtca gaaggaaaga cagggtgatc aaggaaaatt ctgcaaggat aatctagtct ccgcttgctg	tggctgtgta tcacgacttg tccaagagct gttaagaaag caaggatata agtgctagaa tgaagaagca gcaggggtgt tcgtgatcaa ataagaaaga	cgctgcggca ccaacctaga cttgaactgc ccactccgtc actcgatcat gcaggaatca ttgtctctct gagcttgttt aagcgacgac	gtcagaatta gctgggaggc agcggaatca aggcctcatg ttcgcacgtt tacggtcttt gaccaaacag gctgtcacct ataattgaaa	cagttgcgtt ggccctatat gggtgagaag agcgcgttgg actcctggct atgccaggca ccatgcctga aagaagaacg	gatgtcacac tatcaagtga ggtgagagag ctcgggaaat gatcgaggta ttgcccagaa ttgggactgg gctaatcagg attgacaagc	120 180 240 300 360 420 480 540

ccccggatcg ccgcatgcac atgaatggat ggcatgaact attggctccc cttctccctc 780

ttcaacccct cttccacctc cgtcaacagt tgacttaatt ctttcgcgcc ctcactgttc ttgccctcaa gctccaaccc cctcgataca aagcttttcg cctcctccca cctccccatt 900 tcaaccaagc actttccccc gcgccaccaa gccttaacat tattcacggg ccgtccctcg 960 acactagece tggcategae aageeettea acceaeatet getgegaeat gtaegeetgt 1020 gcgcgattcc catacaacgc agcgagttcc tccctagcca cggcaacggg ctcccagccg 1080 ggccgggcga gcgccatttc gagcgcgaaa gtgtacagac gcacagcctc ggcgtagttg 1140 ttcttgcggt aggccatgtt agcgctgtcg cggagtttgt tgatttgcgc ggagcgtttg 1200 gggttgaggg gtaatggggg cgggggaatg gatggggtgt ccaggcttag gagggtgcgg 1260 tggagggtgt tgagggtgga gagttcggcg ttcagggcag ctgtttggga aggcgtgtat 1320 gttgaggtag cgttcgggga gagggaaatc gctttagatg acgggtcgat tgttagagga 1380 tattgattga agagatcgat tgattgggcc atttttgttg aagtctggtg tggtcgttga 1440 ttattgtgta ggtatatgat ctgggtggca ttagcatgcg gaagcacacc accagatgga 1500 acgtaccggt tggagagcaa tattctagag cgcgtaatat ataagccctt gggtacaaaa 1560 gccgaacctc gaaaaaagaa tatatttagt ttgtgcgttg agtgatcagg gggataatct 1620 aaatagcttt ttgaagtcga tatccgcaag ctgtccagac cgggcggtgg cctgaacaat 1680 agatggttca cattcaaggc ggtgggaaac tgccatatag taactcgtac ctgaagagtt 1740 gaaatatgtg tcagacgcta tattctctac caggctgaaa attcagattt agttatacat 1800 tcaagtcaaa ccatacaaga atccagtctg agagtcatcc aatcgtcaag aacaacactt 1860 tgcattggaa agggaatcaa ccgccgcaaa atcatcacat cgccagaaat cgcaaacaca 1920 tacaagttca gcaaaagtcg cctaaaacac gtaatgcagt acaggactaa gctgattcaa 1980 aggcgcccaa ctccgctcca tggtcatatc gggggatttc gaggaaggaa gtaatcggag 2040 2093 gagtggtttc ggagtaaatt agcggtggcc gtacccgctc acagtagagc cgt

ccgagcagac ggtgtggttg ttgaattggg gcactgtaac ctccaattcg acgaggctgt 60

<210> 3034 <211> 1832

<212> DNA

<213> Aspergillus nidulans

<400> 3034

caaaattctt gctgcggtca actgttttct cgctgccgtt ttcttccccg ttgtcgatat aagttctgac agctttgttg tagacagaaa gaattagcga tggcacgagt agataaacca gaggaaaaca tacccgacaa taatatctcg tggagtaaca cccccccaag cgccatcctt 240 300 qaqctcqtct actccagaaa gagtagcaaa atcgttgtag gtgtcgccgt gttggccaca 360 cttgacgcca gtctgtgcat tctcacggca agatctggac tctccgtcag ggtcggccag 420 cttqtagagc ttgcccccgt agcaggccgt tgcgagcttt tcatcatcac cgtccgagtc tqacqtqcaq ctqcqctggg tgtcaataat gaaagggtgg tgcccggatg cctgccacag 480 tacgggaatg gcatatccgt acaaggcctt cgcgaaggcg tcggtaactg tatcatttcc 540 tgtctttccg tcaaatccat ctccatcgct aaggtcactg gcaccgttga tgaagtggcc 600 660 gtccgctaca agagacttga gcgttttgat agagtcgtct gagccgtcga atagcgtagc caagcccatg gtgttggccc tatcccagag accagcgctt tggcctaggt aagtcataaa 720 780 cgcgtcttga tcatcatccg accaatcgtc gctaggtttt cgagtgcgct agttagctat gaaggtttta tcaaaagacg gggtcggaag aaaagctctt acggatcctc agtactaaca 840 aggetegtge ceacetegae agetttgeee aaaataceet gagtgattte tteegettte 900 gacttgccct catcacccag cgaagcgata ccaggcagct tctgtagaac tgttgtctgc gtcaaaaaac tacatgggat ggctattcga gaacgaaaca cataccatat ttgaagaatt 1020 aatcgtcctt tggtggaacc ggagcaaatt tcttcgtaaa gtctttgagc gaaggatcaa 1140 ctaccaqqqc catqqccqac acgagaccgt catggtacct ttgatacgtt ttactgagag 1200 tattcaagga ttcccagatg agcacttcgg cgggagaacg gccatcctgg cagtcgatat 1260 ttccaccgca gccttccaca atttcccagc acttaccgta gccctcccag tccatcatgt 1320 acgccaagta tecegtgaat gacgtttggt teacattgte eeggtagtae ttecaggeet 1380 teaceatgte gteceagget tggtegaegt egagegegge ceagegetee gaaggagtgt 1440 aataaggcgt tccctggtag taattattgt cacaggtcaa gctggaccag ttaccgtcct 1500 gaagattatt agattcaagg ggattctgct tcgccatgat tgcctctttg taatctgacc 1560 agttgcccac tggtgcgtca tgccaggttt ccaggtccgt tgcccagttt accgagccac 1620 ccatqttcaq tqacttqtat ctqctgactc gggactcgcg gacctctggg ctcatgtatg 1680

cgacccattg	gttgtcatcg	tagacaagga	tgttgctgtc	gctgtcctca	tcgaggtagt	1740
gtgcggtaac	gcggcttgaa	gcagtgtcgc	gggtattaag	ccccgaagga	ctaccgctga	1800
ggatcctctt	atcacgccat	agcagatagc	ca			1832
<210> <211> <212> <213>	3035 553 DNA Aspergillus	s nidulans				
<400>	3035					
cttaccatca	ggtagttaat	agggatacat	ccgacaccac	gaagccaacc	ctccatgtag	60
gagagaccga	tgttcaggtt	cttgcggata	ccgtcctcgg	tgatctttcc	gggaacgttg	120
gtgttgagga	ggtcgttggc	ggtgatgttg	acgtcctcgc	ggcggacgtg	catctgattg	180
ggggtgggca	tgtacttgtt	gaaaacttca	ctggcaatcg	aagcgagacc	tgggtgcgca	240
acccatgtgc	cgtcgtggcc	tgcacgaact	tcacggagct	tatcggcgcg	cacgccttcc	300
atggccttgt	cgttggcctc	ggcgttgtct	ttaatgggga	tttgagcggc	cattccaccc	360
tgcatacgtt	agtacggata	ccgaactttg	caaaagaaag	ggcataccat	agcgtggact	420
cctcgcttgt	gacaggtctt	gatgaggagc	ttcacgtagg	catccatgaa	aggtacggtc	480
atggtgacat	cagagcggtc	aggaaggaca	aagttggggt	gttggcggaa	tttcttgatg	540
aaggagaaga	tgt					553
<210> <211> <212> <213>	3036 779 DNA Aspergillus	s nidulans				
<400>	3036					
gatatagact	actatgcgcc	ctcctggcat	tacaccgaca	ggaacaggaa	caggagcacc	60
aagtttttgt	cgagcaggaa	ggcgagactg	tttatgacac	cgagctcgcg	actgagcttc	120
gaattgtcat	gtacgggacg	tagttatgat	tcgcttgaag	agtatgcata	tctggcgctt	180
tgttcctatt	ccattacgtg	ggctatgggt	aaggttattg	tactattata	tttgcaagat	240
ttcaggtcag	ggcgctggag	gtatatatct	ggaagcaata	agacccatat	tcatcgtcat	300
aatttaatst	ggatagatta	2212121	agtagtatgg	atataaaaat	aantattaaa	360

agagtatgtg aaacaaacag acatccaccc aaaatgccca gaaactccga cttgtaacga gaatcgtatc atcgaaagaa aataggctag agatcgtcct ccggcgcaag gtcccattta 480 cgagttgcca tcttcctctg cttctttccc ggagtattga cagcggggct tttgaacatg 540 600 ctatcagcta gctttagttg gtccatcttg cggagcgcaa cctcaatgtc gctctcacga cccaggatat ttgcgttgcg ggaggtttcc agcgcacgat tttttgaact agatttcttc 660 gatggcgatc tgcagttcaa ttcacgctct aaggcggtta tcttactgcg cagtcggtca 720 779 ttctcqaact cgagttcttg cactcgctca tcggaggatg gttgcggatc ttcgtgaac <210> 3037 1767 <211> <212> DNA <213> Aspergillus nidulans 3037 <400> catccgccat catgcctaag gtaagatata ctaggaggct caatgttttg actgccacta 60 acactaacac gtttgtgatt cagatcacag agattttctt cgattgcgat aacaccctcg tecteteaga ggaactggee ttegaggeet gegeegatet egecaatgag ateetegaaa 180 agcagggcct caccgtccgt tacaccggtg aagagctcat caaagacttt gtcggccaga 240 acttccgtgg catgatgcag tctcttcagg ccaagttcaa gttcgagctc accaaggagg 300 agctcgagtc atatgttaca aaggaagaag acaaggttat cgctaagctg cttgagaagg 360 420 ccaagccttg tgttggtgcc actgagcagg tcgagaagct cttcaatgag aagaagtacg atctcgccgt cgtttcctcc tccgctctgc gccgtgtccg tgcttctatc cagaaggtcg 480 ggcaggacaa gttcttcgac cacgacaagg tcttcagtgc cgccacttct cttcccaagc 540 600 ccacctcgaa gcctgaccct gccatctacc tccatgcgct cgagaagtgc ggaaagacgc cagaggagac tgttaccgtt gaggacagta tttctggtgc tctgagtgca attcgcgcca 660

agattgcagt cattggctac gtcggcagct acaccactca ggagaagcag gaagaaatgg

ccaagcgtct cactgacctc ggcgctcagg ttgtcatgag agactggagc gaattccctg

aatgcctcaa gaagatcgaa ggcgaggatg cttccgtcgc ttctctttaa gttgctttcc

aagtttcggt tctacacgat gtcacgacag cgggcgcatt tcctttcttc aatttcgggt

atttcatttc agttttctga agattactct acaaacatgc tcccgcactt tgcttttacc

720

780

840

900

aaccgcggga gacggteecg eteteettt tgeggeeaag tettageagg gageatatet 1020 gegeteggee tittacatee agattettee gggtgggtag acgaattagt gateeettga 1080 ttaaageata tacaggteet gatggacaca gaagatacee etagtetgea acageeaatt 1140 aaaaggaaat taaatetgge tteeggtata eeattetaca gttacttgeg ttgettaaace 1200 tactaaagge teeetgtee eeactettat eeaattaaac gagggteggg accetaacea 1260 eeaceettaa tteeggtaga eacetaaaac gettaattgg aageaactea teeaaagggg 1320 eeeeetaaac eatatteett teeeagatga aaaacetace eattactee eeactgttee 1380 atttgtgeeg ettteetatg aggtattaac eggtattee eattacaat geecaagtet 1440 tttatteaaa eeactataac tgtgaaatte gtteateta tagacaatee tacttaatat 1500 eeggattee ettatteeg gtteeacgtg ttegetteat agteeataaa teettaetet 1560 eetetaatata eettteeet atteeteet tacettatta teeettataa eettaeteet 1620 aatttateta atteettea teetteete tacetatta etteetetta tacettett tacettatta teetteetet tacettatta teetteetet tacettatta teetteetet 1740 eetacatattt tteteeteaa teettee eaatteete teateteet 1740 eetacatattt tteteeteaa teettee

<210> 3038 <211> 1705

<212> DNA

<213> Aspergillus nidulans

<400> 3038

gccgtcaagt aaaagccgga tctacacgga aatgttccta gagactatgc ggaacgaagc 60 cagtacaggg aggagtttgc aggcatcttc gggtttccgt tgctttgatg gctaatcagt 120 gatcgatgtc tttgcttcct gcctttggag caatgggagt cactttatat cttgaatgta 180 atatctcaag agcccttgat cttacctccg tgccagtgcg gccttgtgta gtgggcattg 240 taaatactgc ttgactgcgc atgataggct gatgccctgt tcgacgagct acactggcca 300 gtgaacaaca aggcgccatg gtaatccacg tatcagaatg acaacataac taggaaccta 360 420 gtgacagccc gccgatgaat cgctcggatg taactaatca ttgaatttct gaatcagctt 480 caatggcagc tgtcccgaat agataatgag ggctccgttc attcaaatag cctcctactt agtaaatata cacaaactca tcgttctccc ggtctgtcaa atccaagaac gcattattcc

cagtetgetg gteetgacca tecteacceg cacceacege geteteatee gaateegeet ggtgaaagtt cccatgcatc gagcggtcca ccatttttgc gggcttccca tttgccagac 660 720 gccgccgttc ctggccttta ttcatccaga acagcagcag ccactgcatt cctacgacag caaccaaggc cgaaaagata cctaaacagg cctgcaggcc cgggagatac tctggcgagt 780 ccttgtcgtt gaagagcagc ggacccacga tgtttccacc agccgaggca gcctggtata 840 qactcqtqac tatactttgc ttggtcatac cggcggtgtt ttccacaacc cacgcaatga 900 tgatcgggtt cccgccgaag aggaaggcaa gcaggtagta ccctgccatg agggctccct 960 gtgccgagtc atcgcgtggc acggcgtaaa gaactccaag tcctgcgaca acggggagca 1020 taaacagcgc aagaacaacg ctttttagcc gcgctttctg tgcgagatag ctggccagca 1080 ggatgaatat ccattgaaac gcgccgaatg gcatattcag cagcgtggtc ttgtattgtc 1140 gaaacccacc ccctgaggat caatggacca aagactttgg tgaccccgca ccgatgttga 1200 gcaagagcgc catggcgacc caaagtaagg cttgagtttg agccctgttt gacgacctgt 1260 gcattttgac ttccaagagc cgtgccgttt ggttgctcgt gcccgtcatg gccggggttt 1320 taatttattg agaaatttcg ttggtttgtt tgtttgaaac aaattaattg ctgtaagtca 1380 ctccacccc ataggtattc ttgtcccaaa tatctttgta tgataatcat ttgtaaagta 1440 caggtgaggg tcttcttgtc tcttcctctc tttgtatttc ctcataggtc gctcattctt 1500 ttatcttttt tcctccacat tttccatcct attcttttga ttttacgtta ctctttatat 1560 ttcatccaat ttcattctta tctatattcc ccctcatcaa tattatcttt cctatccata 1620 ttttgctctc atcattgttt gaatcttctt accatatett ettetgttet tateetetee 1680 1705 tctattctgt tattcgtact cgtat

<210> 3039 <211> 4865

<212> DNA

<213> Aspergillus nidulans

<400> 3039

gaccgaatct aaatatacct acgacatccg cgcacccata agatcttcaa atgtcggttt 60
tcgcagcggt ccgcagctcc ttggtgtgac tcgacccgtt tcatacgacc gactatgccg 120
gtatcccagc aaatacggac tcaggctcag acccgtcagg tcttttttc gtcatacctc 180

gttactccta aagagctctc agatgccctg aagaagaatc cgtctacgaa gatctcgact tctccccgcg taataccctt atgcgcagct tggtttatgc ccaatgaccc tgagggtcgc 360 acagggattg atgtttttcg taaacaccgt gtaccacaag ctcgcttctt tgatctggat 420 gctattaagg atactgagtc gccttacccg catatgcttc caactgcaga gacgttcgcc caagcaatga gtgagcttgg gattcgacgt gatgatgagg tggttgtcta tgatacggag 480 540 gagctcggaa tattcagtgc acctcgcgtt gggtggacac tcagagtgtt tgggcatccc agagttcata tcttgaacaa ctacaggtta tgggtgcgcg atggctaccc gacagagacc 600 ggcgagcctc gtcaaccgga gaggacgaac taccctgtgc cttcatacga ctcaaagctc 660 gtgattccat ttcgtgagct gaaggagatc gccaaggagc atcgcaagga gggtgcgaaa 720 780 gaagttgaaa teetggaege eegateteag ggegetggge gggaaetgae eetgageege gccccggtct atcctctgga catatccctg gatcaatgag tctcccgttt caggaattgc 840 tggatcctga gaccaagaca taccttcctc cagaccaatt acgaaagatt ttcgagtcgc gcgatattga tgagaccaag tctatcatca gctcctgcgg taccggcgtg acagctacta tagtcgagac ggcgctgggg ctggccgaat acggtgaccc tagtattcga agagtatacg 1020 atggaagctg gacgtaagtg atctttcctc aacgcggctt ttcatttact taacccatgc 1080 acagggaatg ggctcagcgt gttagaccaa cggatggatt gattaagaag gcaacctaag 1140 cagatagcag cgctgatctg cctcacttgc cgcttgttct tacctcttta tatgacgcgg 1200 tggtttgttg aagtaatgca tgttcagttt cgcgcatagg ttgagcggtt atccatctta 1260 tagagtgtag tcctgagtaa cctactaggt gttttagatt ttctgagcag cgagatcaat 1320 tgctaagcga aataaattgt taaacctaac aaagatgttt acaaagaaag gactataaat 1380 acttccgggc tttctttgta acgagtaaca agatgcttag taagaggcaa caggaaggcc 1440 cgcgagttga tccggtactc cttcggtggc tttcaatgtc ccatcacttc ggccgcaccc 1500 tacgtcagcc ggaaacacaa gatgctgccg atgagaattc ttcatgaact aggatccgac 1560 tgtaagtgca ttgaagtttg gcctcgttcg tcgatggacg cagccgctta tgctgaaatt 1620 ccaacccgct acgcttcccc cacattcctg atctctccgc cgacaacgat ccacaacctc 1680 tctcaagctt cggctgaccc aacgttgtag tcgcagtttc tagaacaggc tacttggagt 1740 agggcgtctg cgcctacagc ggcctcgatc gatcacacaa gcgcctgcgt ttgccgacta 1800 ccgccactga agcgaacacc atgtcggccg cacgcaaggt cttccactgt gccgtggatg 1860 aaacggcatt aacgacgaac atcagcgaga taaaaaaatg ggccaccaac ggagctatca 1920 ctctcatcgt tcctctttac agtaaggccg tttggatttg acccctgcct gccgcgtcat 1980 ccgctcactc cctttccagc acttgagcgc cttcatgcat tgaagaaagc cggatcccag 2040 gtcgccatca acgctcgaga ggcagtgcgg tttcttgacc gcgcaacctc ggacaaaggc 2100 aacgctgctt ctgaacgagt tatattgcag ggcccgatgg aacagtttga agactggagt 2160 gaggcggaga agttcttttt accggaattt gaggaggaac cagaagctgc cgggagatta 2220 ggctcagcgg acgagccgac tctgcaggac aggcgcgagg agaaggacag tgaccgcagg 2280 aagagcaatg gtgctacgga cgacctatca cggatgctcc tcagcaagct gaatttcaag 2340 aaggacccgg atgccgcctc ggctacatct actggcactc atagtggccc cgcctcccgg 2400 ccgtcctcca ggagctcgcg aacaagtcca gactgtgtgt atatcaatgc cacgaatgga 2460 gacgagtcga aggattacaa gagcaacgga caccgccgca ccgcctctgg gtgtactatc 2520 cccgttgtgc cgcccgtctt acggcctttg cttagcgcac ttctttggaa actacacaaa 2580 agtcccgatg catctaatgc tgctaaggct cctatcctag ttaccaacga ccgtactacg 2640 caaatttggg cacaaaaatt tggtattgct gtcaagaaca tccatcagtt gcggacttcc 2700 attcaatacg aggaaaggga atataaaaac cgatgcaaat acgtcgagaa aactcaaaac 2760 aatgagccga aacccttgct ctcctacgaa gacgaaagtg atgaggacga gctagtgttc 2820 gtcccccgcg gccgtggcaa aggcgtatcg aaaagtggtg gctcccgtgg aagcaacaat 2880 cgcaagactt caaccactgc caaacccgtc gcgccatctc tggagagtac gatagaaatt 2940 ccaacccaac caatcgaccc caactcgttc agccggtcgc tgggcgtgcc ctcgaagcag 3000 catgccacgg tcgatttgag tacccaggcc ggcgcctcac gtggcttcgc aggcgcctcg 3060 cggaacaatg gaaacaaccg gcgcggaacg tctcgtggcc aaactcgtgg cggcagcccg 3120 tggccgtggc aagctatggg ttccttgatc ttacgatggt ggtccgtcga ccgttatgat 3180 gcgacggact gacaatcaat acaactacgc gattgaccga atggttgcct tatgaagcag 3240 aaaaaaaaa gttgtatctg cctagcccga ctcagttctc tgtcagtttc ctttataggt 3300 aagacatatg ggttttgagc ggatgaccat ggatgcaaga gccggaggat ggaggtgtca 3360 aatacggtac ttattccacc tcgggattcg actacggaga attgtgacat ggcctagatg 3420 ggttcagatt gagttcaggt caggtccagt ccaggcgtcc actttgcgtt cctatgatcg 3480 ctcatatcat gtcatgcctt tactccttta ctttccgttt atcatggagg aaacggggct 3540 gctgtttcat ctgccgcgtg ggtagaaccc cgtgtcccga ccagatcagc atgctttgca 3600 agaggtaggc tattcaacat gctactctta gttagttacc agcatacatc tctgccaaga 3660 caggtgtgct ggaccgtcct tcttttattg tcccgcgttg attttgtcgg catcaccaga 3720 ctgagactgg atgtcagtta ccttacttag ctcattgaat acttcacata tctagaactc 3780 ccatatgagt aatcctctta acaaagtgta ggtaggtcgg tttaccccgc gatgatcccg 3840 tgggacagtc caatcacttg acccggccac tcgcttcccc tcatggccgc gacaaccatg 3900 ccgtgacgat gagactgcac tagatcgtac cttgagatcg tacatatatc ccgacctgtc 3960 tcacctccct tactctctac gcttaatcca tccaaagtga actgagaaac atactgaact 4020 ccattttatc tgtaccaaca aaatctattc atttccaacc tatctcccta caacaatgtc 4080 cacctcattc gaaactccct ccaacggcac gcccgcaatc gacacaacct ccctcgctac 4140 ctccccgctc gaacgccgcg actcccttga gaaacacctc ctgactcgtc ccgacccgaa 4200 agacctcaag gataggcata tcctgctcga tacgaatgtt gctccgtacg tccaacgctt 4260 atctgtacta tctccctgta tctgggtggt acgctggttg tacaattatg ctaatcacgt 4320 tggcggatta tccagatcca tccaagcaat gcgccagaag cttgatcgcc agcagctgtc 4380 ggataatttg aagaagagcc tggagcatcg gccagagagg gaagaattgg ttgagcgtgc 4440 gtatccctgt tcctatctcc attgccttgg gcttcttcat tctattctcc cctgagtttc 4500 gtcagactag ttccgcttgt aacactaggc atgtgctgac agttgagctg ggatacgtag 4560 gccatatcct ccccgctgac gaacaggcgc ctgttaatca gtgatcacct gacaaacaag 4620 ggccagcgtc tcgctgggat aaattatcat gaagcaggat agatacatcg tctctatcct 4680 tgatgaaata agtttacgtc atctatactt aggctgctgg gacggcttga ccttggttga 4740 caaggaacga attgggacag gagcaaagtt gctggataac ttaagtgttt ccttttaaca 4800 tatctcgggc ttttaccccc aaacgtattg gaaattatta atgtccgatt tgtcacaaat 4860 4865 atata

<210> 3040 <211> 2846 <212> DNA

<213> Aspergillus nidulans

<400> 3040

catcattccg catagtctga acactcgcgg tgagacaacc aggtcgccag ggcatcctcc 60 120 tctgtactcg cgtgtcaata cactaataaa gccctgcgat gacctcgaca aaatgcctaa aaccatgact gcatcgccta gcgacaaccc cttccccaag aatggcacac aactctccgg tgtaaccatc aggttgttcc ttctcgttga ctctcccagt gacggattgt ctcttagaac 240 gatggtagcc cactaaacga tgagtggacg aagtcagcgt ttggctcctt actatctgtc 300 cgcaagctgt ctcaccctta ttgcgttgtc tgtgctgatg ttcttctgtt gtaatctgta 360 agtgaatgga atctttttca caatgacatg gaatgcttcc gagcagcttc cctagagcag 420 agaaagtcaa gcccgtcaaa agacctcggg atatcaacat tttaactgac cgcgttgtag 480 acatagetea geegeetgte aaggtacagt ggtetegeaa egatatagga egaceaagtg 540 acagatatet caccactgag accetgtege caggeetegg geaactetee cagaatgttg 600 caacttcgca gtaacatgtt gctggttgac aggccttgtg atcgtcaatt ctgcgcaatc 660 gagtctctcc gagggatcta cgggatacgt atggcggttt ttacagctgc aattcagaaa 720 tctccatagc gcgtcgattt caccgtgtct cctaccgttt gtctcgactc cattctgaat 780 gtgcaaacgg aaccccgcgg cagattgaac taatcagacc taggaaggca tggcagtggg 840 cctgctcgcc tggcctggca ctaatagaag actggttaca accaagatca gaccctcttt 900 cttcgtcaac gacgatattg acttcgagac accaagagct cagaatctgt caaataccag gagetteete eegtgegeeg acaggaaace etetattgee tgtegagtgt ecaaactett 1020 gatgagcatt gctatttgtc ctcccgttcc ctctctcaca tccgcgctaa gtggtctcgc 1080 agcatagcaa atctcgcccc agcaagctca aaaccaagac cgtttcgacc ctagatctgg 1140 cagaaacttc tatcctggga atctgatctc tcaaacgcat catagctctc cagcctcagt 1200 atatgggccc tcagggtctc atcgccgccg gttcaccatc acagtaaaat aggccatgac 1260 gaaacttgag cgcatttgta tatcttcgat ggataaaaaa tactgcctgg tctcaggaga 1320 cctagcaggg ctctgagtgc ctcctgatgg ccttggcagc atgcacgagc aacgacacga 1380 taatcagttt gaaagacgct aatccaggcc caagttgatg gggtcggttc gttgccaaag 1440 accttatacg gcattccctc gtttgtttgc gcttagatga ccaaagtatt catgtacctt 1500 cttgaagggt gctgaccatc tgttgggcaa cgtatcggtc tgggtcttcc agtcatcgtt 1560 cgcaggagat gcgctgtggt gctctgtccc agctcctatc cagaacccgc gtcttggaaa 1620 atcggtgtgc atatttgtgc gtcaaggtta acacttccca agtccaatct ctgttgatag 1680 tactccttga ggccgtcctt tgtcatgtga gcccggattg accgcttcta gcgcaggcct 1740 gtaggaaggt tgacgtcgac tgcgtggatg agacgaatgt cgagaaggag tatcttcaat 1800 aaacccaact tettetegta aaggeecacg eegagtagga eaggattaet ttaetteate 1860 gccatgagaa ctaagctcaa cacaacgtcg tttcggttca atcatcaccc ttctatatca 1920 ataggcaagg ctcctgcagt gcttttcaag catctcaatg caaagacctc gcgagagcga 1980 tcccctgccc tggcccagag aacaccatgg cccttcaaaa tgtagataag ccagtcaaag 2040 ctgggaatct ggctataagt ctgacaatgt agagattgag tagatgtttc ctgccaggaa 2100 ggctgtcgac aagactcgcg atggaggggc agaggtgcga agaatgctat agtaaatact 2160 aagtaaatgc aacatctcgt gtcagagatt ggtggccctt aaggaatagg ccgtcgagaa 2220 aatgttgtca atattgtata gaaggttttc acagactaca aagtgttagc agatgatgct 2280 ccactgaaca atatatat cctagcaatc caccaaccaa tcaggtgacc aatcttaggc 2340 ggacttgttc ttacttattg agagctaatg caggggtacc agtacgtgtt tactgggact 2400 tggaacaagg accetgttge tggetgeeag ggteettaet atagtaaagg catatatgta 2460 gtcgggattt gcctctacat gcaattaagc actacgacac aaactcatct aaacggaaaa 2520 gtggacgtca gaagaaaatc atacccaagt tcatgcgagt ctataatgtc ggtaatgtca 2580 gtaaccaccc caagaacaac tgtcctcatc tgcagccgca aagcgcgggt gctggccgcg 2640 qtataqaaac caaacqaatc aaccggtcga tggaatgccg aaggaaaaaa ggttaaaggg 2760 tgcaaagacg aaagaggaaa gaaagagaat aaccagtcat cagccgaatc ttcggtgcaa 2820 2846 acgccatcgc aaagcagggc gtcgac

<210> 3041 <211> 1446

<212> DNA

<213> Aspergillus nidulans

<400> 3041

agttctgctt ccttcaccat gccgattgcg acacactctc cgtggagaat ttgcggcgtc 60 agaatggctt caatgcatgg ccaatagagt gaccccagtt caaaaggttc cggagacccc 120 cctcacgttc gtctgctgag acaacatacg ccttgtgccg cgcagatgcc agaattcggg 180 cettcagaat etettetatg ecetcaaace gatgttetee tggeetgace tegegaegga 240 ccgccttcaa gattgtctcc gcgttctctt ctaaagctgt aaactcttct tcgctagaga 300 ttgctgccgt cttgatgacc tctgccatac cattgatgaa ctctctcacc ggcagcgtct 360 ccaagaactc aaggtcaatg tagattttcg tcggttgcca gattgcgccg atcaggttct 420 tacccagcgg agtgtcgatg gcagttttcc cgccgatcga tgaatctacc atggccagaa 480 gagtagtggg aacctgcaca taacggacac cgcgcatgta ggtggaagcg acgaatcctg 540 600 tragatotor gatgactort craccraatg caattacaar ggtatogogg cracatggag ggttctgact caacatccaa tcctcaatat cggccttcgt ctgtcgggac ttggaaactt 660 ctccgggggg agcattataa ataaggaggc gtggggaggg agtaatctcg acgacagctt 720 ttcgaaaagc ttcttcaaag ctgggggtgt agatcgatcc gatattcgta tcagtgacaa 780 ggacgtaggt ggtaaagagc cagtcactga tcaggtctta agccacatag tttcgccaaa gcccgtaatc agcgatgatg ctttcccggc caaggatgct gatttttgta gggttcgaca tggtagagaa cagcgaagat aatagagtga aatgtcggtg tctctagttc atgcttgaga tatgcttgcg acggagctcc cgagcgatct ctcaattctc caactgcgaa gactcgttaa 1020 tggcagagaa ctataaccta atatacgagc gaaaggttag atgcttttgt tcgcaaccga 1080 ctttgaagct cagagatggc ctagctacga gctgagctcg aggcgcattc agagcgcaat 1140 gagtggtgcg gtaccggaga ttttatggga gggggcgagg atgagtaaaa ggttggaact 1200 gacctttcag aaggaagatc gaaagcagaa aggagcacac ctagcaagct caagatgaat 1260 tgagattgaa ggagtggtgg actgggtgtt ggaggtgtgg gctgacgaaa agtgtacgac 1320 ttgactcaat tgactcattg aaaaataatc ccttggggat ttttctcccc gcagctccga 1380 tgtcgtcgct cggcacactt cttgttcgtg catctaccta cctactataa ctccgcacaa 1440 1446 agtaca

<210> 3042 <211> 2150 <212> DNA

<213> Aspergillus nidulans

<400> 3042

gagtgcgcac ccattcataa aatcagcgtc gtcatccaaa attttgccgg ataactcgtc agagcaagcc acgtttaaat cactatgcac cttcctatat tctaagcgcc aattcttgag 120 ctgatcagta tcttctgcat ccaaaatttc ttgaagctta acgtgaagct ttcgtataag 180 240 cqaacqqaac tcaacatagt cgtccccatc aaggagagta ccgtcagaac ggagaatttt ctcgactggt tgttcttcca cagacgtgat tagatccact aatacgtaat aatattagta 300 tttaattaag atctacccat gggtagaact ttaccattgg acaaagattt tttcagcaga 360 cgtaaagttt tcgctggtaa aggccgttca agtcgattct tgacaatact tgtctggaga 420 480 gctttcacca tagccctggc ctcatcttcc aggttgacat acttgggggg tcgccgtt agaaagcctt tctttgcagg acgatcttgc agaggttcag ttctattaga acgattgata gtaaaagatt gcaaatcctc gttccaatta tcgatatcag tttcataacc gaacttagcc agaagcatgg caagtteetg gagaaceteg accgeagtet catacteage etgatacegt 660 tctgggttag aagctaccca tgggtaaata attcagctat ggtgaaaacg tactggtgaa 720 gcaatcaaaa ccaatgtcta gctggaattt tcctgggcag gttttttcaa ccccattcgc 780 aagtcagaat catttgctgt ttcagatgcc gataatggac tatagcgcca agaatatctc 840 cctgtaaagc aatatcactg cggataacca ttgaattgag gcatggggtt ttctgcaaca 900 ttttattctg ggagaaattc attttacaga aaatatcccc ccagggagtg tatggctcat 960 aagcggcagt ctataggtgt gttagattag gatctaccca caggtagatt atttgaacta 1020 gtgaatactt accaagcggt taatatcatt gaactcgctc ataatgcctt gaagacaatc 1080 tggccgtgcg tcaataacca attttacaac ctggatccag tgcacatatt ggaaacgacg 1140 aaggtattgc tggcgggatt cctcggcatt ccgcatcttt tgaccttttt taggggtatt 1200 ctcttcatct atctcaagat tatcccctag ggtggattcg gggacattca gctattttat 1260 tcattattag tatatactat attcagtatt gtagggagtt aaaggatctt aacatacaaa 1320 agtctgaaga ttgggatctt gccacaagtt ttcattgcgg actagttccc acagattctg 1380 gagaaattcc catgccttat gctcaggtgt ttctgaggaa ggagccgagt catcttcatc 1440 caggaacaga aactgttcaa tctgatgtag ccagctaaat gacatccatt catggcttga 1500 tettgatggg agtetccagg teggetegat ecacateatt acatgatgta atacettgga 1560
tacaactgac gagacatttt tetecagate aacecaattg teetacaat ettgtgagac 1620
atttecaace atgggtagaa taaatatgag atettaceag gtggggeagt agagattttg 1680
atgggeatgg agatgtetga aaacatettt ataggacgea teagagagat tgacaaggaa 1740
ceeaggeegt etgttageaa acteetgatt etggataaca atgggggatt ecagtttggg 1800
aagttecage ttgetggagt agteacttga gattggaaat ggttgettee gtetttgeae 1860
agaaceattg gtaaactetg teeaataate eteggattg gggaaaaaaa gaageeteag 1920
etgggagagt ggacggeet ggteeagage aaggateate tteeaateat tatatacaat 1980
gagattetga tgtttageee caaaaatagt agageaaaae ttaaggaact teetggaacte 2040
etgttteeae acetaceeta tagttagatt teeattagaa tgaaatatgg ggaettaett 2100
acetetgtet gettgeetge tgeategage cateaggaea gttegttgae 2150

<210> 3043

<211> 1169

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 3043

ccagtattat aacaatctca ggcgctggat cttctacagc gcggcaatag tgggaatcgg 60 ccgttgttta ccgggaagca caatgttgtc cccgggtatg tggttgctgg taatgggacg 120 atgttctgcg aggttccgtt tatattctac aaagtaggca gaatgatgag aaagaggagc 180 aagtttgcaa agtatagcgt tgaggtaaaa agatcaacga gggttgaggg gactgcggga 240 tgcagctggg cgtttagggc tggctgacaa aaggtagctc tagccttatt catgtttttg 300 atcttatctc gtgtccattc atgcccacct tcgatactgc gtaggcaaaa atagttcatg 360 attattcctt agctgtctat ctagaccgtc ttgcgtgctt gctttatgca ttcgaaccgt 420 ctgcaaccgt aaagccttgc tacgctgatc gcacccctcg agcaaccagt atgtgactga 480 tccctaagaa ggcctgatct agcattcagt gatgccggan tatagctgat cactcacccc 540 caacgacccc ccaccacgca atccccaacg cagcgcctgc aacgatcgcc acggcaggcg 600 660 gcaccctaaa ccaccgagtt ccactatagg agacagcagc aacaacaacc caccatggct

ccctcccaa actgacacct tcctcactcg atcggcctg ccgcagatac ccaatctccc 720
atagtcgata cacagccgta aacaccagcc ctaccgcggc ggcattgaca cctcgcagaa 780
aatgaacgac gtacatcttc cgtcgcagag cccgcagaa actctgtacc gcaacggcaa 840
gaattaagcc cgggctaaag atggcaaaac cggatagcat cgcgccgagg acgctgtgat 900
gtgaggcgga gagagtgagt gcgcccagaa agactgcaaa attgaagtta ggaccgggga 960
aggactgaat gatggctaag ccgatcagga agtcacggct tgagacccag tttgggtcga 1020
cgacgtaact gcgcaagagg gggatgacta cagggccgcc gccgaagata accgtgccgg 1080
cgaggtacat gttgctgaac agggagaggg gtaatgggg cgaggagagg cgggcgcgta 1140
ttgtagaatg taataacagg ctatacgaa

<210> 3044 <211> 2120 <212> DNA <213> Aspergillus nidulans

<223> unsure at all n locations

<400> 3044

ccgcgaactg cagaagcagc aagccccaga actgacctaa gatcttgtga tactggaagc 60 cagggtctcc aaacttggcc atccagtcaa agttctcgtg gcaactgtga tagggatatg gttccccggt gaacccaaag tctatactgg aaatacctgc aaggtcttga aaagccacat agtcacttcc ggctcctaga ggtgcaaacc tcttgttctt ttgctcccaa atgtctttta 240 gggtctcgtt cgtaacggga tctgaaattc ggcctaggac ttgcatgaca acgcgctcgt 300 agagaggaca geeggaaget teaaagteeg tgeegetgae acegaegtee aegttgatat 360 acgcgtacgc attcccgtgc aaattgtcca tgctgtcctc gacatgctcc gtagaaccga 420 tcaggttata ctcttctgca tcccagctag caaactcaat ttttcgcagt ggccgccagc 480 540 cgaacgtcag gagttcaccg aagacgcgca caagttccag gaaaacagca gttccactgc ccgggtctgc actccctaag caccacgagt cacgatgatt gcccacaatg atctttttt 600 660 ccggttcttc cattccgtga atccttccaa taacgttgta aataggctgt cgatccactt 720 catectgaag gttcatgaga ttcacagtag gcgacttete gtcgcctgte caccattget tgaccttggg aacaccgcca acccatttct tcggcacctt tgacccgtgc ccttcaagca 780 cctgcagaag cctctgcgcg tcacgccatg ccagaggaag actcggaatg cctggcatgc 840 ctgttgtttg ctccagactc aacctcgttt tcatttgtgg cgtcgacgca aaccctggag acagtacgtc cccaaccaca tacgacatct gactcacggc gcccctttga acgccatccg 960 cgggcatgaa gcggcccttt gggtaggccg cacctctaac aaacccatca tcagacgggt 1020 cggaatagat aatacacccg gccgcaccag cgagttcggc ggctttgacc ttcagagcac 1080 gatctgattc ggtcccataa taccggacga gagcgatgga gccattcaaa ttgatccctt 1140 tgtccgccaa atactggaaa tcttcccggg atccatagtt tgcgtagacg agatgaccgg 1200 tgacattccc tgattttgaa tgtccatgaa agaccggtgt ctcgctgtca ttctcctcaa 1260 gaatageete eeacetgaga tegggtgggt caataatage tateegeege eegtetteet 1320 tggggtaatt tagatacacc tcatacttct ccatttcgat cgtctccaag cctgcttcct 1380 cgaattcccg ctgtatccat tctgcaagca cgtagcttcc ttcggtaccg gccatgtgcg 1440 gaaactcagt caccctcctc aagtattcag cgatattcgt ctcgttgata tggccctgga 1500 cgaaattctc cactgacgcc gcgctatatg actggcccat cataaatcgt gaactaaaat 1560 taaacacatc cgagacaacg aacacataga tgacagcgat gacgagtaat aaaccgaaca 1620 ggcgaagcag gataatgcat ccgttagagt tgaaactcgt ccgagctgaa ttcaggttga 1680 ttgtgaattt gaaattaggt aggaaccggc gaagcgggag atgtatcgac gataacgtcc 1740 tgccgagatt actgaacggn tttgaagtcg agaccgtaat cgcgaaccgt gagagctctt 1800 gtgacttgca ttcttaacat ncatctgatt aagctccccg cggcaattct tcagcgagcc 1860 cctttcgaag cggcaggcga gagctaagtc atcacgctat ttcgccgact cacccgaggg 1920 ttgtagcata agcccgatta ggcttncggc aangataccg ttttgaagaa ggccgcgttt 1980 gggccgtttg aaaaagggga aagttggcag ctttggcgga tcttttttaa ggtggggaaa 2040 ttttttttt tttttccaat ttgtttgccc cccttttggg aatttttccc cccttttttg 2100 2120 gggaaatttt tttttcaaa

<400> 3045

attggatagg ttttcacgta aggagggagg gacttgtgga aggaggagtc gaagaactgt

60

<210> 3045 <211> 7041 <212> DNA

<213> Aspergillus nidulans

atgctctgga cgttcgggag ctcctttttg catagtcgga cgatttcgag cgcggcgaag 120 ttgtgcctgc atttgtggac aagaacaagt cagactttct gtattttcta tctcgacacc 180 240 agtaggaaac aagtgaatgc acatacaaag gcgccaaatc ctccaggtcc tccagctggt ggtatgtttc ctcgttgatc accacaggac tctcaaagtc gccgccgtgt acgacccgat 300 360 ggcagatata agccaggtcg tcggcactag caacatcttt gaggtcagag tccgtgaagc 420 ageggtgeag caggagtttg aaagegtetg geeetgaget gatettetee tteagetett ctttcttctg cttcgagccg acgctgtact tgaatgttgc ggggggtgcg gtgatgccgg 480 agacttgtgc ggtcgcgata acactggggg ttttggtgta gctgtagaaa gtgattttga 540 600 cggaggagga gcccgcgttt acggagagaa tagatttgcg gggcatgttg aaaggttgct gattttgttg tgatggtctg gtagaatagg tagtgtatag tttgtagtcg tctggatgga 660 720 tagcaggtct aaagtgaaat cgacttcgat tagagaatac acgtctgaga cggagctgat tatttgatca ttttcagtgc ctatatcttt tccatcttgt tttttgacgt tgttctatct 780 ccgcgctgtc tcacaatgct tgttgtcggc cgctttgtga tgtcaacctg aacacggtga 840 cgtagtgcag ccgtctctgc cgagtctggc cagtctaccc aacctggctt taggtatatc 900 ttagagcagc agtacaaaaa caaagatatc tcgagcttcc ttaatcttaa actgattgaa aacaatatat caataccete tacatageea eeacaatgee aggagaagte ategagegae 1020 caaacccggc gccaaagccg tcgcatgtcc ccgatttagt agaaaaactc ataattcccg 1080 cgcagaagac gaagctggag aaaagcgatt gtgatgcgtt gcacaagtat cgtcgcgcgg 1140 cggcgtatat tgctgctggt atgtttggct ttggatggat tagtcggtgc atgggcgctg 1200 acgcctctat acagcgatga tcttcctaca ggataatgta atgctgaaac ggtctctgac 1260 gaaggaagat atcaagccga gacttettgg taattageee tategagget catggetggg 1320 aatgtgtgta ctgaccgatg tcgtaggaca ctggggaaca tgtcctgggt tgatcctcgt 1380 ttactctcac ctgaactacc tgatcaagaa gcagaacctc gatatgctgt atgttgttgg 1440 gccagggcat ggagcaccgg gcttgctagc atcgttgtgg cttgagggct cgctggggaa 1500 gttttatccg cagtatacca aggacaagga gggtctgcac aacctcatct cgacgttcag 1560 taccagtgcc ggactgccta ggtgagattc tattgatcta gacagaagcc aaggaagcta 1620 acgtgttgaa gccacatcaa tgctgaaaca cccggcgcta tccacgaagg aggagagctg 1680

ggctatgcgc tgtctgtctc cttcggcgca gtcatggata accccgattt gattgtaaca 1740 tgtgtagttg gagacggaga ggcggaaact ggtccaacag ccacgtaagt ttgtgattcc 1800 gtgtgctgaa tgtatcctgc taacggttgg gtcagatcat ggcatgcgat caagtacatc 1860 gatccagctg agtcaggagc cgtgcttcca atcctgcatg tgaatggctt caagatcagt 1920 gagcgcacta tttttgggtg catggataac agggagatag tctgcctgtt cacagggtac 1980 gggtatcagg tgcgcattgt cgaggacctc gaggacatcg acaacgacct tcacagcgct 2040 atgtcctggg cggttgagga aatccgtaat attcagaaag cagcgcgctc cggaaagcct 2100 atcatgaagc ctcaatggcc catgattgtc ttgcgaacgc ccaaggtatg cacccatccc 2160 cttggcttga ggttaatcag ctgacgtgtg ttagggttgg tcagggccga aagagctgca 2220 tggccagttc atcgaaggat cgttccactc ccaccaggtt cccctcccta atgctaagaa 2280 agacgatgag gagctccagg ctctgcagaa atggctttcc tcttacaaac ccgatgagct 2340 gtttaccgag tctggcgacg ttatcgacga aatcctatcc attattcctt cggatgataa 2400 gaaactcggc atgagacccg aggcctacaa gactcatcta ccgccggacc tccctgactg 2460 gagacagttc tgcgtgaaaa aaggggatca gttcagcgca atgaaggcca ttggtagctt 2520 catcgaccag gttttcgtca agaacccgca taccgtccgg ttattctcac ccgacgagct 2580 ggaaacaaca agttgagcgc tgccctatca catacgggaa ggaatttcca gtgggatgag 2640 ttctcgaatg caaaaggtgg gcgggtgatc gaggtcctga gtgagcattt gtgtcagggc 2700 ttcatgcagg ggtatacatt gaccggccgg acgggcatct tcccatcata tgagagtttc 2760 ttgggtatta tacataccat gatggtccag tatgccaagt tcgcaaagat ggtacgtaaa 2820 gtcgagtaca gtcagcgctt cgtgctaacc agcaaacagg ctaaagaaac ggcatggcac 2880 catgacgtga gtagtatcaa ctacatcgag accagcacct gggcccgaca ggagcacaat 2940 ggcttctctc accaaaatcc atccttcatc ggcgcggttc tcaaactgaa gccgtacgcc 3000 geoegegtet acetgeetee egacgecaac acatttetta ceaetttgea ceaetgeetg 3060 aaatcaaaga attatatcaa cctcatggtc ggctcaaagc aacccacccc agtctacctg 3120 agccccgagg aagcggaaag ccactgccga gccggagcct cgatcttcaa gttctgcagt 3180 accgacggtg ggctccgccc ggatgtcgta ctcgttggaa tcggtgttga ggtcatgttc 3240 gaagttatca aggcggcagc catactgcga gaacgatgcc ctgagctgcg tgttcgtgta 3300 gtcaacgtga cggatgtatt cattctagag aacgagggtg cccaccccca cgccttgaag 3360 cacgaggeet tegacaacet etteacegag gategeteea tecattteaa etateatgga 3420 tatgtgaacg aactccaggg cctgctcttt ggccgcccta ggctcgaccg ggcaaccatc 3480 aagggatata aggaagagg aagcaccaca actccatttg acatgatgct tgtgaatgaa 3540 gtatcgcggt accacgtcgc gaaggcagcc gtcacgggag gagcgaggtt caatgagaaa 3600 gtcaagctgc ggcaccagga gctttgctct gaattcgatc ataacattgc tgagacgcgc 3660 aagtacatca tgaacaatca tcaaggtgag tgagctgctt ctgatggata ttatttggat 3720 tcatcctgac atcttagcag atcccgaaga cacatacaat atgccctcat ttaactagca 3780 gatggaaact ggagctaggc atatcagcgt accgaatcag aacacatttc acggttaata 3840 gtccagatcg tcttgcttgg tagtgttgta agaatgtagg aagctaaaac agttgatggg 3900 gtgagtctga atcgtaggag gacaaatgac aggggcacgg gctgtaacac ggctcggttg 3960 atcgtcttcc tctcctcttc cccgtactct ggagtcaatc tttctgaaca atgcatctta 4020 tcttatattg ctttcattcc tattgttgct gggctgcttt ggggggtcaa ttttctcaga 4140 ctctaagacc aactgcctcg actctctccc gcccatcgtg tcagagattt gtttcgcaag 4200 ggtgcgatcc ttcgcgtcga atttttgagt cctcgtcagt tctcacagac accctcggta 4260 tttgtgaccg gtcatctggc tacggaatgg tgggcttaag gtgacgagaa gtctatcgca 4320 aggaggttcg tcgggccgtt gcagtcgaca agatcctcac ttggctggcc tgatgataag 4380 atgatatcga tggcgttgca agatcgatct ttccagtcca tcaataaatc catacgccaa 4440 taagaacaaa gcgatgcagt tcgactctag cctttcccgg cagacaagaa agttgccgat 4500 ctactcggac caatttccat caacagctaa accattttca acaaaccttg cgaccatctg 4560 tcaacctctg tggacttttc ctaggctgaa gcccacccaa gccttcaact gccgaataac 4620 acacggcccg accgaggcca gggacaggag tcgaacaaat cagactccta cgtgtgggac 4680 tgctccgcca gcaaccgaag gctgccatca tggaaaaacg acggacatcc aaatctatcc 4740 gttcccgact ccgggagccc gtttggcaga ttttttggcg atgcgcaagt agttttcgcg 4800 atcttccttt cgcgtcatgt tgactgtttc agactctgtc agagactcga cctcatggcc 4860

aagacgctgc tgccgctcgt ttactaataa tttggctcca aaaccaacag cctatccttt 4980 cattcgctat atctacatcc gtgctctata gtctgtacta ttcactcagt ttcaaatccg 5040 acgagegeee ttacgeaata ttgategget etceetggat ettteagteg ttaceeegte 5100 ttgaagtete ttetttetet catetacaag ttgttggtta aagatgteeg acageaactt 5160 ggacataagc aattacatac tgcctaacgg caccgtccct tatgaggtca ggagacagct 5220 gcagaccqqt tgccatgcct acatcgatgg gataggcact ccttacggtt atgtcccctc 5280 tetegeagea ggeategtet ttettgteet etteggeett acaatggtgg geeagacagt 5340 tcagtttgcc tggaaacgga cctggtggtg cgctgtattc gctgtgggaa gtctcagtaa 5400 gtacttettt accetteget attttatace gtetteteat accataceae cacageegaa 5460 gtcataggat gggccgggcg aacctggtcc gcagaatgcc catacaacac caatgctttt 5520 ctcatgcaaa tcacaaccct gatcatcggt aagccctcca ctatatactt tacagatctt 5580 cgaacttggg agaagctaac aaatccgaag cgcccacctt ttacacggca ggcgtctatg 5640 tectectigg degetteate gaacteetig geogegaete ticaateete ageoogegag 5700 tgtatctcat catcttcgta acttgcgaca tcatttcgct tgtagtccaa gccattggcg 5760 gcggaatggc gtctgtcgcc gctgcgcaag aaaacggcaa cacaactccg ggcacaaata 5820 tcatggtcgc cggtatcatc tttcaaatgg catcgattac tgtcttcgtc ctctgcgcgg 5880 cagattttgt ccgtcggacc ctcgtccgcg gctcttgcag aactatacca agacaatcgt 5940 gccgctgctt gcggcgatgg ttttctcgta ctctgtatct atgtccggag catttatcgg 6000 accattgagt tgttggaagg ctggagcggg tatcttatta ccacagagag attcttcatt 6060 gcgcttgatg ggtcaatgat ggttcgtact gtcgccatat tcaacctgat ccatcccggg 6120 tggtttttgc ctgagtctgg acatggagga aaagggtgtg aagatgggag cttcacggag 6180 ctgaggtacc tgggttaatt tgacttgact cttaccttgt tcgctttata atatcatcgt 6240 atatatttct ttacttaccc gagcaccttt atcgtgcacc tttggatgcg ctggatacct 6300 tggatctaaa ctagagcagg tttccatata gatggctagc tcgtgcaatg cggaagtttt 6360 acaggatacc gcttgaaaaa tagaaacaga cttggaatta acagagctaa aagataaaaa 6420 caagatatta aaacccagcc ttgcgtattc gtaaagtgag aaggcaatac aagcccgaaa 6480 gccgcaaaga caagattagg acagtggaac aaaatgaggt gagcccaagt ccaaactgag 6540

teccectage tgatacagta taateceate egacttegee aggetaageg aaacaaaate 6600 ataaatteaa tteggaataa gaageeaagg atetggagag tttgactaaa gtecateaac 6660 ageeteaate caaceataga ecaaceecae gaccaaggta geegttgtee atacgaatee 6720 tecacacega agegeettgg aagetageae egettacetgt eeetgeaace tgaatgatag 6780 tgttggeeat gagaacagtg getagagtea eegttegett gataageace etggteetee 6840 atgaaagege geeceaagte tteegataga eggtggagge aaggtaetet eeetgetgag 6900 gaaggaeget tttteettt teaatetegg tateetgtae ggeeggggtg eeeggagge 6960 taacaaaaaag gaagteeete getgeecaae eegetgggag aagagaggag aaaagagteg 7020 gaaageegaa eagggeegte e

- <210> 3046 <211> 2284 <212> DNA
- <213> Aspergillus nidulans
- <223> unsure at all n locations
- <400> 3046

tgaggtcagt aactatatct actgacaggc tagttactga cgtcttttat acttcacata 60 ggaagaggac tttagcaccc aactctataa ccggacatta ctatcgcatt ttgcatacga gcatttcccc agtcttttga accgtgcgat ttcctggatc gatgagcagg aatccattga 180 cgctgctgcg aaaagtgcaa taaaatctcg tttattattt cggcaagagt tccttctggg 240 cctgcagcag gatatcaata ttttggagac caggtccgtg gacaagctgg cgtcttgttt 300 gtctattata cctgctctga aaaaatcagc ccaaacaagt cgaccggtgc ctgaatcctt 360 tagctggaag atacagagaa gattggctag caccgtcccc cctaggccag tggtgaaaat 420 cagctttgag gatgcgctgg cgcatctcga acggctgtgc caggacggaa ttcacctcaa 480 tcaaattctt gactacagag ggccatacaa tctgaaagta agttttcctt tgcgtctgca 540 tgctgctgtt tctaaaagtt taggtggcca tttggaccct tctctcccgt aaacctcagc 600 catcagtgta cattcgatcc cttgttcagt ccattattat ggaccagtct accgtcctcg 660 ggtctgtccc agttaagcag tttctctacg acgaactggc ggcgcttgtt ctcccttcca 720 780 gtatactgct cgaggcaagc cttgacgaaa ccgaagttcc ttcagacccc cgctttcaga

tcgctcaatt gatggacggc ttcgttagac gattttctca ggtacgcacg atcactcatg ttgacttatc agtactaatt taagggccag ccatttgtgg atacattccg aagtgcatgt 900 ttgaatcgct gccgtatccg ccgcaccgtc tgtcatactc tcgccgattg ggacaatctg caaatggagg teegtettet agtaetggaa accatgaeet caattgaetg taataggeee 1020 aagatettgg egageagett eggaeteaan geggagggee geaattatea etteeaaatg 1080 gagacactac gtactcgtac cctcttagca gctgggccta ccaccagaag ctgatccaat 1140 tecgattaat tetecaaete gggttegage tgtecatata eggteeagaa gageteeeeg 1200 gaatgtactg gtatttatcg cacatctgct cgacccatct cggtcatatt gatcgaatcc 1260 gaacattcat cctcgcggcc gtccagcgga accgacgctc gcccacccaa cacgccaccc 1320 tecgateate attectecte ttegacegae taacgaegea gategtegee ategaegeet 1380 tegeaatage tetgeacgee etetatgtee ttetateteg ceatagaatt etacecaetg 1440 cctcggcgcc taacgcctac tcaaacgacc aattccgtta cgagcttcgt atgaagccct 1500 ttcttcaaat cacgctcccc gaactcgtgc cctatgaaga ataccgtcgc gaagctacat 1560 tgcagggtga cagcgacgag attgtcatgg agcgcgctac caaggccatc ggcgaacgtc 1620 gaaaggcctg ggaagcgacg ctcgccaatg gcccattcga caatttcaat gacgagaaac 1680 cggatgcgcc tgctctcgaa gaggactgga aacgcgacgt gaaggataca atgcgagcgt 1740 gcattggcgc tagcattgct atcgagactg taaagaaagc gattgccaat aacgccactg 1800 gcgacgcaga gtcactcggt cttcgagtta acattcccga tgctggctcc aagaatcgtt 1860 ggcatgactg gtgggccgtt ccgcaagttt cacaggtaca gacacaatct cccagtacaa 1920 cttcaaagtc atgaatcatg agagatacct ttcttacaag tactaaacat acaactgatt 1980 ccggcggaga tgattcccgg cctatttttg agcagtgagc tgagcagtct caaaatgatt 2040 gatagaaggt ggggatagga cgtttcggca ggattatcta ttagataatg aagaccaata 2100 ttatatgcat tagatacgag gttatagaac ctgaatggat gaatattttt ggccacaggc 2160 gataattagg caggtatagt tccctcaaga cagcttaata ggccccccgg ggttggcctc 2220 gaggcagtgt agagcagggc gagccgcatt cacactcaac actcaagcaa gtgacattca 2280 2284 CCCC

<210> 3047

<211> 2236 <212> DNA

<213> Aspergillus nidulans

<400> 3047

aaacttctcg attaattaaa ctcatataaa ttgcggagga tggggatgat aatctttatg 60 caagaaagtg acagtaatac aacggtgctg accaaagaat tgtgccgccc agcctgggta 120 ttgtttggta attcagtaat aatgcacacg ttcccgcgcc ttcgaagagt gcatgtcagc 180 ctgcgcctgc gcttcagaaa tgctcactgt cctctactaa ttgctctcct caatctttca 240 ctttcccctc cagctctccc aactgcatga gggttattcc tcttgatacc cctgccttaa 300 tatatctttc atttagcata ttcatggctc atggtgtttg atttatctca ttcgttcctc actttctcat tcctgccgcc tttcccctgt gttgtgtcta ccgaacgtct ccggctcgtc 480 tcgacctcta tccgatcttg acattcgttg gccgcgcctc tgcggattac aatttatact ctcctccctt accgttcgtc gcgccatact gataacgagt acgccggcat actggctgtg 540 ttgccgggtc ggctcgtcgg agcggaggct ccttaatatc ttgcatctct tgatttcgcg 600 actatacgtt tactacgaac gtgtattata ccacagatgg cttcagactt gccgcctgta 660 gatttcccgg ctccttgtcg ataagaagat cgttgtagcg gcgggcctcc ccatagttgc 720 ctagtttgta gttacccagc gccaggtaga agagacattc gcggcgtcgc tcgggatggg 780 cgcggaaaat ctcagacagg agacgaacgc cctcttgctg gtcagctcgg aaattcgatt tgatcaggcc ctgtacagca tgttatgtca gtagagtcca gacatcttcg tttcttgtgt 900 ggggaatgaa ggtgcttacc caggcatagt tgaacttagt ctgaacacca acgtagtcgc cttctttttc atactgggcg cgaaggactt gaagctctgc tggcttcaac gggctgtata 1020 ggctttgtta gctgctgccg cgcaataact aataatgtgg agaatagacc tttcagcatc 1080 tgcggcatct ggatttggtc agtaccaaat agctcgccct tgccagtttg gaccacgtac 1140 aagggagatt tgaagaagtc atattgctgg aatacagtac cactgtctga gtcttttggt 1200 aagatatgca aaagagttgt gatgtcaaga atcggccagg ccaggcagct tcactgctcc 1260 aggtgacgag gcggtgcacg tggagatgtg gcgttgccct cccaaccgtt cccgtattta 1320 ccacggatct gtattaagac agcccctcac tatcgcatct ttttaaacac agcggcctca 1380 tttcgaccct atcatagtca ccatgttgct cgacgagaat ccgtctacgg taagcgtact 1440

getettttat gtgcggetta tactgageaa cgtcagetca ttcaccaca aateggeaac 1500 ttcaacatcg ccccggacaa acaagccgtc tcccgcatca atgattcgct cgcgaccctc 1560 cagcaatcgc gcgagetgcg catgcgcgaa getgaatcct ccctccgcaa gctctcacgc 1620 catctccagt ccctaagcac acaacatgag gaggccgtcg ccgctcacga cgcaagcaaa 1680 catgccgccg ccatggtcga gctcgacacg aagaaatttc gcatcgccaa ggccgcgtcg 1740 gaactggaga tcgagagtga gcgtcttgaa ggtgagctgg agatgttgaa ggaggaggct 1800 gcagatctag aggcgaggg cctcgagggc gatgaggcaa cgcggaggga gagggaggct 1860 gatgatgcta tcttgtatgt cttgcttgc attgggctg gtatatttc taacgaaaca 1920 ggctacgtt gaagatttac cgggctttgg gcatcgatat cgaggctga gaaggggag 1980 acttcaccaa ggctgttatc cgtaacagcc gcaaggaga tgtgcacgtt gtcaacctgg 2040 atccgaagtt ctcgcgttt ttctacgcca actactctg gtcaactatg cagggttga 2100 tacttgtttg gcgttatggt gtaatacag tacaggtta tcgtacaatt attatacacg 2220 ggcggagcga gccgac

<210> 3048 <211> 2328 <212> DNA <213> Aspergillus nidulans

<400> 3048

aaaaaaaaa tgcgggaatt tggaaagaaa atttttttga atccaaaatt ctccccccaa 60 attttatatt aaccaccttt taaacaacca agcccatggt gttaagtttc ccaccaccga 120 atccaaaaag gttactttca aaaaaaaaat caaagccatt tgcccaaaag ggtggtttct 180 accaacggct tcccccttaa atttcttgta aaacccccac caaggggttc cctcctgcct 240 caaaaacact ctgaccagtc aacaggttgt tagaataaac cacaagtaaa gttccatccc 300 tcaacgaagg tgaataacac gttcaatccg gccaccgtga gtcaacgcta acaactgcac 360 cgggtcctcg gaaaccgcct cgcgacttcg acgttgcaca gcagagtact ggacagtcat 420 caacagcctc tcctacgcta aatgttccgg atatggcttt ctctccggct tcgggctcgg 480 ccatggccca acctcagacc aatatatccc ccgttcggaa tagtcatgcg ccatcgttga 540 gttcgtccat ccaggtttca accaacacgt cgaacgtagt agattgttcc acgcctgtcg actetatgaa tetggaeeee caeeetaeee aggetetaae aeeaggteae aatgggaeag 660 agccaggtgc ggctcaagta gacttgaaca aacttttttc cgacggattc ggtatcacat 720 780 ttgagaaact agcagctatt ggtgggtccg acaaaaaagc tcaacgggca aaggtgttct acatatggta ccctgaggac tcaaaagtcg ttaaagacga aaaggactta ataacgagat 840 ttttgaggat ccacacccgt cttttattct caaatagcgt caatgttgac tgggaaagat 900 ttacgaccat ggttaacgag aacaatatgc atggtgttgt tcttgtatgt cctccttgct tgacttcata ctgccctaac actaccgcag tttcatgagt ccttcgtcga atatgacaag 1020 gttcctcaac tccaaaaggc ccttcgcagg acgaccggtt tctggaaggt gtccctttca 1080 aagccgatcc aatacgttga tcgtccacta catgtccagc ggctatttcc acatgggggg 1140 atttttctgt tgaccgagga cctgattgtc cacgaaccgg ttgctgctat gataattctg 1200 caatggttct acgagtggtc aaaaaagaag catccaggac tatggaaaat aatgctccgc 1260 cccaatatct tgaactggct gacaaatcag atgaaactcg cagattattc acaagaatcc 1320 cgggtgtgta cctacctatt cacggtttca gtggtcaatg gaaggctcag cgcttaacca 1380 aggaacatca ggtggctagg cagtacacca tctggtctaa caactaggtt tctgctctac 1440 cagcaatect ctatetaget acgaaagetg ggaaggegte gtaatetete etectgeaet 1500 ccccaaatac gggtttcgga cggcagatga ctcactagag attcccaaga actgctccca 1560 ggagcagcgg aacgcggacc atctaagcga gttttttgcc ggttacagct tagttcacgc 1620 tcatcgcttc cgccgctttt atattattac agccttggag cctcttgaaa gatggaagaa 1680 gtggcaacac gttaccgtca gtggttacca ggagttcttt cattcccatg atgtcaagcc 1740 agagttaatc caagaacggt tatccaaggg cgcgtcatca gctctttctt cgacggatcc 1800 cacacctgtc tcgccggctc cgccgcggtc atcaaggcca tggggcactc cgctgtctga 1860 acagcaatct gtatcgcttg caccccagtt tgcgtccagg tatggccagc cgtatcagtg 1920 agaaaaattg gatgtccaat tattatctaa cgttgacacg ggagtctcct gaagatgagg 1980 atggcacgat ataaatgacg gatggactgc tgcatgccag ggtataccat tacagcgaca 2040 ccagtgacaa ctgtatttgc ataagaggaa caactttgaa ggcgatactc gtgcgtttat 2100 tctctgatca gtttccaaaa ggatagggcg atgggttatg gggaaatgtt ggttgtacct 2160 tcagtttcgg caacataggc aacatctttt gtaagcggcc gatcaaaatt atgtcgtatt 2220 ttcacgccca tctgggcagt atcttatgct ttacgcaggt tataatatgt tttatattgc 2280 2328 tcatagacat taaataatac atccctttag tgagggttat agcggccg 3049 <210> <211> 5395 <212> DNA <213> Aspergillus nidulans <223> unsure at all n locations <400> 3049 agtatgactc gtactgtatg gcagccccag tatagaacat cataggcccc gcggttgcgt 60 120 tgcccagtac actgtgatag gtgactttgg tctgtaatct tatttcaaca tcctacttgt 180 gacttgtaat tttcctatta ttaacctcga gcatgaccgt taacacaggg gcgccagaac tgtgtgaaaa gaaaatatat ttataagcga taataaatca ctatgcaaat aaaaaggatt 240 cagaaaacaa gcataatact aaggaagaat gataccactt acactctggc agacagctca 300 atcaaagcag gtctcggccg gttctgattc tggttctggt tctgtggttg ccagtaaggg 360 gagagggtag taaactggaa gcgagggcta gcaggcaggg taatcttcgg ccctggaggc 420 atgatctagt cctggccttg gtgatcttgc tttgtccccc aggtccactg tgtgatttca 480 540 cacceggeet acagtatett gtactgactg ccaacateca gcagtggtee atacetatee aggagggtac tgtacagcgt agttttggct gccagccaga gctcaatcag gtccatgctg 600 tgtacaggaa acaggccggg aaaatcaggt tcatagcaag gtgctggacc ctgcagctca 660 gcaaccagtg cttccttcat ctccctacta ttagcagaac agagacatag gataagatct 720 gaagggctcc acttgaagag gcagggctta tccaagccgt cttcctcgcg tttcattatg 780 840 agtgtaatcq tgttgatcag ccagttagca attcgtgcag acaatttctt ccatccagtc aaggagagta ttaggcaggg tattgtttcc aacaccgcca gcttttgctg ctgaggcagg 900

gcagagtcta tcctgatagt tgctgcagaa tctgcattga agtgtgggga ggttatagga

gatactgttg gtcctgtgtt tttgttatac aagaaaaagc aaaggaagca ggggtgttaa 1020

gggatcgcga aaagctccag tatttgggct agacaaggca gacttggcac ttgcctgtgt 1080

tggcttcgaa gcggggcctc tagtcttgac actaaccaac gttaaccatc gggcaaagtg 1140

gagtggtata tcagcaactt gcatccacta acggtttgtt ggttcagacc catgcatttg 1200

ccggctttga cgctggttca aaactaacca gtggctaagt agagtaactg attaatcctt 1260 gtcccatact aaggtatgta acatcaacca acttgcttat tataattggc tcgtgaaatg 1320 cctagacttt gttagttcag gcagtataca cttgtattgg ccttgtatta gccagcctag 1380 actatatett etecaceata etecatagaa aceaaaatet aaaagttagt agagtaeegg 1440 ggtcacttgc actaagatat ataacatata ctaacatata ttaacaaccc ctncaccgca 1500 atgacccagt cacatgtgca gtgcgttgtt ggttcagact atattgatct ggcgatgtcc 1560 gacagetgea tgteteageg tttgaetgag caactgaace acaetatett taeteteeag 1620 gcaactatct tggttcttgt accttgcata ccatggtttg cgatggccac cggaaattac 1680 aatggcattt cctaggaact agatcgcatg gcccctcagc ggggggaggg aggaggtgtc 1740 cttctcttct ttccctgtag tctttatcca acgcggctat agcaggaagg ccctctcgtt 1800 tggcaaacat gacacagtga tggggacatg aagcatacat accatcctga ttaggcagag 1860 gacaagaaga agggggacag actaccatgg caaaacggat tatcttcccg ggggactgct 1920 aaagttgaac acacgagtct gcaagtgacc cgagatggtt atttggccct aaatgtggtg 1980 cccatacgct gagcaacctg ttggacatat ttttcaatac tgtctacagt aacctctgga 2040 tggaagctat cgcagcccca ttttgttccc ctgttccaga gcagacttcc gctcaatggg 2100 agtaacatta agccgtcagg cgtaacagaa atctcccgga cgccgtggcc ttgaagggat 2160 gaggccgctg atgacggctg acatgtggga ttgttttcga aggcacaaat agggttgcct 2220 atttgtcttg aacctaggta agtcaaaatc agacaggtga cttcctgtgc aatgttctgg 2280 agtcataaat aacatagatt tgatcaaata cttcttcctc caagcagcct agtaatagtt 2340 agtcggaggc ctctctccgg ttgtcagatt atctgatcaa ctggtggcca tgtaggtatc 2400 gtcaatacct ccagggcctg atgagagctt aggtgtgtcg ggccgaggaa agttccttta 2460 ctctgtgcac aaggatcatc agttccagct tttctgggag cgatcaactt ggcgaagatc 2520 tacttcctgt atagtacagg agaaatttat tatatacttc ttttaggctg gcgtggtgag 2580 tgtaagcagt ataaatctta agtaagcgga gctgaggtcg ttggagggag gcagttttgt 2640 gttcacaggc cctcaagtcc gtacccgccg accatagggc tgcaatagcc gcccagagga 2700 agggtggcgt gggtgctggc atcacatcgt tttatcggaa ggatgcagcg atcaatcggt 2760 tatataaggc tgggcacaac ccgttgagtt tagtaggctg ttccgttgcc catctcaggc 2820 cagactagtt gagaacgggt gttgtgaacg ggtgttcccg tctcggcccg cgctgtgggc 2880 aaccgcccgc gcctccattg tttgtcgtgt ttgcgcgaaa gaacctccat aatttcaaaa 2940 aaggagaaaa aggtgttaac tgtcgtaaaa aactgatttt gagcccacaa catgggtaat 3000 gctcagagat tagttgcagc aggcgagagt gaagcaaggt tggtagtcac agcaactact 3060 gaacactaat tgtgcggaag ataggagtag acgctccggc ctcaaggtgt gatgcaggga 3120 gattggatgc ggttctgcgg gactttcgcg gcgattttct aggcacctgc caagctgaac 3180 agactgctgc ttcctacata cgagggtgta ataccacgtc ccccccagtc aatctgaccc 3240 agttegeett agtgggegtg eacceagtea tegagggeat agaageaggt acceategea 3300 caatatatac tgaaatcagc agaggcaagt tctgactttc gcgtgggtgc atcaagcgat 3360 gatattcaaa ttgctatggc ttgcgctgcg ctgcaccgaa ctgctctgac aaagcatctc 3420 aacaccagcc ttaacccctt ctcaacttgt cagcccatgt gttcaaagtt ggatagctct 3480 cttctaatac agcgctttag tcaattcaga gctctctaag gttttcctct gcaatacaat 3540 caaatctccc caggctccaa tcattcctta atgtccacat tatccttcat cttcttttgg 3600 eqeaqaqeat caaqqattte catatgteee ttttecageg caaggtette egeagtgegt 3660 ccaagcggat ccttaagata gatatcagcc ccagcctcaa tcaagaaaag cgccatctcc 3720 atgtatecet etacegeage etgatgaagg ggaeteceea tateaceata ageeteageg 3780 cctggcgggc ccttgatccc aacctcgtca atatcagccc cccttaacag aagatacttg 3840 accateteca ggteeteate aategeegee ettacaattg cattacteee etteageett 3900 gccccatgcg cgagcagcaa atccaccagt tcgacgttgc cagtgtgaac cgcacacgcc 3960 aacgcgctca gatgctcctc gacaaggctg gcgttcggat tggccccgtg ctccaggcag 4020 aatcgcaccc agtcgatctt attgtcggag gccattgttc cgagaatatc gccgtaccag 4080 gggacaacaa agttgatgcg aaccaccttg tgcttaacca tcaagcggta cacggcgaag 4140 qaqttqtqqa caacaaccqa cqtcatcatt tctcgcgtgg ccttctggcc gtgttccagg 4200 cagtaggetg egacetggtt ggegegaeag tetgtggegg ceaggageag atectegaga 4260 ggcggggtgt attctaactc tccggctgct tcgcgttgtt gctggaggaa agcctccagt 4320 gcctcacqqc tqtttttqcq aqcqatqqcc cqtatctctt cqctqatqaq gcgttcgttg 4380 tagtgcatgg tggctgaatg gttgagatcg agattgacgg gataaaattt caatgaagga 4440 tggaaggtcg gtgtgtttta ctgatcttga agacaaatga gtcactgtta aatgggggaa 4500 gtgttggtag ctacctagcc tacctaccta cttataggta gcgtagcgtt ggtctggaaa 4560 gacttggcgt cggctgaaac aaagacagtt gctcaaacaa gatggtccaa ttgctggtat 4620 ggatgagtta gcctaaagga gaatgtggtg ttcacacggt cctggggcat gtaatagtat 4680 gttttgatat tacagagcat gaaacttttt attacctgag gtggaggagg aggaggagg 4740 ctaaagtagc cccatctcgc gcggattgtt ttttgaccct gcaggttgta cccaacccgc 4800 accgagtgca tccctagtag tatatctttt ttacctacta tagatcaaga gattaaaacc 4860 ggctagggct aatatatagt aaaattccct ttccctcagt tacttattag tttgtcaatc 4920 cgcaccgcaa cccgcagcgg gtcaccacac tgcagcagtg cgatgcggtg caggttgcaa 4980 aatcttcagt ccacgctggt tgcaggttct aataggagaa tctgcacaga tttgcgggtc 5040 acgtgcaggt tctgatgtct gtaatacaaa cctataatat ctatataata tataaaacat 5100 agattacccc tgcttggttt cgatctatac acctggaaga aaaaagaaaa aggagatata 5160 actattaggc tactaagcat tattgcttat ttatttataa ataattaatt tatacaagag 5220 atctcataat atgtcatgtt ggtatctgct agatagctgc tgctggcata gtagtattat 5280 gatattataa tattgcaata ttataggatt atagtactat agagtaaacc ttagggttgg 5340 agactactcc ttaaacttat atagtttgct ttataagtct actagaatag tttag 5395

<210> 3050 <211> 1908

<212> DNA

<213> Aspergillus nidulans

<400> 3050

taattaactc gtgttcgaaa taaataaata acaggagaga gatttttaaa acaaaaaaca 60
taccaaatgg cgattataat taccaaatat taacgtcaaa cctcacgaaa agaggaggta 120
gtaccaagag agtcttatgg accccagaac ataaactata ttaaaacata aaaaaggccc 180
aaatatgtag aagaaagaaa aaaaagcttt aaggacccac aaaagaagta gaataaatga 240
gttccaaggt atgaactcaa taaccaaaaa aaaacaagtt ttggtctggc aaaaaatggg 300
actatggtgt gaacagtaat atgctaggaa aaccagagta tatcaagctg gagatgagac 360
aaaaacaagg tctttagaag aaatctatgc ttagggatta gtagcaaaat acattcccta 420

ggagggcgga gggcaaaaat cgattaaagc ccatacaatg gaaagaggta tgctacacta aattgttata tagcacccaa ttgcaggcac ttaattgcca atcaggcaac acttcagttg gccccattaa tcttatttaa taaggggaac actaaatggg gggttttttt tggatggcct 600 aatagaccat aaaaagtaac tttcggtcct tggttctgaa ttccttaaca actggccata 660 gatacagagt teettagacg acttagteea teeacacece eeeeceggg egetateage 780 acctcattat tecegeecta geatgettee attecttace accatetegg gtacgetaca cttacatccc atcgctatca ctccgcatcg tcttttattt atttttttc tgggtccttc 840 ttgctttttg acttgggctg tgacttttgc tcttgtcccc gactcgattt ctcttgctcg 900 tgctttgacc gtccgaccgt tggttgcctt gctgacggcc tctgtgcctc cgtgccatag 960 actaccttgc ctgcctgagc tccccgtcga tcgtcacccc tcttcgtgtg accttgggac 1020 gcgaaagtat acattgccaa agaaaccgat cgatctcttc tcttcctcat cccttccgct 1080 cttcagagac gctggacgaa accgcccgac tgcaatcgcg acggagggtc tcccacttcc 1140 ccgcccatcc gcccctcag ctgcagctga ttgcctcttt gggaacctct tgggagcccc 1200 agettegeee ttgetegtee tgetegeeea acgageeage caccetgttg tgttetaegt 1260 gggcataacc atgttctcgt gactgtatga ttgtcgcatg cgatagaccg cctgtcgagc 1320 atctgcgccc gcccaacccg cctacgcgag acgtcggagc tgctagcatg gaaatcgtca 1380 ccacggagga gaaatcaagg atcttccccc agtactccgg cccccgcct ccaatgcatc 1440 gcatcccgcc cgcggaagcg ccgcatggct tgccaggggc cccgggcctg tacgatcagc 1500 catggcgccc gtatccccat atgaaaacca ccatgccgaa ccacggcggg tcgcgatcaa 1560 tgctccgcag cctccactat ccacgcatcc caactacccc ccaatgcaca gtcgggagct 1620 gccacagete cetteggacg gtcettttag ceggecegee ageetacetg tgccegeage 1680 ccacgcaccc cccgagcccc ctcagccgca gcatgccaat taccacccga tgaacggtgc 1740 catgaatggc gcaccaccgg aggcgtcgcc cgtctctgcg cccgactacg ccagaactcg 1800 catgtcgtcc ccaccccagg agcagatcgc caacagcaaa ggagatcccc cgcagccgca 1860 1908 gcaatcgctc ccaccgaatc gacatcggac ctatcttcca tcgcgata

<210> 3051 <211> 3377 <212> DNA

<213> Aspergillus nidulans

<400> 3051

ggcgttctgg cgacgagatt ggcggtccaa gccgagggta actgagctca gcagtgactg 60 gtacgctagc gattcagaaa tgcggagtgc aaggttttat tggggaacga ggagtttgat ggtagtggaa ggctgtgaac tagacgggtg gaacggtgtt tgcccgttgt gcgaaacaca tgacaagctg gacttgaaac ggataccgcc gatctcaggg ccttgtcgcc tctttgtggg 240 300 tatgagactg ctgaccgctg agatcgctga gaccgctgag attgctgagg ttgctgaggt tgctgaggtt gctgaaaaac cgctgaagac ccctattcag gatgactaca aagtatgtag 360 tcgatggatg aatatatata attcttctcg ttttctcttt tccttttacc ccaggtggca 420 acgttggcta tgcatcggct gtatgtcatt acctataccc gacgtccttc gccgcgattg 480 atctaaaggg cttgtgctta tagcttgtgc ttatgaaggc tgatcacact ggagttgtac 540 cttgcaatgt ggggattaca atggaagata gagatggacc acggctccat ctttagcggg acacctatgg aagaatgtcg tacccacact gtcgggtcgc gcctgatgat cgggaaatat 720 cttcgtaatt agctgacggg cccaatgtac tcagagttga gagataatgt taggatgcat ttccagttcg atcctatcat ttgcaggcag ctggatggct gtctgtcagc aaaggaggaa tcacgcaatt tttcttggcg ttgagcaatt ccataagacc cataagccgt tgacagcgat attcaatctg gcgagccccg ccaaattgct tattctgcta atgtgaatat aagatctcga tccccgtaag gtgatttcgt cgggtcgtcg cttggtcgcg tcgccggtca tgttcatcca tcgccgattg tcatcgaatt catcaggata ttgttactgt gatcaagatc gacagcacga 1020 atgtaaccac agtgatctag tccatcagcc cagttccctc ctcagttctc aattgcgacc 1080 cgatcaactc accgccgttg tcaagaaccc gatgcagttc agttcccaac ctcctgcgta 1140 taccgtcccc agcgcgatcg cactctgctg tttccagaac cgatgcgctc ccaggatcgc 1200 cgtcacgatg gccgcgcaat ggcacgtcac cgataacggg acgccgactt catggtatcc 1260 gaggcctttg cttgagccgg caaactgaag gcggaacagc tgggcgatca ggacgccttg 1320 cattgcgagg atcacggagg tccggatgta cgcgagaaac gttcgttcga gagctggtgc 1380 gtcagaaatg ttagcattgc tcatcagcaa tcgatcttcg atcgagtttc caccggtctt 1440 tetteaatet tegateeatg titgeegtet titteeeteae aaeggeagge egagataaga 1500 gggggacaag gaaataccga aataatcccg attcttcttc tgcgccactg tcaagaccac 1560 atgcctcgtc cagaaccgtt gaatgcgccc gaggagcccc tcgcgtcgtg gccgctgcgt 1620 ctgactggtc gaggtgcgcg ataccgtccg ccgcgtggtg atgcggtatt ctccagagga 1680 gatcgacacg cctgaatcgt cgtcctgctg agtttcgatc tcgtgcaact ccaggttgtc 1740 tgggtccagg tgggcttcgt tgcgcggtcg cggtcgcggt cgcaggctgg cgctggtgtt 1800 ggtgtcggtg tgggacgacc gtgagtcagg tctcggctct ggccccatgg ggtcggcgac 1860 agcttggggg cgagaaggaa ggtggtctgc cattatggat gaattgaccg atactcacat 1920 atttactgct gatgcagcat gaacagaatc agatgggcga agaacctgga agagaaatcg 1980 ggaatccgtc agccggatgc gggtctggtc cagatgcgga ccgttggagt tggggagtga 2040 gatcattggc cccgcaacaa gtatagctct ctatcgggta tttaatgatc gagttgtgaa 2100 cagaaggcat caccttcaac acaccaatat tcaaaccaac aatttcgtta agacgcccag 2160 aggtcccgac cattgcctat ccttgagccc ttgacgcaga aaacctgttt tctcatctgg 2220 cagtacggct gtcgttagga ggacgggcag cactgattca tgctttttaa ggggaaaatg 2280 tttaaggaat caatgtacga gcgggaagat gaaatctgat atctcgtcgt ccagatgtca 2340 tacctcgtcc atgaagcggc tccccggtta aagcgccgaa ctcatatgag gcaccatata 2400 gcagaacaga gtccagcatc agttgccagt taaaatgtat cagtaggtta ccttgtttga 2460 gacacatttg aggtctacta caatgggage tgtgctcata cttgtcgccc gcacactgat 2520 agagecateg caeggtatag caeaacacea acagtatatt ggegggataa aaatgggatg 2580 tccaatggca acggcgctta agtagctgta gtagtattgc aaatagagag gttggatgaa 2640 gcaaactata aagtgaccat atctctgtct ttaagctggt aagactgtct gtcagtagcg 2700 gagcctgcca ggggggtcag catacaaaga tcttgttatt cgtgctctat agccagtatt 2760 caqcccagta caactcctca ttgttttgtt cttttcattt ctttctttct ttctttcttt 2820 ctttttattt ctacttttat tttccctgcg taaacggcat tcaggatgat aatcctctgt 2880 atacacaagg agatetgtet aaageeactt geattgtgga eagtteteac eetteeacee 2940 ttgtccagag acaacagtta tgctctgtaa catcaagcct ttgagaaaat gggatacttc 3000 aggtcagacc actgtcctga aagccgatgt cggatggccc catgcgctca gcggtatggc 3060 cgcgatagag atcatggcgc cttccagacc tatgaagata gtctcctcat tcgctagatg 3120 gctatcagat tcatctctcg actaaggaac gcggaacacg cttcaaatag atgcaagcag 3180
atgcccgatc ccggtatact cggaacgcca cccaaagttt ttaggcccgt tgccggcact 3240
gtcgagttta acacaacacg ttaacaaagg cttggagaaa tcatcggagc tgactcgagc 3300
ggcaaccgca tagtaatgat agaaccttag ggaagcttag acaattcccg gtccagtaaa 3360
gacgcaccgg atggagc 3377

<210> 3052 <211> 1182 <212> DNA

<213> Aspergillus nidulans

<400> 3052

60 cccaatatcg ttatagccga gcacaaccct tgaacgggct cggcaacgta ctttgttatt caagaatagg aacagtcgca aaccctgaga aggctgttca acttcaatac caagctgtta gatcaatact aggaaaccat cctgtcctgg catgatatct gaacaaccct aaaactgtgc 180 240 ttggcaaaga tacacaagaa cagaaaaagc tgctgacctc gaagtgtcac tgatgctgca cgaaagctct taaccaacgc cggaaattta tcctgactgg ccattacatc taataccctt 300 gaacgcagga tataagtctg gtttgtaaca gcttatgggc atatgacagg acaggaggaa 360 tggctgacct tatggagcca tttccaatac caatatgctt tacgccagct aaactctttg 420 cttactactc ggatacggct ggccaaacag tacttcagca tcttgctacc atttcaagtg 480 540 qcaqaqctat gaaactgcct gggcctcaat tgtttgctta ggcgccttgc tatggtatca agacttggtc gaacccataa cagttataag taaactggtt ataacccagg atttaccacg 600 660 tttccttaca tttcaacgga gctcatatct tggcggattg gggtgggtcg gagcgggatt 720 cagggggggg gattaacaag actaggtgta tctgctccgt tatccagttc tatattccgg 780 agcctgtgcc ttgttatatg gatcggtggg tggacaactc aaaccagagg agtctggcag atccaaacag gtcaagggtt ggggaaggta tataaatatt ttgctatatc agcagcactg ctaattcaat atagttattt atggcttctt gatatgtcag tgacgaatta cccgtagaaa agtaacagcc gcaatctatt caataggatg gccagaaatt ggatatgggt agagagatga aaatagtcgt taaaattcac cgtcacacga gtcaactcga gctggtttac tatatcgaaa 1020 cggcctgcaa cctggaagtc tcccggcact ttgcattgaa ctacatgcca gatgttagag 1080

ctgattggca	aactactgta	gcgagctata	acctgcttgg	aaattgctgt	acgcctttgg	1140
gcgcgaaaca	ccagagcatc	ttctggcaac	gcttagcacg	tg		1182
<210> <211> <212> <213>	3053 1169 DNA Aspergillus	s nidulans				
<400>	3053					
cggcggtcca	tgtcttttct	gagaggcgat	aatccacccc	ggaacacctt	gcggcacaca	60
agaagtcagg	atgtgtttgt	gcagctggct	cgctcgcaat	accagcagga	cctcatgagc	120
agccctgatt	ccacagcttg	gggaccattg	accatggcga	aagtcaggcg	agagcataag	180
ccgtttagaa	aaacatgccg	gggcacaagc	gctctcgacg	gtacatccgt	cgcagaggcg	240
cctttggaag	cgctaaaggg	ccctcagtcc	cttggaaaag	ccagagcctt	ttcgaccacc	300
atcaagaaag	gcatcaaacg	agttttgggt	ctttccagga	atgtgtctga	gcagggaaag	360
gtgcatgcat	tcccatcatc	ttcccgtcaa	ttcgctgagt	caccttcgac	tgcggttgat	420
aaccgagacc	gattgcccgt	gacggctgtg	cagccatgaa	cgaacatatt	tacgaatcag	480
cagagatccg	gcagccaacg	atacggagaa	tgcagagctc	tgctagtctg	gccacaagtc	540
gctctcgggt	gacgagttgg	gcggattcca	ctgctgctaa	tacaattgca	acccccagga	600
caagtgccca	gcaacgcctt	tccattgtgt	ctgaacaaga	gaagcttgtg	cgtcctgatg	660
tgccaccagt	taccacagac	tccattgcaa	gcaacgcagt	tgatagtcat	cgtttatttt	720
ccgccctgat	gaaacgaatc	ggaggaacaa	atgctcaagc	ttcggaagac	aagattgtca	780
tcggacaagt	gaaggagcat	cgggtaattc	ctactcaagg	gtcgttgact	tcccaccaca	840
gcaaacgtac	catccgccaa	gtttccagtg	agatctctgt	caactctcca	agatcattcg	900
ctactgcaaa	tggcggccca	attacgcctt	atgagcagcc	acaggtacat	ggcgcatctt	960
gtgcacacag	tgcaggtctc	acaactaaag	catatcaaga	gagcaacaag	accgctgagg	1020
gtgacatttc	acgagccgag	tccgcgtcaa	gcgtttactc	tcgatcgacg	agcgggctct	1080
ccccaagct	caaagctgcc	cgtgattcac	cagattccgc	ggaagaacca	ggggtagcaa	1140
cgatctatgc	ctctgaaagg	actgcgtac				1169

<210> 3054 <211> 2703 <212> DNA <213> Aspergillus nidulans

<400> 3054

gctggggcat agctcaatat cacagttcta tttatgtaga attttattca gttacagtta 60 ctatggcagc taaccaacgg ttgtccagtc aggctcctac tatacaggat acagagaaca 180 gagtagctag aaaggtcaat atgctgactc atcgcaccgc aacccagcta ggccagagat cagatcagcc teggttetee geaaaceeea ggeageteet caeeegaate ggateeataa 240 300 agccacgcgc actgcttata aggagtgcct gtctttgtct ttcctatttc ttccctctaa ccaccatcgc tectttete ttgcactcac ttecgtteet aacceateet aaccecaaac 360 ataagcaaaa tggccaccac cgcccgtcag cgtctccaag cgctcagcca gcaactagtc 420 480 gaaggaatac ccgacgcagg cactttcgag gacatcccca aaattcgaca ggttgcggga gactcagttg ggccgtatgt gtcacagtta tcttgcctct tatatgcatg cgggtatggt 600 agagcgtcaa actaaccgag atgtatgtat gtagtcgagt gaaggacaaa gtcgccatta tcactggtac tccatctact taccactgat aaagatatta ttactaaaga ataaaaagga 660 acaaactctc ccctgggcat tgggcgcgca acagcgcacc aattcgcgcg caacggtgcg 780 aaggccatct atatctgcga cttcacgagc acacaccttc ccacccacgc ccgggaaatc aagtccctct acccctctgt cgacgtgcac acgcgcacct ttgacgcagc agatgaagct 840 gcgctgaagg ctgtgattga cgaggccatc cagaactacg ggcggctcga catctttttc 900 gccaatgctg gaatctcagg ctctaacgtt cccttcacgg aagtgacagg tgagcaattc gcggagacgc tgcggatcaa cacagttggt gtgtttttag ccgcaaagca tgctagtctg 1020 gcaatgagga agactagtcc cgagaagaaa taccctggag gcagtattat agctacagcg 1080 agtgtggcgg ggttgaggtc gaatgcgggg gcgacggatt acagcgcgag caaggcggct 1140 gttgtatcta ttgcacaaac tgtggctttc caattggctg ggacggggat ccggattaac 1200 gcgatctgcc ccggggtggt agagacgggg atgacagctg cgatgtacga ggctgcgcgg 1260 gcgaggggga cggagcggaa gattgggcaa ctgaatccac tgcagcgcgg tgccgtggca 1320 gatgagattg cacgggttgc gctgttcttg ggaagcgatg agagtagtta cgtgaacggg 1380 caggcgtggg cggtttgcgg tggactcagt gctggtcatc ctgtggttcc cggaaagttg 1440 gettgattge tacgeegaat gtatataeat etteaggetg aaattgaaca tteteatgtt 1500 ttacttatag acaagtatca attaactaaa tccaccagct acggtgagcg aacacagagt 1560 ctgcgcttct tgagcacagc ggcaactttc aaagcagctc cgttgcgaag aatatcgaca 1620 aagggaatcg ggggagattg atcggaaata gtgggagaga gagagagag ctcgcccggt 1680 atatggaggc cgcgggctat ctatgtaaag gcagcaaaag acgccctaga acgctacgtt 1740 ctagatgaaa gaaaaaccgc ccgacagcgg gcgcgaaggg tggggaatca agctaggccg 1800 tcaaccggac ggccttcaac gaaaagtgaa ataagagaaa gaaaaatgct cctccagaaa 1860 gaaacaaagg cgtccagaaa gtttgtggca gtggtgagtg aatatccaag acggaaacag 1920 aaagatcaaa acacagaaag cgccaagatt gttcacaact cgctctagat ctgacaatat 1980 tgtgtacgga gcagatgtcg tgtcgaagtc gtcgaaatca aacgtcatcg tctgtggatg 2040 aaaggtotot acgcgagcat gcgaggggtt gtccgcataa ggtcctcgtt ggaatgcttg 2100 gagagagtcc cagcttcgct tgggttatcg agaccttccg tttcatgggc gtgctcgtca 2160 tegtectega egateegggt egggatetee eegggeecat actgetgaet tgaeetttet 2220 gggaatgttg agctgctgat catcgacatt gaggtgcttg accggttgtg gacaagatct 2280 ggcgtaggag gaacgcttgt ccggccatcc gggtggaggg tgctgacctc actgtcaccc 2340 atctcactgc cctcgcgagg ggtcatcatg ccgcgcggct caagattggc tttgctcggc 2400 atggcatcgc catcctctgc atcctgggca agttgcagac cctcgacagc agcggcacac 2460 tgctcgctga tgctgcggat aatctccgag atggcatccg tcttgtcgcg taagtagcga 2520 teggeaacgt cagttacget gagacgegea agacggegtt etggttgace aatgtteage 2580 aggtgttgct ctaggtccgg gttgatactc gacacaccgt ttgaagattc gtttgtcttc 2640 acgtecttet teaegttett ateettgaeg gattetgege teteetggge etgtteeteg 2700 2703 gcg

<210> 3055 <211> 801 <212> DNA

<213> Aspergillus nidulans

<400> 3055

atgggtgaga cccaatctta agatccactg ccttcgcgcc caagatttgc tgcagggcat 60

cgaaagcctc agcggctgct tctcggacat catcatcgtt gtcaaccaat gccacacgga caatggatat gagaatette tegtagteet egagggeate tggggaggaa gatgegatga 180 240 tttccttgag cgcgatacag ataccttgct tgacatccac atcgggggag gtttggagac catcttcaag agtaggcagc aaagtggcga gaacagactc tccggctttc ttgatgagat 300 ctccaagagc attgcttgca atgacctttt gctccatgtt ggaagaacca agacggcgaa 360 420 tgatgagctg ggacaaggtg gggaccatct ctttgagtgt tcttggagac gcgacaagcg acttccatac acccattgct gcagtcttga cgagaccgga agtatcgcag cggcagataa 480 acagcgcgga caagaccttg tctctcctct cctctccaag aacctcgagc agtgactgtc 600 cagcctgagc ggcttcttca tcctcctctt cggcctcggt cttggccgtg atgcctgtaa 660 tactgaagag cagatcacca accaactcga cggaactcaa cctgatacgg tagctatcat ccgcaagtcc gcgctcaagt tcaggaagca gaagatcgat tgccttggac gagaagttct 720 tgaccagcat gcgaccggcg cgatacgaag tctcacgaat cgtgtcgaca tcgtcagcca 780 801 gaccagccaa gataggttgg a <210> 3056 761 <211> <212> DNA Aspergillus nidulans <213> 3056 <400> ggaccatgct tattacagtg acgcgacaag tttttgtcgc ttcgcaggat atagcggcat 60 atgctggagc attggaattg caaaagaggg catggactgc tatgaaggcc ctatctggca 120 180 atttaactaa ctaqctaact aacgtaattt cacagtcgag ctgaacacac aagcgagctg aacactaccc tgtagatacc caaaaacacg tcttcttaat tcagcgagcc actatggccc 240 cggcacgctc tcaaaaatgt caagattcta ctcagcaata aggtaggctc cagcttgtct 300 taaaagctat aaacgagaca aagcttctct cgattcagtg aagctacacg cgtttactat 360 gtgcccctct ccgcgctgca cagtcgcatc cggggcaccg catggcgctg cttttctccc 420 tatctctatt ctgaacccac gctttgttct ccagtgtact cgtcgaatca gtgtgttgca 480

540

actctcgatg taccatgatg atctcactct tatacgcgtg gcttcaaaag gaagacatct

taattttttc aatcactatg cctcactttg attctcttgg tcgttatcat gaaattaaga

gataattaat	ggatatgtct	ggaagaaaca	aatctacaca	gtcgaacttg	tcaaaagtaa	660
ctctcagggt	caagctctac	ggacattgaa	gaaaaccaga	ttctatattc	tctatcatac	720
cttggcttag	aggcgccctg	tgtagatatt	ttgatttaat	t		761
<210> <211> <212> <213>	3057 2734 DNA Aspergillus	s nidulans				
<400>	3057					
ccaccaactg	gcgagcatca	tactacctag	cgcacgtagt	accgtcaaac	agcgaagcga	60
tcgacatcct	gaacgacatc	atagccagac	ttaagacaga	tgagagatgg	atgttgaagc	120
taaacaacgt	ccgggcgttc	gcagagatgc	tatttgaccg	cggccagcga	tattgggatg	180
cggagcagtt	tgatccggca	attgaatctt	tcacggaatc	ggtaaaggtt	gataatgcat	240
gcttcaagcg	gatcttgact	atcattgagc	aatactatga	taggcggctc	tggaaagata	300
tcttggagct	gctaaagacc	gttcaagccg	gtgctgtctc	tgacactatt	accggctctc	360
gtgagagaaa	aggcaactct	catctgtcca	ggatgctcgt	cgaccttgcc	tcggaagaag	420
cattccacag	catcattctc	catacagccg	tcgaaacggg	acaattcgat	ttcatcgaga	480
ccgtctacga	agacgccatc	aaactctcag	cccaaatgga	ggcttacaca	agcctcttct	540
acattaggta	ccactacgca	aacgagattt	ttcaacagga	cggaacagac	agcgaagagc	600
gcgctatagt	tctgtgggaa	acggcgctga	aagaagacct	ccctcgctca	ttcctggaca	660
tcgactacgt	cctgcctagt	ttgacactga	aacttgcgcc	aacctatctg	tctcgcgcac	720
gatctgccga	gccgaattca	gacttagcgc	aggaatattt	acaccgtata	gcctcaatca	780
caccggacga	aggctcggcg	tcgtcagcgt	cagcgtccca	aagcaacctg	attctcccag	840
ccaagctcta	tetegegegg	tactacgtcg	tcacggggaa	taaggaaaaa	gctaagcaaa	900
tcgtgcggag	tgtggtaaag	ctcgcgttgg	agatgctatc	tgatgatgac	gctgataatg	960
attatctcgc	ttattggagg	ctactgcttg	tgtttttgcc	actggatgat	gacgcgaatg	1020
cccttgttgt	tgtggcaatg	gttgttctgg	cgagtcgggc	tgctgctttt	gggaatgtta	1080
atgcgggctc	tggcccgggg	atttcaatgc	cgctgattga	. cgagccgacg	aggactacga	1140
acggaaaaga	ccataacago	aagaaagaac	ggaaagagca	aagtccccgc	agtcgacctg	1200

cagtaaacac tgctagccct agcatcagtc tacaaacagg ccctgggacg ccagaaccca 1260 ggcgtccagg tacaccgaat agtttaccgc gcacgcccga gcttaaacct gtctcgcttg 1320 cggattcgca ctcgcactca ctctcagagc cagcttcagc acctgcgtca gcaaaggggg 1380 acgacgtaga cgacagtggt gaagacccat gctccgtccc tgttttcgcc atctgcgacg 1440 gcagctgcgg gcgctactgg caaggtgcga gtgagatgtg gtggtgcaag gactgcatta 1500 atttaacctt tgacaaggag tgttttgagc agttgaggag tgggacccta ccgttgaagg 1560 tttgtgatag gagccatgca tttttggagg tgccgaagta tgatagtcat ggtcctgatg 1620 gagatgagta tggtgtgccg aaggggtttg taccgtatat ggggaaggct atttcgttag 1680 aagagtggaa gaaggcaatt gtaagggctt atatagagta gaccagagtt gactattagt 1740 cagttgtata tacactagct ttttggcgct tttgcataat acgaggcaag ttaagtgtaa 1800 aggtgtcttt gtagaaacta gggcaacgta atactttctg aaaatgatgg cttatgtgct 1860 agctaggcgg gttatcctca ttatctgagc atagtgcttg gctgccgacg acccaagaca 1920 cctacgaacc tctcaactcg atttcgattc atagtgaaat acgctcatgc cagttcatct 1980 ccactttcag ccaaatccag aaaaatcgaa gcacataggt atacgcctta ttctccatcg 2040 cattccacat aaacgaaaca tcacgcccca ttcgcacccc cattgctttc cgaaacaacc 2100 tectettete gaatgtegeg gacaataage tgegetteae aaaatteagg gettteataa 2160 gctctgtcca gccaagccag catattcttc caaggtatgg gtaaaataca ctctgcatta 2220 agetectece tgatgaatag caattecace cacgatetaa tteetggate tetgtgattg 2280 agattgggac gccaagtggc ttgggggaca ggacatacgc acgacagcgg gaggatacga 2340 aggatgggaa agatgcagag tctaaacctg cgttcttgct tccggtagtg ttgggttcgg 2400 aagagatgag gtcgaaggat ttagtgtgta gcgggttagc gaggcagagt gctgagatat 2460 tgtcgcgcca ggcgggccct aaaacaaaat tcatttaata ctctttttct gaatcaatag 2520 aaggaatgcg tagaaggac gaaaggacca catacaattc cttaccagat acctaaccgc 2580 accaagteee cettetgaag caccaataat tteaatttte geateeetee teacaageet 2640 tccacgagct gcgagaattc ctcaaaaaca gagttaacat gttcctgcca atttctattc 2700 2734 tcagggatct tgtcctccta gtctcgccag agga

<210> <211> <212> <213>	3058 861 DNA Aspergillu	s nidulans				
<400>	3058					
cgaaaatgtt	cctcgacatg	tttctgtacc	tttgctctgt	gttattgccg	ttatctctgt	60
cgcaggcact	tccttcaccc	ggcagcgttg	ataaaccatg	ccgatactta	ccaggcgata	120
ccgactggcc	tactgaagct	gagtggtctc	aactcaatac	aacagtgggt	ggccgattga	180
tcaagacgat	tccgttgggc	tcgccctgtc	acggttccag	ctaccgtgcc	gccgaatgtg	240
aacatctgca	ggcagagtgg	acaaacccag	agattcagta	agccgctgct	cgaccttgct	300
cacagtcgct	attcttgctt	gtttaaggat	ttgaccttga	acgcagtgcc	gattccccat	360
cctcttttgg	agctccgctt	ttccaagatc	aggcgtgcga	tccatttacc	aacagatcga	420
gtccgtgtga	gcttggcaac	tattatgtat	acgccattaa	tgtcaccagc	gcagcagacg	480
tcgctgctgg	acttgctttc	gcccaggaca	agatgatccg	acttgtcgtc	aagaacaccg	540
gtcatgagta	aagtgcctct	tcgccatctg	gacattgctt	gctcactgtt	aatccccttt	600
tttttccagt	ctactagggc	gatcatccgg	caagggagca	ctgggcctgt	ggacgcataa	660
tettegeteg	atctcgatac	tcgactacaa	cagcagcctg	tacacgggca	aggccatgaa	720
ggtggggagt	ggcattcagg	tgttcgacgc	ctattcagcc	gcccaccagg	ccggacttcg	780
cgtggtcgga	ggtacctgct	tgaccattgg	actggcaggc	gggtacacac	agggaggcgg	840
acactcgatg	ctctcgacag	g				861
<210> <211> <212> <213>	3059 813 DNA Aspergillus	s nidulans				
<400>	3059					
atgtacgtgg	gaaataggaa	attccttacc	acatccatag	aactgataag	gcctgcaccg	60
tgggtaaact	aatacggccc	tcttccttgt	caagtaatct	tttggcttcc	gtgtaaaagt	120
tcgttcgcag	atcagataga	ttgtcggaag	agtaagcctg	acataaatga	gtgtctgaaa	180
cacgggatga	cagtcaaaca	gagatcaaac	atacacatgc	atcagatagt	atgatgttca	240
ccaggagcgg	cgagcaatac	gatgctgaaa	gggatccaga	ttgcatatcc	cggatgaaga	300

gatcgcgatc	gatgaagttg	cagatcggat	gtacccacgt	aaaccaggaa	gaaatcagcc	360
tcgagacaag	atcgtcgtcg	tctataatgg	aggtccaggg	tcgcgcaggg	acagagaagc	420
gtggagcgtc	agaagacttc	ctggcgtcaa	gaatatggcg	ctgaggcagt	tcaacttcca	480
agagctctgg	tgtctgcgga	aggttcggct	gttgctcgat	atagaagcga	atttctgcag	540
gagaggcatg	gctgcggatg	aggttcaaaa	gagggattgt	gctgcggttg	ctactctcgc	600
gaaagaattc	gaggaggcgg	accagtagat	cttccttatc	ttccaacttg	tcaatcttgc	660
gcttgaggac	tccacgacgg	cgtttgtcgg	cggtttcgtc	gagggtacat	tcgaggcggc	720
ttttcaggca	gttggcgcag	ggaggagctc	cggtacacta	tcaacatata	tcaggcagtg	780
taaaagcgga	gttaagcact	agataccttg	agc			813
<210> <211> <212> <213> <400>	3060 518 DNA Aspergillu 3060	s nidulans				
taaccaccat	gagcgccgtg	aacgtccttg	ggtgtctcag	taacgtcgaa	gggaacatgg	60
ggtacgctgc	gaaaaacttt	tcatatacga	aaaacaggat	cagcagcgcg	atcccaagcg	120
tcaggaaggc	aatgactttt	gcctcgttcc	agggatactg	ctgccctccc	cagttcagcg	180
atataagaag	gaaaaccagg	ccagcagtca	tgattagccc	gccgatggag	tcaatgcgtt	240
tcactttttc	gatcttgctt	aagccggccg	tgttcgtacg	gggaggtggg	ttataaaacc	300
accagatcat	cccagctgtc	agaagattcc	agatcgctac	catacacgca	cagtaccgcc	360
agttgtgttg	cgcgatcaat	gcgccgtaga	gacttcccgg	cgcgaagggg	aggaagctcg	420
ctaccacggo	: tgcaatgtag	tagcctctgt	accgggtagg	gacaatctcg	gcgattgcgc	480
aatggccatg	g agttctgcac	tgcgattcaa	accattga			518
<210> <211> <212> <213> <400>	3061 1762 DNA Aspergillu	s nidulans				

60

cctcaagggc gcatcgcggc attctcgttg acagtcacca aatccaacga agcgccctca

cgcttgtcga agtagatctt gttgccctgg tgaacgatga cgatatccca agagtacacg ctgcgaggag cacacatgag catggagagg atatcggagg tagcgaagat ggtggcttgg 180 ttcttctcgg ccaattcctg gataacggga tcctgcgacg tggtgacgtt gtacgcagcg 240 cggtcgagag cctgcagtcg gcgctcggcg ttcttgacag gggccttgtc gtaggaacgg 300 tegtagtagt agaggaatee gtacgtgteg acateetege eetegggtge etgtaggtte 360 aacttggaca agcggttgaa gtcaacctcc tcgagcatag accaatcagg gcgaatgttg 420 actgaaggct cgcgagtcct ctgcggctta tcgtagtctt tccatccgaa gcgacgaccc 480 cggttgccgc gggcgccacg gttgtcgtag tagcggtcac caccttggcc acgaccagca 540 ccaacacgct ggaagccagc acggccgcct ctctggcccg cgccgccgcg ctgggcacgg 600 tcacggaaga cggtgccacc gccccggcca aaggtgcgct tagcggaagt gcgagtgttg 660 tcaaccacgg agaaagtaga ttcgtcttcg gcaacttgaa cggcgaagag gctagaagag 720 ccagctgcat atacttgttg atctggatga cgatattcgt tagatttgtc ctgtaagcga 780 tgggtggttg gtcatttcca tacctctgta gttgcggttg tatgcctgac gaccgccacg 840 gtcacggtct ttggagtcag cagtccaatc agccatgcgg cctagcttgt cacccttgga 900 gaaaggagcg tagggcacgc catcaagcat gttgtccgcc taggtgacag gaccccaggt gtcctccgcg gggagggccg caacaatatc tgcgatggag atcggggcca tgatgtcaaa 1020 aaataaaact acaagtaaat taaaacaacg ttgacctgaa tgtcacaaac aagcccctca 1080 gaaaccgagg tagccttatg agatctgggg acggtaagct tgcaggcggc gggatattgg 1140 gaacccagag aaaggcgatt ttttgtgtcg cgagtggtac tgtggctggt ggacttggca 1200 ccgccctatg gagcagtaca tgcctagcca catttatgcc tcaggtatca acactgtata 1260 cccaaacggt acgtgtttat agtcgttgca ttccgcactc tccttgttga caattcaact 1320 ctgactgcac agagaaaaga gttcccctct gagaccttga tacgaacgtc actcggctat 1380 ggcagcctca tacattcatg acatatccga accettgagt ctgtgttgcc gtccctaaac 1440 cccatcgtcg acccacggat tttgtaccct ggtcaatcgc ctgactctgc tgataccaga 1500 tacatgtatg cttcattacg taattgacta ttttcttagg gagccgaaaa tcctcttgga 1560 cgaatacctg aaatgaagaa tccatgacgc cacttttttc aggtgcgaag ccgcctatgt 1620 gccagaaatt acaatttaac cattgcccaa cttgcaatat ggttatgata agaaatgttg 1680

<210>

<211>

3063

883

1762 ttttttcccg gctttttatt ga 3062 <210> <211> 1128 <212> DNA <213> Aspergillus nidulans <400> 3062 ctqqqqctcc aatatttcag gttcgggccc catggccttc cagggaacgt tgaccatgca 60 cccaatcgca ccttcagcct tagcgagatg actccctttg gcgcgcggat gatgtctgag 120 gtctggacgt gccggcaaa tacctccttc acttctttag atccggtact ctatgcgaat 180 cccctcctaa agtctgctgg tgccggtact tctaagtaca tccgctttct cttgaacggc 240 300 qcacctcttc ctctgaaggg cctagttggc tgtgagcacg cggtgaatgg cttttgtcct ctggaagggt teetgagegg agtteegaet etgaaggage gegegeagta ceagaggget 360 tgcttcggcg agtaccctac tggcgaacag gttggtgatg gtgttcctcc tccggcttaa 420 gactctcatc agcagctgtt cctattcttc tttcttggga gggggattgg aagtgctctt 480 540 gaaagagtca gatattttat cttgggggtc tattcaagcg agtagcttgc ttggccatct 600 ccagagtcgt tattgagacc tacccaaaaa tgtatgataa gctagatttg ttgcaaatca tacttctcac tggaggccct ttcctcacta ttccttcaac taaaagtttc catcggggca 660 720 ccgcgcttgc ccggctagta ggcccctatc acctaagtac actattttac tcggactgag 780 acateteatg cagtactice tgtactatat tacettetge tecettegeg cecaccaega catgagggcc ggtgaaagta acgcatggta ggggcgcttc ctgctcgcta aaaagggtta 840 gcatacagat agagectgtg tgggagegga geteteatge tggacacetg cagatgateg 900 gctataacat gctctcctgt aggaacggct gcttgcaagc gctcagctat aatataagat gctggtgcct gatggacaaa cccgaaggga atccatgtgt tgtacgtaca tagcttttga 1020 aaaaatcact aggacagaca tgagcatgta cgctacagcc taggatttgc tctgggatca 1080 tgcctggcgc ggtcggatct agacacatgt acacgatacg ctggatct 1128

cctacccact gcacaccggt ggtctaagcc cttattttt tttttttggg gggggggttt 1740

<212>

DNA

Aspergillus nidulans <213> <400> 3063 tgtttataat gggtgccccg aatatactga agctttggga gaactgtcta aaggctctgt 60 ttttagggct ttttttttct agattaagta agatgctgtg gtgctgtata cataacgtaa 120 180 atcataagta cgtcacatcc tcacccttgt tgtgttctca aatacctctt acgctagtag 240 acaacttccg tgctggcaac aacgttaggc gaggattcaa ccatcactat ccgtgtacaa 300 tctgtaaact ggccacttgt aactccgcag gatctctgtc atgtgtgttt tgtgtggcta 360 atteatatet etecetgett ttatetggae eegaetetge taggeeacte ttagttggga 420 gctcaaatac acggcgctcc gtagcctcca tctcaacagg cgaatcagtc ttgtttgcag 480 acteggaaat tggageacta tetaactetg ateggeeagt gttteeteet tttgetgace cgcggtaacg acggaggaag atcattgctc caaggatgac taaaaggact ccgagggcaa 540 cgccaattcc aatcccagcc ttcgcacctg ttgtaaggct gtttccactt cggttgcttg 600 660 ttgggagagg cgagtatatg gtgacagttg cttggggggt gggatctcca tctgtggacg tgtctgacgt agtgctgctg gtgcctgtcg atgtcgtata tggcttcggt gtgccggtaa 720 ttgttatagt ggtgggtgga gtaccggcaa gtatctcaat agtggttgtt gagggtatgt 780 ggtttcagtg gtggacgaag acteteettg teggagtggt gagtggtttc ggtetegact 840 883 cggctggtgt ttcggcgcac ggttgactga acacgtgtca gat <210> 3064 <211> 994 <212> DNA <213> Aspergillus nidulans <400> 3064 gcgcttttcg actgggttgc gctaacaacc tcatcagcaa tgggctcaag gctgatagat 60 ttggtggtag catcgggaaa ggatttctgt tcagaacacg aattcggcgt gaattgcagc 120 acgctcacat tcaagcgaga tggcgacgac ggaatactaa ccctaggtgt tggtgtaatg 180 tcgccgggag tcggtgtgtt atcgttaaca acaggacgga caaaatgagg ctctttcggc 240 300 ccaggagcgg cacgcttgca tgccttcaca ggtgcagcaa tctcagcctt ttcagattca ggatctggaa gtgtcaaaga ctgctgattc tgaggctttc ccagctttgg ctcgcaacgc 360

tgtcggagcc tagcctctag aacatcttta cattcagtca gcttgcacaa aaatgtctta gacaaatgtg tttgttgtaa aagctggcag acaatatcaa tttcacgcct gtactcatcg 480 540 actgactcct catcctcggt atcagtagta gcttcaagaa cgtccaaatc actcgtcatt tgttgtttcg gatgtgagaa ccttcccaag tcaagtcttc tcttagcgac tgctagagtc 600 gacgattgag agatttctgg ttcgagggat tgcgtgaagt ccagtccttc taattcttgt 660 aacgctggac tcattgcagc cgcattctca gattccactg gactgtccaa gtcgacaagt 720 780 gtaccgacga ctctttgggg acgcgatgcg ggagtcgagt ccatgggagt tgccacagat 840 tcctgtgtgt ttggctctag cttctcccct gtcttcgctt gaccggtcgt gtttattgag 900 gctgttggtg gcgtctctct aggtgactcc gtgctcacca agcctgcacc cagatcgtga 960 ttagttgttc cgaatttatc ctccactttg tcctcaggag tcatggaaat tgtcagctgg 994 gttgtgactt tctgctcttt gggctttaca atgt 3065 <210> 1528 <211> <212> DNA Aspergillus nidulans <213> unsure at all n locations <223> <400> 3065 gacttttggg ggaattcctg gtcaataatt ccaaccattt tttgaagcat agtttcattc 60 cctccttggc catcagcagt tatcatcttg ccattaaatt ccataacgca aggaaccccc 120 ccagagcaca ttctttaaca tgggccagga aactcatttc tagataccct tttttagcag 180 agttctcctg actcaaatgc tttggtagag catttttcca caataacatg agctgagaga 240 gatggatctt gacaaagcta gggcccaatg gcatcagccc tccgatcagg atccatgcca 300 cctgaatttg cgtgctggca gcacgcagtt cggcgctgct gcttgttttc agaaggtcgg 360 tagcttgagt gaacacacga gagtagatat caacagaacc ataaagtggc tgcaaccgag 420 atgtacttaa catcgccgac aagccattag catagccgac acaacgccgc ggagactgtc 480 gtggggtaga tagctgccca acctcgcggt tgagactatt cagacagata gtgacgcatg 540 acaatagctg gactggacag gcaaggacaa agatacggag acagtgtgca gcgtgaatct 600

660

gcacagtata gctagggtga gaaagaactt gaagcagagc atcacggcaa ctttcggcaa

gtgaaccaaa ggcggagccg agtgaagaaa ctagagagga caaggcattg agggcattga tcagagtgta cttgctaggc tcacggcgtt cctgaacaac ttggggatag tccttgagca 780 categittat aagecaettg getgeegtaa ggegaetgit eteaeggage gagtegegae 840 cgacggtttc ctcgagaata cttccaacaa ctttcctcgt cataagcagt cggaaccggt 900 tgtttgttat tgttgggtgg ttcagaagat cgaacagtag gtgatttgcg atctggtcat 960 accgctcttc cacaagcttc tcgcccaaaa tccgtagaac gtactttgta caaacccgcg 1020 atccccgctt gagctcggta gaaaagtgtg cttcaaagta ttggtgcgat aggtgcttca 1080 agagacaggg aggtaaaaag tttaaccgng cttcactttt ttggagcgag ggatttggaa 1140 tttaacctaa tettattett tegggettgg geaaggettt ttgatgeett ttgettttgg 1200 gctcgagggg cataattgaa aacttacatg tnttttctag gccccacgaa aaqccccaac 1260 gcttttaaca gcccaagggt ataagacttt ctacacgttt agggatcaat ctcttttatc 1320 aaaaaggttt gggaatttga accgtgtgac ccccaaggct ttaccggggg tgcgccgtta 1380 aaattggtgc caattggacc acccaacctg gaaaaaaaca cttaaccggg gttcgtttaa 1440 taaattcaac ccgggagaat cctcccaaaa aaaagagggg atgtgtattt ttttttctt 1500 ccccggttgt aaaatccttt tggggggg 1528 <210> 3066 <211> 2239 <212> DNA <213> Aspergillus nidulans <400> 3066 aatgttcaat aggaatgatt cttatcaagc gattttaaca gcctggctag gtacatcttc 60 tgctatgtag aataacagca tcaaacccta ggtagccagc ggtgcttcca cagtctacga 120 accagagaag cacagaagag aaggtattac agtatttctt tgaagatcaa catatggttg 180 acgcagtact ggactagtac ctgcaaggat atacgtatac acccctaaac aaacccgctt tgcctcactg cgctcccgca ctgcatgatt gctagccttt tataggtagc cttgcgcaaa 300 tttttattat cgtccggaga caaaggaata tcgcgctaat aattccaaaa gccctaatcc 360 caacactaac ccgatacctg cattttacac tcgtgctggg gacaatagac ggcggcggcg 420 catcgcaact agagttacct gcacccttct cgttgaggat aaaatcaacc aaaccaccag

tcagagtccc catttgtttc tcagaggcgc tacgatcgaa catgtcgtag ctctcgtggc 540 ggaaagtggg gacattaagt ggttttagag ggtgatctct ttacttcatt gtaccgtgga 600 caaagagaga acgtgcagat aaatctaggg gatgagatgt aatcacctct taataccaga 660 tgcttctatg ctaacttggg caaaataatg tgttcctggt atgtttggtg atagtggagc 720 agagacatat gttagaataa tcgggcgaca tttcgtggaa atgacaatca accttgttag 780 aataattatc agtacccatg gtacatattc tgtcagcaac tgagaactga agtatataat 840 gcaggaacga aggcatggat ctgtatttat caccccgtta agtgatacta tcggctgcgc 900 tgctcagctt cagaatggta gcaatcaaac tcgaaccggt gttccttagt tggagaatga 960 gtatagtacc agetetacac gtgageteac gaageggaag cetgaataca gagtgettgg 1020 gatatatacc agcaaagggt ggtaaactca gccctaccaa tcctggtaat agtctcaggg 1080 tcaaccagcc taatacacaa tataccttaa tatcttgacg agatgttgag aagcttcaaa 1140 gcagatatgc aatgctcaca ggaactgaat aggtttcgcc atgacatctt tctgactggc 1200 agacgcggag tcgtttacta tgtgcgggac atgaaatacg cctctaataa gattgagata 1260 tatccctcgt ccaatggtcc acgaggttga agtctcaacc ctcaagcacc gtttccggta 1320 cctagatgat cttgaaaaga gagcccattg ttcgaaatct cagcgacaaa tccgagtcgg 1380 tttggagcaa ccacttagaa tatccacatc tttgagtccc tctttatatt aggcctctct 1440 atttggtaaa ttgtcttagc agaagggctt aatctcagcg atgttaatga tgttgggtag 1500 atcggtgtag ctgaaagttg tgtacaggat tagataatag tggcgcagtt gctgatcatg 1560 tgcaggcttc ctggatattg ggctgaagga tgagttgagc ctcggatcgc aaagctgtgc 1620 aaaggtgttt aaagagtctt gttagcatgt aaagtagact tagggcagtc aaggtgatgc 1680 geeetgggta ggatetggag eattgetgat gagaeecaag eeeggggage ettegettgt 1740 agtecaetet eggtaateta aetgaeaata getaeteaeg eagggttgge egecaaeata 1800 tataaactgg ttaagagctc tacaaggata ctacgctggc cgggcaaacg ctggggctaa 1860 acggctagca gcagattaca ccagattaca ccatcttact caccaaagac tgtctgagcc 1920 tatgccaaag cacctggagc gtgcccgtga aaatagttat acgatatcat ttgttcaatt 1980 ggggctctgc tgtgtcttaa gcgactaccc cgatttttgg gcatctctga cgcaatacaa 2040 ccctgctaaa cttcaaaacg ctctctgaaa aaataacagc cctgcttcta gaaagtaaga 2100

aaagggaaac	gtggggttaa	gatttaccca	ttacgtatta	tgaattcagc	agtgtcagga	2160
aggtttggtg	agctcgaagc	tccttgcgca	cataaataat	catcacggtg	gacagcagcc	2220
atcacggcaa	ctatagacg					2239
<210> <211> <212> <213>	3067 575 DNA Aspergillus	s nidulans				
<400>	3067					
aaaatattct	cgaggtagtc	gccgtttcct	agaagatcga	gccgtttgcg	ttgtgcggca	60
aaggctttcg	gcagatcttg	cgccaggaga	ctccgtagag	ccgctgagat	ggttctccac	120
acatcaaggt	ggacggggaa	tggcgcggta	tgtatagata	ggagggcatc	gttccaatgt	180
ttttggagtc	gggcttcgag	ttcgttttct	gggcgcggga	gagagctgtc	cccctcaagc	240
tgagggtcgg	ctaagacgag	gaggcggaag	atcgctggct	ctatgcctgg	cgttgagcgt	300
ggtgtgagga	tgtgttctga	gggtgatgaa	tgaatgcgct	gggacgctgt	gaggcattgt	360
agctgttcag	agggagagga	tatgcgcagc	cagagaagac	ggggtagagg	tacagataga	420
cggtagcggt	aacggctagt	gggaggaggc	tgaggagaag	ccgaaggagg	atccaacgaa	480
gggacatgga	ggcgacatga	tgtagaagaa	taatgatatc	tattataata	gcaggtgcaa	540
tgttcgaccg	ctgcagaatg	tacagggaag	aagat			575
<210> <211> <212> <213>	3068 579 DNA Aspergillus	s nidulans				
<400>	3068					
taattatgtt	cttcttttgt	aaagtttgcg	tgaacagacg	gttttctgta	atacatcgga	60
aataaaagtt	ggacacgaga	tgtaatcgag	tatttttcta	ctgatctgac	tgtttcggta	120
attatatatt	taggtttata	cattcaagtt	tatacgtgca	agtttagagc	taattacgta	180
ggtggacgag	accgatatcg	ctggaatgag	gatgacccat	catttagagt	tgctcgactt	240
gaatcaccgt	ttatctgagc	tagaagctat	cagtgccatg	ttcactttct	tacgactcag	300
gcgtccagct	ccaagacttt	gtccggaccg	tctaggtagg	ttgcggctta	tattcgcatg	360

cgttgctatg ccatggtatg ttggcaggtg cctgaacggc acgcctttgc gaggcccagg ccgagatacc cgaatgcaat cacgagcatc gacggctagg caggcgaggc ccagtgcttg 480 ccgaccgaga cgggatccca tttctgatta actacatagc ggcaccgaag caacaacttg 540 gttatatgtt taccaaacag caaatgtgga cctgcaggc 579 <210> 3069 <211> 4386 <212> DNA <213> Aspergillus nidulans <400> 3069 gtctggagac aggttggcaa ccaagtccca gtcagctcaa tcacgttcac tctctaaatc 60 ttcccccttc aggcatgcct ttaacaaggt tccagagcct atgcatccac tttggcccc 120 ctcagggtta attcacgtgc ggaaccttag taacgaactc gatttaagaa acgacggcga 180 tcgccaagcc accgcaacgg acaacaggaa atcaaagacg ccagctqttc aagttattga 240 tgaagaaaat gtgctttcct tcttgaagtc ttcggatata ttgccggctt tacgaaaacc 300 atctaaacag gtaatcagtg gacgagtgct gcaggcaaaa gtaggcaaac ggctgatggg 360 gcgaggcgcg agctcggaca cagacgaggc tccgtcccct gatactttac attcagctgt 420 ggccaggtta tacacatctc tgcccagttc aatgagcgcg tttgagcgtg gagattacga 480 ggcgcaactt tgggcgcata agtatgcgcc aagtaccgcg aagcaggttc tttgcgctac 540

caaagaagca cttatgctgc gcgattggct aaatcatctt gttgtgtcta gcgttgatgt 600 gggtagttca tccagagata atgagaaagc caaacggaag caggagaaga agcgcaagag 660 acgaaagaga acagataaat tggatggttt cgtggtgttc agcgaagacg agtactcgtt 720 gggtgaaatc tccggttctg atgatgaatt agctggcgat gtgacggtct cgaacaagcg 780 cactgtcata cgaaccgggg atctcacttt caacctgaag tctagcagtg accgcagtcg 840 tatagccaac gcaattette taagtggtee gtegggatge ggtaaaaeeq cateaqtata 900 cgcagtggct aaagagatgg atttcgaagt ctttgaaatc aatgcaggct ccagacgcag tgcgaaggat attttagatc ggattggtga catgacgcaa aaccaccttg tgcacaactt 1020 gcatgacaag gaaaatgtca atcaaccttt cgggacatct tcgcaggctg aagagctgga 1080 agacgcgaag caaaaccaat tgactggatt ctttatgcct gctaagaaag ctggcagacc 1140

acagccaaag gctccttcaa aagaaaacgt catgaagcat tcccgaactc agaaacagtc 1200 tttgatactt ctagaagaag cagacatctt gtttgaggaa gacaagcagt tctggtccgg 1260 ggtccttact ttgatcaatc aatcgaagcg cccgattgtt ataacttgca atgatgagag 1320 ccttatcccg cttgatgata tatccttcca tgctattcta cggtataggg ctccttcaca 1380 ggggttggcg gtcgactacc ttcttctgat ggctgcaagc gaaggtcata tactgcagcg 1440 gacagcagtt gagaggettt attegageae eegcaaegat ettegaaagt etateatgga 1500 actgaattat tggtgccaga tggccgttgg cagcgagaaa tccggccttg attggatgat 1560 tgaccggtgg ccacaaggtg tagaccttga ctcgaacgga gacaagcttc gaatgctgag 1620 cgcggataca tacgataact acatgggctg gtttagccga gacattatga tcagtcccgg 1680 cttagcaaca gagagcgagc ttcgggagga agcattgcac tggtggcatt tgagtctaca 1740 agaggccgat gtcatggagg attcacagct tcaatcattc cgagagccca aaacgagtct 1800 ttcgaaaatt gagcacatcg aaagtctgtg ctcgcagtct gaatatatgg aatcgcgaag 1860 tgtcctcgat ctgcttgctg cgccatgctc cctggatgca cggatggtaa ttttatttcc 1920 cattlettet teeettitt eeegataggt etaactgtee eaggatgeaa tegatacate 1980 cataccaccg atctcggaaa aacagaagct gaatttcqtt qacqqttata aactactaca 2040 tgctgacaaa ctccctgatt acgctacctt gacgttggat attgggagta cgtttcaqac 2100 tcttctggga agagtattcc gcggaacttg tgaagccgat tccaaagaca tgctagccag 2160 caacatgttg gaagctgttt ccaagcccaa ggcagctgag cctgccaaag agcttctaga 2220 agtgetegta cegatagega agectgattg tggatateeg cegeceagtg gaggegeaga 2280 gcttgcgttt gagtatggcc aacaatcaat tgtcgaagat ctcgcgccat atgttcgctc 2340 aatagtagcg tttgaccttc gtctcgagaa ttaccgtagg gagcttagcg gccttctctc 2400 cggcgatgcg aaaggtacaa aacgaatgcg aaccactcgt gctagtcgag cagcactcga 2460 aggcggcagt aaagcggaga ctcggaaaga gagatggttc tcgccggctg tgaatgttca 2520 acgcatttta gccacgggca acagagaatg gcaggatctg ctggttcaga acggctattt 2580 taccgtgcct gtggcgttgg agcaggcgac tatggagcgt agtgagctgc cttcaggaag 2640 tgcaagcgat ggatctatat aggatagccg tttatagaca gtctagtcac ccatacaaca 2700 atgaaageta gagetataee eeagagaaeg teggttggag atgeeaagee ttgggttgae 2760

tagcctccgc ggtcagccac aacatcgaca tcatcccctc aagacttcct tgtcaccctt 2820 cccttatcaa caccgggaaa gcaggttctc tttcccaggc catctatacc ttatacttct 2880 gttactatca atcattatat attctaatca aactactatc agctgtcctg caactcggcc 2940 ctgtctgcgc atcctgctgc ctgtgcctta tcgcgtccga ccgagctccg ttcctcgcat 3000 cgctcctcca ccgtgcggcg catcgctcat tccccatgtc attatttggg acqtcqccaq 3060 atgactcccc ggcagccgat tcagctcgga gatccaaaac ttctttattt gccgacgagc 3120 cttcgttcgg caccggcagc agctaatttt ggcgggtcct ctctcttcgc agatgacgat 3180 gatttaggtt caccgtggaa tagtaacact gccaaacgaa catccaaaca acaattggtc 3240 aaaactttgt tgccaggact cggatgtacc tgaaagctat atcgatgcgt acgacctcgt 3300 actgagtgcg ggggaaagag cgggcacggg cgttagccta acgactgttc gagagctatt 3360 gtctggcggc ggactttcgg caacggatca ggccaagatc ctcaaccttg ttctctccgg 3420 tgatactgat aggtccaacg ggctgagtcg tggagagttc aatgttctac tagctttgat 3480 agggcttgcg caggaaggtg aagacttaac tttcgacacc gtagacgatc gccgcaagag 3540 tatgtccttt gcgtccgaag actacattga aactaacagg cttgcagagc ttcctgtacc 3600 aaatagctcc tatttggatg cgctgcgcgc gaagcaagag tctatcatgc ccccttcgca 3660 tgagcgtcct tccactcctc ctgcgccccc aattcccgta caagaaccga gccccgcgca 3720 ategeggegt getagaggag attecatggg tggeetagat geagaceeat ggggtagtee 3780 gcagctacat cgtggccatg ctcacactca gcgcgaagcc gagcgcggca tgctgaatgg 3840 gtatggcagc gttcgatcag caacaaacgc ctggtccaag actggtgact cggtaaatcc 3900 agatgcaccc tetaattega getacacaaa tggceggtet gagattegca gttecaatag 3960 cgccgattac gggtggggtg accattttgc gcaatcatca cagggcggga gcctcggagg 4020 gccagttcag cctggtctcg gagattttgg acggcaggga tcggtcgggg cgagcctaat 4080 cccagtcgac agtcactgaa cattgaccgg gccataaaca accatgtcaa acaagtggtg 4140 acagtaacac ttctcccaca gaagaagggg ttgttcatgt ttcagcatcg caattacqag 4200 gttaaatcgg cccgtcgcgg gagcacagtt gttccacgtt atagtgattt tgtctggctt 4260 tttgattgcc ctcacaacg atacccattc ccccaactac ctctacttcc accgaaacga 4320 caagcaggta agtcgcaaga aagcatgttc aagctctcct ctccgcgtct cactataaaa 4380

gcatgc 4386

<210>	3070	
<211>	1773	
<212>	DNA	
<213>	Aspergillus	nidulans

<400> 3070

gataccettg aagtgaagaa cagaaacaag aaagacactt tetteeatat accgagggtt 60 tgggtataag cgaagacgcc aatcaaaaca agtgaaaaaa gccccctttt gcaatacaat cgtgtcatca acggcatcaa gataaaaaca catgtagaat ggatatatca ttcacaaggc aataagtggt cgttagaaac atattacgcc gcgaacagtc ccctacaggg gtagtcacta 240 agcatggcgg agccggctca gtcagatgag ttcaccgttg caccgtattt gtggtgcccg 300 tctcaactga tgattgtgta acactagaac cagacgtagt cgatgcgttc acactcgacg 360 atgecaettg tgecetgagg gtggetaeet eegaettgag teeatttagt teeteatgaa 420 480 etgagegaat gtacteceag agetttteet eeegtteeeg ttgetgateg aagaegeteg gategtgaga ggtatggaeg ttatgegttg atgetgette ggggattgte ttggaagtea 540 600 aagaaccacc gtgattactc gagtggctat gtgatggcgt atgtttagcg gcggaaccgg aagcctgtac ggagctttgc gagtggaggg aaaaacgagg ctcagaagac cccaagccag 660 720 gtggcggcgg aagttgaggg gccccgggct gaggtggtgg aaggcctaag ctcggtgcag 780 tgtggttgga aagagaagcc tgagaggggc ctgtacgatt gtatgattgt tgagggaatg gatgtgagat tccagcagag tgggcgcgat ggtgcatttg tagaccgttt tccggcccgt 840 gtcctaattg gtgggaagat agtgcgttcg gtgagagcgg ttcttggact ttcagccatg 900 tttgaaggcg caaaagcaga ggagccagat ggctggtttg tcgaggggaa cgccatattg ccggactgag atactgggag aaggggaggc actagaaccg ccatgacttg taggaggagg 1020 gaaaagcccg ccaggcgacg gtctgctcgc ggcaattgga gggtaagtgc taggttgacg 1080 cgcttgatag ctgcttacgc tgattgagcg aacggcataa ttcgagggca catcatgctt 1140 ctttatgete ggeatgttgt aacgtegtte ateatettea teeatgeatt eeggttegge 1200 gtaaactacc ccatccatag cctctttggc accagcagct gctgcatcac catactcatc 1260 ttagggtgeg taacttacca tgctggeeet aegaccagea caggeaeett ggeeettatt 1320

<210> 3071 <211> 1324 <212> DNA

<213> Aspergillus nidulans

<400> 3071

60 ccctttcagg ggcgggagct tcggtggtgg attgccgcct gtccgcctaa ggcagtgtat 120 tttaggccag cgctctgggc tccggagatt ctgcttagtg ttgtccgctt cagtggtctg 180 cgttgtcagg ttatgatata gtcatgcatc ttgagccaga gaacttagat actgcctctc 240 tatcgccgcc ttgggcttag catcacctga cgtcctggaa aagtcaacca gggctgaaga 300 tacctcaaac tagggtacgt atgatctaag acaggagata aaacgatata tttggattgg 360 tactgaatcc tattttatac caaccgggaa aaaaacaatg tatgaaatgg agaagacact 420 ccaatccatc cagtgggtgt ggacaatcat accaaggaga agaaagtctg gaatttgtcg 480 aatttcgagt cttcaattcc aaacacagtt tgtaatgaga acagaaagga gagcaagagc 540 cctcggaatt gcatcaccat accaagacaa accaaatctg tttatattga tttgagtggg 600 caagaaagca actttgcgtg ttgctttgcg taaagaaaag aaagtagaaa atctcaaaag 660 ctagacatga aggaaaacag aaaatgacaa tcatcccaat aacagtaatg ggtccgttac 720 gtttcggtca tattatgtat acgaggttcg catcacacaa tcggagtctt gcgcttttcg 780 gcgctcgaca gcacaagcat aggagtcttg cgcctatccg taccctgggc taccgtcttc 840 tgaccagcga cgacagcagc aatggatggc gatccattct cgggtgaagg gtgttctgcg 900

aacttgcctg caaaataccc gtcttctcg ttgagggagt ttgtgctaaa cggactgtcc 960 ggcgacttgc gctcccggga ggatttctcc ttcctctag agccaatggc accgttggca 1020 acagcgcga gactgcctag actgggtttg ctcgaaaggc tagcactgcg aaccgtggca 1080 tcgtcattat cggagaaggt gaattcttc tcgcttgcag gagtgttggg tgcccccgct 1140 gctgtgtcct aggcttcgag aatctccgcg gcgctcgata cctgcacgca ccaagttatg 1200 gacggcacgg cgacgctgac gggtggcaaa atttttgctt ccttcgagcc ttgaggttgg 1260 tttagcaact agttcctcaa gcgacgggg ggcccagttt gaacgacggg tgcttccac 1320 acga

<210> 3072 <211> 782 <212> DNA

<213> Aspergillus nidulans

<400> 3072

cagaccctgc tgccaacaag aagaaggtca agaaggacgt cagcccgaaa attgggaagc 60 gaaacgacat cggaaactca ggaagaagag gaggaagagt tgagcagcgg agacgaggat 120 tttgcagagt ctcaagatgg tgacggaggg tcagaagcca gcgagcttga cgacgctgaa 180 actcataaga aagatatcga ggcccttaaa gagaaggacc cggaattcta caaatatctc 240 caggagaacg atgccgagct gctcgaattc ggtgaccttg cagaggttga cgcgctgagc 300 gaaggagagg acgagcagga cgaggagccg gctaagaaga agaaaaaggc aqcaaaggag 360 gaggaaccgg cttctaacct aacggttgca tcggtgcaga aatggcagaa gctcatggaa 420 gaacagcact ctattcgcgc aatgcgacag gcagtgctcg ccttccgtgc cqcqqcgtat 480 ctcgacgacc cagatgccca ggagcaaaag tactccatct ctgactcaaa cgtgtaccac caagteettg teaeggeact taacaatgtt cecaaggtte titegeatea tetteetgte 600 aaggagaccg cgtctggcaa agttcgggtt tcactagact caaagaagtt caagactctc accccctca tcaagtcgca cacctcctct gtccagaaga agcctgcgca cctctccgac 720 gagcaaaccc tcataatgaa atctcttcga tcgaacccat gcttccctac ctcctqqqat 780 tc 782

<210> 3073

<211> 1799 <212> DNA

<213> Aspergillus nidulans

<400> 3073

gatctcgaag ggtccgagtc ctgcaatgga atttgatggt cgagctatat cagatctgag 60 atgtgtaaca gattaacgac cgttaacatt caagactatt gcaagccatc cgttgatccg 120 gcggcgtcag aagcacactg tagtcagtca agtagtgact gcagcggcca cagtgataat 180 gtaagatgag tetgagteta titttagtet tetegagegt agteatgaag acagetegag 240 tcagactatg cggtccggga cgaggacgag catacttctg aatacqatcg cccgtaagag 300 tcctcaaaat cttgccacgg cattgagcaa tcagccgttc gtgcaacagc gtccctgaag cagatgtggt ttactgcttc gacagaggtg gtccagatct cggctccaga gcttgtaagg 420 tctgataacg gcagtttaag agggctgtat acatgctaca cggcagtgct catgccatat 480 cgagtaaggg aaggcaaatt gtggatacac ggatcggagg attcacaagg atcgaatagc 540 tgggtgagca gatgacccac tgtcggtgga tatagacagg gccgcaaggc atgaaggaaa 600 gcctggacag gggccaccac gaagagcggg agcgtcattg ggcaaaggta agcgctcaac 660 720 acaaagctga aacaaggggc aaatacttca cgactgtttc tggcgccagt ttgatgatgt ttgctctgcc ttggcatgct cggctccacc agagctcgac tcctgactcg cactcacatt 780 cttggcactc ggcttgggta acctgacttc caggctgaca actgacatag acagcacgga 840 gtggtagcag ttgtactact ccttggtccc gggtggccct cactacccga acttggacaa 900 atctctagta atatttctgt gctctggaaa agtatctgtc taggtgttga ggatgcaatc gccctcccag cttgagcaga gcttgccatt gagttacaag agtatatggc ctctccagtt 1020 ggtgggccgg gcgcgggcct gaggggatgc tcttaaggggg taggtgcggt tgtcgatccg 1080 geggtettee agtacegeat taegateeet aaeggteatg atgattattg ttateatggt 1140 ctggcgaatt ctcaagtctt ccaatatggc atgtaatttc cgcaagacct gtgattagac 1200 ctcgtttatg tgcttccaga ttatattttc gcgctcttaa tattgggtgc tctattttgt 1260 tettteeaaa attegetttt taeagtggee ettgegaett gaaegettaa agaetegaag 1320 gttcgtgggt agcctaaccc aaaaaggagg agcatccgac agtaactcaq aaactcagtg 1440

tgctagactg taagcttgct cagtcaacag atctgctcac tactctcaaa tcagaaagga 1500 cttcagtcgc tgtctcttcg atggatccgg gacgaggccc cactacctct gtgatccgtt 1560 gacgtatgtg acaaagcctt acgcgagtat cttactatag cagccaaatc ccagtattt 1620 tggaaaggac ctggtatagt catgtatcgg tccctagcgc tgtctccgct tttccttgct 1680 ccagagtctg gtctctagcc tgacgcaggc caggacggcc tctttttgcg ctgtcggtgc 1740 gcctttggta gccagcctct gcagtagtgg gcaggtgacc gggccagtca gaaagagag 1799

- <210> 3074
- <211> 1190
- <212> DNA
- <213> Aspergillus nidulans
- <400> 3074

ggatgccctt gactacttgt tggactatcc tatcgcgcca tcacgaataa ctattttcat 60 gacaattgcc gaggacagcg cgtggggcaa catatttcga gcacagggga ttaatgtgtt 120 tgttcttgaa gatcgacagg caaccacgca gaatcgcgat gcagctatga caqcaqcqac 180 cgattatgat attttgaggt ggagaacgga ggaagaggcc agggaatttt atggagagtt 240 gtaccagcct ggacgcgtaa ctaatacaga gaggaattgg agaaggagaa aggggctttc 300 ctgatggctt atgtataatt aacgcaaacc agcattccgc aggtatgcag ccaaatatat 360 gtctagaccc tcagtgaaga cccaagtttg ccgtcattcc agttcagccg gagactggag 420 cagatttgta ttgcattctg gctctatttc gcaaaatgtc ctttacctac acattctaat 480 gaaaactaac actgggaagg caaattcttt ctcaacgtac tacttactta agtagtgctg 540 gaggaattaa gttgcctgct gcagaaatac actcgtcgct ttgtgaacca aattatatcg 600 acatttcgtc agctccgcaa gataaaggtg atgcgaatcg tccatgctag tactgtgatg 660 agcagaaatg cccgggtttg tgacttgccg tggccgaact aagacacaga actcagctta 720 tgaccggata catagtcatg ctatgcccat cacaaagctg acttccatcc cccctctgcc 780 tcaaaaaccg cccctacagc ctctgccacg gaaagaagat gctcgtcatg aaacctggcc 840 gccacaagtg acaacccaat tggcatgccg ttggttcctt gaaatccggg gatattcacq acgggggtgt ggagcgcctt gtcaccaaca aacgttagcc agtctcgtag tctqqaqqct tagcagtggg tacgtaccgt ccacatccca ttaaacgctg cactgcccgt cctcagagtc 1020

ccctcaggcg cttcatcggg tacgctgggt gtcagcagcg cagagtagcg atttgcgatg 1080 tcatcaataa ccggtctaag cgtccccacg ccatcaaaag cagcgatttc ttgcgcatgt 1140 gtccacccgt tgatattctc aacctggtta ccaagaaggg ctgggctttt 1190

<210> 3075 <211> 2146

<212> DNA

<213> Aspergillus nidulans

<400> 3075

agataaaaag aacgaatgaa ggagaaggaa aggaagtagc aaaaaaggtag aatgggaacc 60 aagtgcaaag gaggatgtta acaaaagaaa ttaggaggag gaagaggatc tatattttag 180 gtgaccaccc gatatcagta cgggacagaa agagatggtc ttatacttgg tattaagggc tccgaggtta cctagaaaga agggtacgag aggcagtcca tgcggatagg ttgccacatc 240 taaggaaatc cacaaaaaaa ccgagattca tggccaaaca gacaagccag gtggggaccc 360 caggtacagt gtctcagccc caagaatcta ggaaacgagc cagagcatag tgttcatatc aaattcaacc gtgtggaagt ccggacgaaa agcctattat gtgttgagga cggcgagtta 420 480 ggggatgcct aatgtatgaa agtgggtttt cgaaaacgag agggcagtgg gtatctggcg aaaacgagga tgttgttcaa aattagaaat gttatccaca cgggctatag caagtaagaa 540 tagtaagagc tgcgcggtat gtgagatgag agttgggtgg tttatgcctt tggaagtcac 600 acatggcaca acagtccaca atgctatgag ccaacatgac tctatctgac acggacgaaa 660 agtggtatga agactgtggt atagtactct gtattaaatg gcagttctgg atctgcacta 720 780 tatcaaatct ggcctcccag tgctcttatt ccgtcagtgc ctcaggttct tatgctactc 840 aggatatttc tccagcatcc ctggcaggct tacgcgtgtg ctcgagacta ggttccagac 900 attttggaca ccattaccaa taatcttgca atctttgtaa caatagtacc cacagggcta gacageettt ttaaateeeg taatattgat gtttgaegag eagetageac gatetteaga gageetgtag ttttgaeeag aacgagaaag etatgeettg getaataace agagegatte 1020 aagtgattta agetggtace egeaaatetg agtteteega taagateate teetgateta 1080 gaatatatcc aagcagaaaa ttgtagctgg atccaagcta gttacttggt agtatgtcct 1140 cccaatgatg ctatatgcaa agccctagac cccagtcgcc agctgctctc caactttaca 1200

agcccttgct catccagtca atcaacttgg tcgaactgct cacacaagct atgaatggtc 1260 ttagtgaggt acacatatct aaattgttta tctcgtagaa cagcagcgtg agccctaact 1320 ccgacagttg cctgcgatct tttgagtcct actttttgcc cggatcgtgt tttagtaggg 1380 tataacgaat tgacatctta tagctgtgtt ggaactttaa ggcaaacatc ttaagctttg 1440 caatgtcctg ctttctctag tgcccttgca aatgtccttt tctgagttcg tcttatcaat 1500 ccgtatcgcc gcagacttcg ccttcggaac aggtatagtc aacgtaatcg ctgggctcat 1560 actcaccaaa tgaacgaccg tcgtcactgt cggatagcta gactcgctgc cactgataca 1620 aagactgccg tcattagacg ctctcttatt attatgctcg atctccctgc aatcaaagat 1680 tttcactggg gttggcgtcc gactcccgag aaactgttga ctgcttgtgt ccagtaggcg 1740 ttgacgcctg gttattgaag acgatacaca atgataaagt ttgtactgcc taagactaac 1800 ccaattcaaa agcccaatcg atccctggga gagagtgact aggaagaagt gggcggcctt 1860 ttttaaagct acaccaaaag ctcgctcaat cttcccgaga agtgcgatgc tctggaatgg 1920 acaacccaga aatggaagac ataggtagga tagttgggta gaatgcgggg tttgggattg 1980 agttagatga ttggcagtcc cggcagtttg ctcaaccaga ctatctgaca atagggggag 2040 cgaaagcgct ttgaaccaaa taaaagtaaa acggtcaaag gaagagacat cacaaaaggg 2100 gattagacaa cacagtttac agagagttgg aacttgcccg gatcgt 2146

<210> 3076 <211> 736 <212> DNA

<213> Aspergillus nidulans

<400> 3076

accttttgac ggacccaaag ctgaatgtca tttttgacct ctatttcagt atgctgcaat 60 ggtgggctct cgtactgccg catgtgctaa tgtacgtcag tgtacacata ttccagcaga 120 cttgaagttg gctcgccccg gttcagcaca cctggaagtt tcttcattta tgtgctgttc 180 gtggcgctga ttattatggt aagtcctgat tatcttgatt tccctgatag aatatatcta 240 ccacataaat ttacacttct ctccctctca tggtgcttca tcggcccca ctccatcttc 300 cataccctgc aaacctcgca tatctgcccg cccagcccca ttctagctga agcggttcct 360 ggaaacgagg aagattaccc ctgcatcgca tatggtacct acttcttgat ccttataggg 420

ccatgtacgt gtaggettgg tgggactace agtgagatag cctgcgtaat gaatgtttac 480 gcaggtggtt ttggtgccct acattttata atcttgtgca taacatttac ctgacttcac 540 gtaatatatg tactctctc attcatgaaa agccatcagt gtaccccaat tcatgctaac 600 gacctgaagc taactgcagg gttctatctt ggagccgggg ttttcacaaa tggtgagctt 660 agtacgtgat tcctgatcat aaggagctaa tccccagcag cgctgatatc ggcactcgaa 720 tacacatatt cccagg 736

<210> 3077 <211> 3559

<212> DNA

<213> Aspergillus nidulans

<400> 3077

tgagttccgt gcgcatcatg gtttgtccgt tccatgacgc cgtgttatcg agtgttgtct 60 tgagaccctg tgcctcatca agcgtcgagt tggggttctt gtactcgaag gagagggaaa 120 ggtagtgcgc tgtttcctcg gaaccgtgga tgtaccattg gtacgggggg atttgtgagg 180 accaggaccc tttgggatag tcatattagc tcagaagaga gagagaaagc acaggagaag 240 gtacggaggg aaggtacatt tgtcaaagtc ggcgacggta taactctcgt tgaacaggcc gctccagacg gtagctgctg aggcgagggg tgtcaacgtt gaaagcaggg ggaggatcga 360 ggtggactic attitictgcg actgatagat tgactgcttg gctiticttgg tittgaggcga 420 tttcaaggcg aagatggggt tttatagctg gtgggaaata tgtgtgtttc accgtgtttc 480 atgtagatcg ctccagctgt ccgtctcctt ctccttccgc ggcggatcta gcacggatcc 540 gtggcgggga tgaggccggt aggatgctga tgattgacag atgtttattg taaattaagc 600 cttgtctact tcgtacaaga gttcttctga gttgcttcat cttattacat atagagctta 660 tatactccac gaatacaaat ctgtcttcac cgctacagga ctatgactca tagaacaagg 720 tagtacttgc cttcacattc taacacatag ccatatcaga attattgtca gtgctcttgg 780 gcttcaattg cttcctctaa ttccattgcc ataaggctct atcgatctcc tccgccgcc 840 aggacctttt tcttgtcaca ggttcaattt cagtgcagat aaactaacaa gtgggatttc 900 ctctactcaa ctgccgggta ttcactccgt tgtttctacc tccgcaagat gaatccgtga 960 ttcgagacaa gtcggaggtt cctccgttgc gggccgggga ggcctgtgac gatcctcact 1020

aatccggaac ggcgtagagg cgttcatttt agcgtccata agcacaattc tgcaagattt 1080 aatgcaccca gcgctctttg agctctactc agtggtaagg ctggatcctg cagaaactgg 1140 agggatgttg gctggtagtg gtgacggtgc ggggaaaggc aaatgttcta gggctaagta 1200 aagcaggtga tetttgtaeg gattatattt eetageeaaa teaaaeggee aggttagatg 1260 aaaatacaag tataatatat acattgaaca gtcgtacggt cacacggtca aatcaatata 1320 actgactatc ctaacagcga aagcaataag atattcatta ctcatgacct cggcattaac 1380 catatccatc cgccttatcg caacatactt agtccagcta ggctccgtcc taaccaagca 1440 gcccctgccc tttcttcaga cgtagacact accaactctc cggcccaaac ttcacctccg 1500 teacetgeae ageegteece geegeateea tegtattege egeaatgtte gteeceeaee 1560 aggatgggaa ctccgtgttg gtcaagttca aggtaaggaa aatcaagatg gtgcacaggg 1620 caaggccaca tctagaccgg cggaaagaac atagttgtat tgcatccacc agccgcgcca 1680 acggtcgcgg atccacttgt tgaagatgaa gccgataatg ccccaggaca gataattgag 1740 cggcgtggca ggagggataa agctagatcc accgaagatg atgggcgcat tgagaaggcg 1800 cacgtagcgg gcgtacttgg tgttccgaag aagcttggct gcgatgtaga tggcgacggg 1860 gagggcggca ccggcgagcc agaaccattg gagactagcg tagagttggc caggagagaa 1920 catgegggeg gggeegatgg tgeeceagat gatggaggeg ttgaagaaga egeggeegtt 1980 gggacaggtg tagcggttcg gctgatcgag ggtgcagacg ctcgaaatgg cgccgagagc 2040 ccagttcatg acgcagatct ggacaatcga tgaccacagg caagatatca tctgtgctgc 2100 aaaggtcacc cgcggaggaa tettcatgta gtggccgage ttcatgtect ggcagaagta 2160 aaggccctgg tacatgctga tgtacccata agttttgaag agcatcattg ccatcgggcg 2220 gccaggctgc atgtacccaa tcacaaactc ggtgataacg ttgagaccga tctgaatgtt 2280 ggtcgaggct tggataatac cgcaaggcac gaaccatact gcacccatga tcagggcaat 2340 gaagaaggcc caccagctga gattggtcgg gtagccgagt gtgacaccaa gagccattcc 2400 gatcataata agtgtgatag cgccgtacca ccataacgga acaggcttga atcgagccat 2460 gageegtgea tggacateet egteeteatg acegatetga eggaacegea eccagatgte 2520 ttttccgtgg aacaggatgg catggataag cacagcaatg atggtggcaa aggacagccc 2580 ataggcgaga gagaaggtgg ttgataggaa cagaggagag taagcttcgt acttggcctt 2640

qtccaqqqtc atctqcqqqq taagaatacg cgtaacattg tagacttgac ccgtgttgtc 2700 gtagctattt gagtcgctga tgggcaggta cttggcccag tgagtgccag tgtagtgcag 2760 agccqtqgtg acgacccaaa aaagatgaac atgcccagct tagtgttggc aattccgtgc 2820 cagggcgcga tgagcgggct aaagttgaat cccgaaatct gagtccagtc aaaagtcatg 2880 ggaatcagcg aaaggccggt ccagccgccg aacaactgat tgatgaccac gttgttcggc 2940 ttgatccaag tcacccaggc aaaaacgctc aggaatgggg caatgtatcc cggaaaccaa 3000 taccaaagaa aagatccaat cagacagtac agaaacatac ggtatctgcc aattgtccag 3060 ccagagactt tgcttgggtc gggccgactt cggtcatgga gcgcggtgaa aagcgcacta 3120 ttgatcagcg tcgacggcca gatcattgca gccggtgtaa ccaagaaccg gtggaagaag 3180 ccagccattc caaagcccag catctgggtc gagatgcaca tgaagatctc aaacgcccag 3240 tcaaagcgtt gcttgtagaa ggcgcgctgg gcgagcagaa catcggtcgc gtaggccgca 3300 ccaccqccaa aqqtqqcatt qqccatqatq accqcaatgg catgctcctt cttactataa 3360 ggtccaggat ttaaattgac actcattcca aacatcctga ttgtcttatg gggcatgacc 3420 ttggcccacg caacgctcaa tggggtaggc gacgacctgg gcgacatacg atggaatgac 3480 gatgtacggc tggcgcatgg agaagagcat gttgagtgca gaccgactgt agctaagaac 3540 3559 atgcaatggc caggcgcgg

<210> 3078 <211> 1682 <212> DNA

<213> Aspergillus nidulans

<400> 3078

gggggaggag aggataattg ageggegtte ttttecegat tgtteacteg tettggettg 60 gegettgagg teggggegtt cetacgtaat etaagaaaag geegcaatta gatgaacagg 120 cattttaage atceetgegg eggtactaga tacaataaat egaatggeat ttettettgt 180 tactattetg gtgaettaeg aagetttatt taceegetet tgeaactgea gteeggtaet 240 taeggegaeg eacetettga ggeecatgee getggageet gggeacagtg eeetgetgaa 300 getegggeta tttettgeagt teeeceatgt tetegagaee tgeeagaatg eegcatggtt 360 acacatgeeg ttgaeateet aegtaecatt tteatetggt acetttaece ettgatgete 420

ttgacatccc ttaccgagtt ctttcacagt tacgccttca taactggacc tcaccagcct 480 tgcaaggctg ccaagatcga cctcatttta ttggagatga acaaatttga cccgcttact 540 qtqqqcctqc ccagacgcta gactagattg ggcgttttgt catcacgggg ctcagctaat 600 cqqqaaattq qacccqtccq gccaaggcgg ttccaaccag aggccggtaa acagtgattc 660 720 aaacataaqa qqttcacaac cacaggttca ttatgcaacg ctctccctgc agtcaatctg cataaatgtc agattagccc aagtagtaca atgagatgct ggttcagact acgattcgtc 780 aagacctcag aagctgagaa aacgaatgca ttccatgaag ataaaaggag atatatctcg 840 gctaatagaa caacatatag gcacctgcac gcgcaaagga atagcaaaca tcaaggcgaa 900 catagaagaa aaagaaaaca aaacaaaaac aaagagaagg taaagacaaa aagtcaatac cgaatacaga aaatccctca ttgcatgcgc ggagctacga tttccactgg agacgcagta 1020 atgettagte tecaagagge atececteca cetggteace cagtgacege cagttgteag 1080 cttgcagctc cgagtacttg actcgctctt gactccaatc ctgatgaagc cggctgatgt 1140 gatactggct ctgttggaag tagataagct cgtctcggat gcactctttg atgaacactc 1200 cacgcgcatg ctgttgtaca attgattctt tgtcctacag aatatgttag ccaaccaacc 1260 ttctgggcca cggggcaaat agtacgaacc ttgaaaatcg actcctcgac cttttcgatt 1320 tcacctggct tgacggtccc ctgtggtcgc gctcgtaggt cttggagctt gcgttcattc 1380 gcctcaattc gcctttctaa ctgggggatg ttgttacggg catatcggtc ccgtcggtca 1440 aacatctccc qcacactcac taggetgtct cgctgacgtt tcaaatcttc caacactccg 1500 tetteccaeg ecegegeete gtettetage agaetttgae tggeggaeaa gtgtettgee 1560 gtggccttga tcccttcatt cagtagaggc acgtcgttcg tatctaacgc gtatctgtcc 1620 cgagtcattt ctgtgagggt agcagggcaa gcgaaaaacg cagatggtca cagcaaggcc 1680 1682 tt

<210> 3079 <211> 699 <212> DNA

<213> Aspergillus nidulans

<400> 3079

ggagctgttc ggggcgacct gcgagtatgg ccaaggccag ccagctgaga cactacctgc 60

aaqatccagg agtagatgat cctgcgaagc atgacggggc ctagaccatt gaacacttgt 120 attgatatac taccatagcg ccggcaccca agtcacattc taacgccgac attgtatctt 180 gttacctaac tccagctctg cctacgtaaa aagaccatga ctcgcccaac ctcgaacctc 240 qqcqattcaa tagtttccag cgccacaaat cctccctcga ggagaaggtt gtcgaagcga 300 360 gtcagagaat cgggttttgt atcctgaagg gaaggtttgg acgaacatag ctgctattat 420 tattcttctg tggccgacgg tggcagcgcc aatatcagac ttcgagagac cagatacgga 480 cccaggctgg gtcgcaaagc taccgtagct cgtttacggg ctagtcaaaa caatatcaat qtttcatacc tcaaagatac ggaatatgag actcgttcaa tgattcgctt tgcgtagctg 540 600 ttqaqcqcat ctcgggcgtg catccatagt caaacccaca gcactgttga ccaattggcc 660 tqaattacat ttcctgccca cttcacctaa agtttcagaa taaattctct caaagttata ctttcgcagg atcagaatcc tgttcagctg cctgcgcta 699

<210> 3080 <211> 1075

<212> DNA

<213> Aspergillus nidulans

<223> unsure at all n locations

<400> 3080

tatacettet ggggttegtt aategetaag atggtgaaac acaagggagg ettggttttt 60 cccgcggccg atgccattgt ttttccccaa gtttttcaac ccgccggctt gatcgcagat 120 180 ttcctcaatg gcctgaccct ttggaagact ctggcgactc tgttcgcctt agctgtggtc tacgaccagt gtacgtggcc tctggaagcg agtttttgcg agttactgat tttctcccag 240 300 tecgatacat ttaceteaag ggegecateg ttggtecage ttggaagete eegtttatgg gaccgttcct ccagtctgtc aaccccaaat tccacgagta caaggccaaa tgggacagcg 360 gcgagctgag ctgtgtgtct gttttccaca agtatgtgac caatacgatc tccttccaat 420 480 ccgcaatgtc tctaatatgt cgaccttttt agggttgttt gtcatcgcat tcacttgtga tatggtccgc aagatcttca actcgnctac ttatgtcaag ccctgtgtcg tcgatgctgc 540 gcataaactg cttggcaaga ctaactgggt attcttggat ggcaaggaac atgttgactt 600 ccgcaagggc ttgaacaacc ttttcacccg tcaggcgctt tcttgctatc ttcctcgcat 660 ggaggaggtt tacaatgact actacgcgcg cttcctcaaa aagtctaaga acaacaacta 720

taagccaacg ccgtggatgc ccgaattccg tgacctgatg tgcgccgtct cttgccgtac 780 cttcgtaggc cactacattt ccgatgaggc cattgataag atttccgtcg actactacaa 840 catcaccgct gcgctggaat tggtcaactt cccgatcatc ctccctttca ccaagacctg 900 gtacggaaag aaggctgcgg acatggttct tgacgaattt gccaagtgtg ctgccaaaag 960 cagagctcgt atggctgcgg gcggagagat tagctgcatt atggacgctt ggatcaaggc 1020 tcagttggac tctgccaaat accgggaaaa gattgccaag ggtattgagg ttgac 1075

<210> 3081 <211> 1299 <212> DNA <213> Aspergillus nidu

<213> Aspergillus nidulans

<400> 3081

aaatttatgg aacaagacac aaattcatga taattacatg tttccagtca gagtatcttc 60 tgttatcagc cagaaccatg ccgacccttt ttgcgcctat cctgtgccaa tgagcaacgc catgtatata tatttttgcc attatacatc acctgcttaa ttctagcttt ctcatattca 180 cagccgacac tgaaaatatt ctcagacaga ttctacatgg cctataaaac atatccgctt aatattgagc agataaatac ctggtagact gaaagggcgg tcatgtcccc agggcaactc tacaccaaac tetgtetege ggetggacae aaggeggete ttgaatettg taatggtgtt 360 420 tcatccataq caaqccaaag atcactcaga gattgcttac aatttcgaac gaacgccgtc agaatcttga acgatcttct gcaggatccc gtgactgcgg tggcagagtc tacagtgtta 480 540 acccacaggt atctacactc tatcaccctg cttatgatcc gagaatttaa taacagcaaa 600 tcttttgtta ggcgatcctc gatgtaggaa ctggtacggg gatctgggcg atgtatgtga 660 ccattgccgt gcagcttgtg aggctaatat attatagaga tgtcgccgat gcgttcccag ccgctagagt tactgggttg gatctttcgc ccattcaacc cacatttgtc cctccgacct 720 780 gctcgttcga aatagatgac gtaaccatgc catggacgta tgatacggaa caatttgact 840 tgatctacgt ccgcgagatg ttcggctcga tacctgattg ggatgcgttt ctccggcaat 900 gttgggcctc tctacgacca ggtggctaca tagaagttgt tgagcattcg attacgccca tatgggacgc tgataccagc ctgggaccta tctacgcatt atgggagcag acaatggcgc aggttgagca ggtatctggc aggagtttct cgatctggcg tgaaagcgca caggtgctgg 1020 <210> 3082 <211> 1330 <212> DNA

<213> Aspergillus nidulans

<400> 3082

60 gacetteegt egactgtatg acaeageegg tettggtgae gegaetgaga ttetaaeggg 120 cttccatcgg cttgcgcttt acgagatgag caaagccgca gaggttgaaa gcgaagttgt caaccagcta gtagggctgc gcaacgatct gcagaagaaa accaaagaga tcaaggcact 180 ggccggggat tttcgcaact cggttgacaa agaagttgat gctactcgaa agacggtccg 240 300 acatttgcaa gaagccttag gcctagtcga tactgatcca tcggctacgt ctggcaaggg 360 agateettte attgteegee teagegtega gaageaaata gagaageaaa ttgaggagga aaactacctc catcgggtgc gtccactgtc cttggtatat ttcgttttct aatgtccata 420 480 ctaggcctat ttgaaccttg agagctctgg tcgtgagctt gaatcaattg tggtaggcga 540 aatccagaag gcttacaacg cctatgccgg tattatgaag cgggaggcag accacacgct cgacacggta gacaagcttc gcgcgggccc aatctcaatg ccgcatgatc atgaatggaa 600 cgcatttgtc gcaaatacgg acgaaatggt ggacccgcgt atccgaatcc gtgacgttga 660 aagcattacg tatcccggca aggatcatcc ggctgctgca gaagtcaggt cagggatgct 720 ggaacgcaag agcaagtatc tgaagagcta tgctcctgga tggttcgtct gcttacccgt 780 840 tggactgctc gatgtgctaa tcctgctgca ggtatgtttt gtcaccgact cacctccatg 900 agtttaagtc ggcggatagg gttgcatggc agacaccagt aatgtcatta taccttccag aacagaaact tggatcgcat tcgcaaccgg actcgacatc gcacaagttc atgctgaaag gacggcaaac gggaacgatg cacgagggtc actcctgggt atttagagcg gagtcccaca 1020 aaagaatgat aacctggtac gaggatattg atggaatgat catatgacag gagaggcacg 1080 atatgcgtac gtcaggcgac atgtacgtac cgtcagtggt gccagtttcc gaagcagcag 1140
tgacggagta ttgaatgaag acgaagccga tcggacccca tactctgctg gatcagttgt 1200
gatgcaacag gaacgtccta catctcagcg ccaaccaggt ggcatgttac accagccctg 1260
tacaaatcga tcgtcaccaa cacgatccac tgtctccatc aagcggagag agctcggaga 1320
gagagatctg 1330

<210> 3083 <211> 3542 <212> DNA

<213> Aspergillus nidulans

<400> 3083

60 cettteqtte ateteatgag cetgggatte caateateet tatattteet aacggettte tggttgggtg cggtgtggcc tgtctcctac tactcccctc ggttacaatc attcttttc 120 atcctcttcg gaaaaaatct gatttgccat tgatcaatcc cggaaagggg cgcatcggta 180 tactacgagg gtatcgctca cggaagacat ttaccacaga gctaccgaga ttagttgcag 240 atgggctttc caaggtactc atctatcctc caaatagtag taaccgctga gcccatagat 300 aggcgagtgc ctttcggatc gcagccccag atggagtcaa catcgtactt gctccatcgt 360 atgcacatga gatcgcggag catcctgact tgaaccccgg cccaatcgct ggagacgagt 420 480 tcaattccca tattaatgga ttcgaggtgt ttgcacaact gggaaccagt gatgtcatct 540 ctgaqtctgt gaggacgaga ctgacccggc agctgagtaa gtgttcgtcc tagaatagcg tcacctcatt gcttctcgcc ttcggatgaa ccatattgat ataccaaatc tcttagcaaa 600 660 attgacgccg cttctcacta gcgagactcc ccttcttcta caatcccaat ggaaagatgc 720 accaggtate tagtecatea gtagteegee egettttgte acacaacete tactgatace 780 tcgcactaga ctgggtggag gtgagcccgc atgagacggc tctgtttatt ctgtcgcggc tctcttctct cgtcttcgtt ggcgatgacc tcgggcgcaa cccggattgg atacgcatcc 900 taacatcata caacaccgag gettttgcag cageegaaga geteaacete tggeeteaga tacttcgacc cctcatcgcc cgtctaaaac catcgtgccg ccagcttcgt cgatatatcc gtgatgcacg tgcgcttctt gtcccagtcc ttgagcaacg gcgccatgcc cagagccagg 1020 gtgatcgaag ggagtataac gacgcgatag aatggctcga cgagacgtct cgcagtacag 1080 gtcaacccta tgatcctata ttatcccaaa tgctccttgc catcggctct ttccatacct 1140 ccagtgacct cctggggcag gtcctccttg acctctgcat gagaccagat tggaaagttc 1200 tggtcaggga gcttcggaaa gaaatcatat cctcgctaca gggagagggg tgggataaga 1260 tcgctttgaa caaccttaaa ctgatggaca gtgtgctgaa agagtctcaa cgtttaaagc 1320 cagcctcaac tggtaagctt cctctatcac cctcttttca caagttgatc ccctcctttt 1380 ctaacctggc catgcataca gtaacgatgg ggcgatacgc ctcgcgcgag atcacactct 1440 cagacggaac aataatcccc aaaggctcaa cagtctttat cgccaacgtg gccatgcgag 1500 actccaatat ctaccccgac cctgatgatt tcgttcctga ccgttttacc actcggcgtg 1560 aaaagggcga tagttccgcc tacctggttt cggcttcccc agaacatcta ggctttggcc 1620 ttggtcgaca cgcgtgccct ggaagattct ttgccgccaa cgagctgaag attgtcttgt 1680 cccatatgct tatgaaatac gacattaaac ttcctgataa tggcgcggtt gcacccagca 1740 agtcggggat cttcttagcc acgaatcccg atgctaggat ctgtgtccgc cgaaggaagg 1800 aggagatagt gatctgaaat tgacctctag tcgtttcttt tattattctt agctgtcttc 1860 tgtccgctat tgggttgttg gaaaattatt ggggtgcttc gcaggacgct tgttgacgcg 1920 aacaaataat gattataata ataaaatacg atgctttcac catagtggag acgatcgcgg 1980 ctttttgagt actgtgtcaa atagatcttc tggtaagata cctatgcgca tcacgctatc 2040 catgccgttg ctgatcagtt gtaggtttgc gtggacgcgg acgtggcgtg cgctcaactc 2100 gctccatgca gcaataattg caggctgctg ccttcatgat tctggtcttg aagtctggcc 2160 cgatattgtc ctgggatggg catacaactc ttagccacgc gctcgctgtg gatcagagtc 2220 aaaaagacgc gaacacgcaa ggagccgtcg ccgaatctag aggcatgcag cacggattct 2280 tccatcttca gtcctccaga attccaaaca ccgaggcata agtggcggtc tgtgttcgtc 2340 catagcattt gaactccttg cggaagtatc atcccaattc aatcctgttt gcttgctctc 2400 ctctctctag tattctttgc ctacaattac aggggaatga agcgacatct ataagtcaag 2460 attcaagaaa gagatttatc ccgccgtgtc ggccagatta tcatagcgcg gtgacctttc 2520 tcgataccgc gcattcattc ccgcgatcta tgtacgcgac ctcaacagat aattggtgca 2580 ccctgttatt ttgctcaaag taagccagtc gagctaggag ggtaagagga tgagtacagt 2640 ggtcatcgcg cagtaggaat gaagtcatcc tgccaaatgc atccaacata aggttctgat 2700 gttcgcttta cctatccatc tctccaagaa cttcgtaaag taaccctaat ctgaccatct 2760 gccggtgatt atgagcccct ttccagataa tgggctctct cataactgag tatccctcgt 2820 tttaaagggc gcagcatccc cgtaagagat atgcttcgct tctaaccggt attggagatc 2880 cttcagcctt atggtatcgt agaactcgta gatctcctcg ataaacctac agtcgtccgt 2940 catcttcaga ataaagatgt actcattctc ataggetcca acaatgettt etgeggaage 3000 cttagcgcgg atcatcactc tcctagcagc ctcatcgaca agggtatggt ctggctcgat 3060 gatggaaaag tcaaatcgtt tgaaagtagc gatgaactgc gggaagttcg cacgggtttc 3120 ctcgttcgtt acgacatttt tgttgaagct ggggcagcac tggtggtaaa ggcatgttgg 3180 cqtqcqaatq qaqaqaattt cctctatqtc aaaqqacccg aacgttgaga caaatctgga 3240 ggttgttctg aggagctttt ctcgtgtggt ggacatggtt ttgggccttg tcctgtcagt 3300 agggcaatca tgtggctctt aggacttaat gaaaacttac agcttattat cagtgacgag 3360 qataacaqaq attqqqqtca tagtgatqct gggcctttgg tacactgata tatctgctgg 3420 cattagtgat tacgtaggct gccggttggt gtcgtggaca attccttaca tgctatgtgc 3480 tgagetetga tattgeteac cataaateet gtgetacagt gettageeet teactagett 3540 3542 ct

<210> 3084 <211> 2101

<212> DNA

<213> Aspergillus nidulans

<400> 3084

gacatgtgta aacagtccat tgaggactgc ctccgtgtga gtaagacttc cggctttctt 60 catctcttca ttaacaaatt gcttcatttc gaccgaaagg tcggtagcat tgtcgcggcg 120 gaagagtata ccacgtatgg gctcggggtt agcaatgttt tgcaggaggt ggatgagcgg 180 gaatgagaat tttccctccg atagatcttc gcaaaatcct ttcttggcag tgtactagga 240 300 ctcaactatc agccagtgtc acgaattatg gtgaacggta agttacctct tcagaagcta agtttaggta atcgtctctg atctggtagt atcttcccag caaggtgaaa agatgcatca 360 420 atteggggtt eggetegett teegaeteta eetegagaag tegaageace agaeggaaga aaccaccggt tttgttgtcc accataacaa ggtactcttt tgttgatggt aatattgtgt 480

taaatctcca atgtaactcg aggccctgtc cgaatgagag agtttctagt tcatctgcgc gtgttagctg ttacagttaa tcccaagggt atacatacct ataaatacgt ctgcgcactc 660 attggagtgt ttcagcttct tcaccagtcg actccctttg acatagagat aggttgcgct 720 gttgagagtc tgaggctggc caaagacagc gtgggctgct ggtcgcccgc ggcgcagccg 780 tqatccqtct tqgatatcat caagcctacg ctgtcagttt gatgttgact actgaaatgg 840 cagtccaaca ttaatacggc atcgaataac atccttgaaa cttctccgat tatgtttgtt gagtcctcag gcaatgttag ccaacactgt aggcagtcga ttaagcggcc gagggtcttc ttcccgggca acgaccgtat atattcccac ggagcaagaa caatctgatt aattttagca 960 tgccagctgt gtggtcggcg tgactactaa cctccgcagc tggggctttt tcaaacggta 1020 cgactatttc cctggctaga ggcgccactg cactggtgcg tttatggctg gcctccgagg 1080 agctatccga ctcagtatgg ccattagttt tcatggtcat ggccatggct ggaggggggt 1140 agcctggcaa cctccttttc ccgtcgtaac cgcgccccac tagctgagct ctatcagcgg 1200 cagaagaaaa agatcagtct gttgatacct cgtcgtgcag actgccagta gcttaccccc 1260 ccataagtga ggatggagtt gaacatgtac cggcgcagcg catctgtttt agggcttccc 1320 gaagagttcc agttttcgta ttcagccatc aatctggcct cggccgcaag aacctcttgc 1380 ttcaaaacat tgccggcttc ctgttcgtca tacccgtagt tgctcataag cacggccatt 1440 ccgttatgca tcatatcaag ggtgccagcc aagaagtgct cattgaattc tttgtgaaaa 1500 ctgtggaagt catttgtcaa cccggttatc agatcgccaa tctctgtcat gtgggagact 1560 gaatcaagct ctttatcact gacgtaaaat ccgtttatag cgggcaccaa tctcgacagc 1620 accetatgcg aaaccagtca ggttatteet agtgataaaa aaggaagtte agegaaggee 1680 ggagagggct tacccgctgc caacagtttt gattctgtga gctttgtatg cttcccatgt 1740 cactgtgtgc aaagctggca cggtctgtgc ttgcaggcca gtgtcaaaga aatcgaaact 1800 gcgcctgaaa acagcatcaa acgcatcggc tccgttcaag aggtccacaa ggctttgaat 1860 atatagetea ttgatetega aetegeageg gttgegeett eecagettta etteggagag 1920 aagggcagcg cgcaagtcta gttgaatcct ctcatgctag gggactcagg tactatcttc 1980 caggtaggcc agggcactta cggtaactga atccagggca tctgttgcat ctagcccgac 2040 agggacaggg tattgtgcac gtatgtggaa tgatacctac catcccaaca caagacatta 2100 t 2101

<210> <211> <212> <213>	3085 754 DNA Aspergillus	s nidulans				
<400>	3085					
tctccgaatt	ggatccttgc	ataaaatgaa	gaggtttggt	gttcgggcga	ttctgatcca	60
gcttgcaaac	ttcattcatc	ctcgcttgat	gaatcatgaa	gcgcaacggg	acccagcaga	120
gcggagagaa	cgggagcttc	actagcagaa	gaaacatgcg	atccttcgaa	aatgagtctc	180
aacatgattg	gccgctctgt	tcgagctccg	gggctacaga	gggctgagca	caacgtggtt	240
tgtaccagat	cttcgccccg	ataccaggga	gtatcccatc	agcatcgttg	tatgcaaata	300
tcactccgct	tctgccagaa	gatttgggtc	ctctgataga	cgggaagaac	cccattgcaa	360
catgtcccta	gtctcccggc	gaacagagga	tagttggaga	cacaccaagg	aggtgctgcg	420
agctagcctc	tcgatgcccg	ttcatggagc	cacggcatca	tacataaact	ggcggattac	480
tttggttgca	ggaaggaggt	tcaccgcaga	gtcggccaag	aaccagaacg	actacgagca	540
ataccagaaa	ttgcttcgat	tcgttggata	agtctagttg	ctattgtggt	tcaagcctca	600
ctttttttgt	tattaccgtg	agcaaaaggg	ttggataaaa	agagtgaggc	ggtttcgcag	660
tgatccgaca	ggtacaacat	gactagaaac	agccctcgca	acgcgttcct	aatgttcatc	720
tatccgtcac	aggatcgaag	gtgagttccc	tggg			754
<210> <211> <212> <213>	3086 444 DNA Aspergillus	s nidulans				
<400>	3086					
cttgtaatcc	ccttcattct	agaatcctcg	ttctcactat	acttcctcaa	acttttcttc	60
ctttctccgt	tctccggagc	ttcacccata	cggtcaccga	cagcttcaaa	tattcctgtt	120
attaaaattc	agctccagca	ccagctccag	cttcgataac	cggaaaatat	ggcacagacc	180
aatggcgaga	tggagcactc	aaaaggtttg	ttgccacgga	gcattcctag	aacactgaac	240
taattgagtt	acagagtete	cagagcaaat	caccaatgga	aacaaccagg	aggtggtcca	300

ggaggacgat	ggcgctgacg	gtatgtagga	ttgatattgc	tacgtgtgac	tatcccgaaa	360
attagtctga	cagctgttct	gcacaggcct	cttccagatc	tccgttaagc	ttcctcatga	420
accttacaag	atccaggtta	tggt				444
<210> <211> <212> <213>	3087 2031 DNA Aspergillus	s nidulans				
<400>	3087					
ccctcagact	gcatgctgaa	ccgtcttcct	acatacagat	tacgtgtata	tcagtgccct	60
gcacaaaagc	ggaaccacgt	tctagagaag	catactcgct	tcgttgcgtt	atgaagtgtc	120
cagatcgact	cggaaatgtc	tactcggtct	cctagcgaat	atgggaacga	gctgcctttg	180
gccatcgcag	acgcgacggc	agatttaagg	aagtccattg	ttgtaatttg	gcgccagctc	240
ttgggctagc	taagttcgtc	ttttcgggct	cggggaactg	aaaaggccgc	gctcaaagag	300
gctgcttgat	gatggcgatt	cggaggagtg	agggagaagg	attcgaggag	ttatcgagag	360
gcggaggagt	tccgtgctcc	tggaggttta	tagaccgtgg	ttgaacgaag	tagttgttct	420
gttgttgtct	ttttgtttgg	ccctgctatc	tgggtccctg	ggataatgaa	cgagctccgt	480
aagtaccccg	cccccgattt	ggcttaggct	gtctgtcatt	taatgcatcg	cgcgtatcga	540
ctcgaccaaa	acttctccct	attcaccaca	cgccatgtca	tataatgtgt	tatcaacttg	600
acaagctatt	tgaaaaggtc	cagtttacac	cgcttctatt	cttgtagact	aggcaagtaa	660
gtgatcacta	ttatcactcc	gtcatacttc	acgttcccag	cacaacctct	tcgatgatgc	720
gacactggaa	aggtctacgg	ggaaacttcg	accgggacac	ccaaaccggt	ggaactcccg	780
ctcagcacac	cagaggagtc	cgcccccaac	gtattcagaa	ccccttcacc	gggcgtccct	840
tgtggaagcg	cageteaget	cgaccccggc	ccaattcacc	cagcccacgt	atcccagacg	900
caggcacatt	cttgataaaa	aggcaaaaag	gttctagtcg	caagacccac	gactaacggc	960
tegetetgee	ttgggaagac	atgtgtacaa	tgaaaccgat	ggctagccgc	ttactggggt	1020
ttetegteeg	ctgtgcctct	atgaggaatg	gagaaactaa	tggctgcggc	gaacattgtg	1080
tggggatcca	tgaggcttat	actatcactg	cgggacgtgt	gtgcagggct	gggttggata	1140
cagctgggat	gcgttgaaat	gcggggtgga	tttgtgtgtt	gtggaatcta	gtgcctgggg	1200

ttttgtgggg ctcctttgga tgagaacaag taccgcggct gggtgttgcg gttttggctg 1260
aatgaagacc aaatgataaa ctgaaaagac ctgaggagaa tgggattttt tgttttttc 1320
acttctttt ttttggttgc atactgggtc gagacactac ctgctaacgt gttgcaacag 1380
aatctcttcg aacacgacgg acaccactag gcatagcttt acacaatgta cagtagcaac 1440
tttatctgtc ctacaagtgt cattcagctc atgctttact ttatcaactc tccctctac 1500
ccgcaatctg tacctgaatt taacctggct tcagctgca ataccettcg ggatcagtct 1560
cgccatccaa gaggcctggc atcatgaagg gttatttgaa atataagaag ctgcaaactc 1620
agcacgtagt atcgatatag atcgatccag atagtccata ttctgataaa tctcccatgg 1680
tcccgatata atatacgcaa agcgggagcg acgtaggac gagcaaagac accagtcttg 1740
gacagcaaaa gaccacggcc ggcttagttc aacaatgtgc cttctggtca tattctgata 1800
ctctttctgt ccgactaggc caccctgaaa gatggattcg tcaagctcag ctgttcttga 1860
tcagcagaaa ttctacaccg cgttccatgt ggtagaccaa ccaacgacag aatgcatccg 1920
ccctaaatag gtatataatc ggcatgtgcg gaccactaaa accgaggaaa agctagcaat 1980
agcttcaaaa atagtgcgct tcaataatct gcgaacgatc agatctcgg g

<210> 3088 <211> 936

<212>

<213> Aspergillus nidulans

DNA

<400> 3088

60 aaagtgactc caatcatacc aggattcccg ctctcaggat tcccatagcc agactcaaac agaaattgcg gaacgtgtgt tgttttaccg cttcctgtgg ctccccatat cacgatggca 120 qagttgttat ggattgcttc catgatcttt tgctcttcgc caacaacggg gagtttgaga 180 240 cgggcttctt gaatatgttc gggacggtcg acttgaacac tgaaggcttt ccggtacggg ttgccctttg tgacttggag ttctagaggt agtggctctt cctccacagc tctgactgga 300 360 agtgcggatt tggggatgac ttgtggctca gtcgttattg gaccggatgt gggcttaaag 420 cctacaactt cattgatttg ttgtctggcc catgatttga aggctgattg tcggggctta 480 attegteeat cagtgttatt tregtetreg tetregteat cateateete titetegteg tetteatect egtecteate ateatetaeg tettegtett egtettegte tteatectee 540 tcatcttttc tgtcttcatc ttcatcacta ccactatcgc cgttgtcgtc aacttcactc tetgattcag aagaatcate ggageeegtg ecetettett egetttttge gtegatacea 660 ggtccgatct cttcttcctt atcctcgtcg tcggaatcga aaccctccca tggtatctca 720 tttaatggag ctttcggtgc tgccttcggt gcacgctttc gctttttgag aatcgggaag 780 ccatccggac caagttcaag aggacgtttt aacccaatac cgttcatcag ggtcgatgct 840 900 ttctgctcct gctgcccttt accagtagcg tccgatttta atccagatag atcatcgtct 936 gtttcatcgc tagaataatc aggcgcattg cgcttc <210> 3089 <211> 4806 DNA <212> Aspergillus nidulans <213> 3089 <400> ccttttgact acacttcgaa caaccttgca aaagctgcgt ttgaactaat ggcctcagca 60 aacacactgt atctgattta agatattgac ccaaggcgtt atgataagaa aaagggagac 120 atgatgcgac tgcagatgag tacaaaaggt gaggaatgtc gacaaggata taccaaataa 180 tgttagatga acaacccctg cgacggctgc tagatactat atgagcatgg ataccaactg aaaaagaaga caaaacccag agaattttca tgctcgctgc gttgtgcttc aatataaata 300 aacctaccca aagcataaaa caggaaagac ggccacactt tactatactg tgccatacaa 360 aacaacaagg ggtatgtaac catgactaaa tccacgcaaa gctttaagaa cagaaggcaa tccaagaaga actagtaaaa gagacatggt aaagcagact taaacagttt caatacgcgc 540 atcctgcgag aggcccgggc gatgcccata cgccggagct gtaaccgtgg gagtcttagc ctgtcttaca acaagccttt cattactaga gttcaagtga ggggttcttt tcctgacagg 600 gacaaggacc tgcttcttgc cctttgagac ggagacagag cgtgcgaccg acacttcgat 660 ggttgggatt ggagcattat cgcctgctcg ggatgttgtt cgtggtgggg gcaacgtgga tatggttctt gctgtggcta cattcttgtc tctgggcgga gactttgtcg tgcttaaagg 780 tgagaggatt ggggaagatg ctgatgtcac tgtgggtgtg tccgagaagg tctctgttga '840 gtgacgctgt ttgagtccga acttgaatgg agtctcgcgt cctgatggtg aggttctttg

cttttgttga ggtttccgag gatggtactg tcatggttac cggtgcttta tttgaatgtg 960